

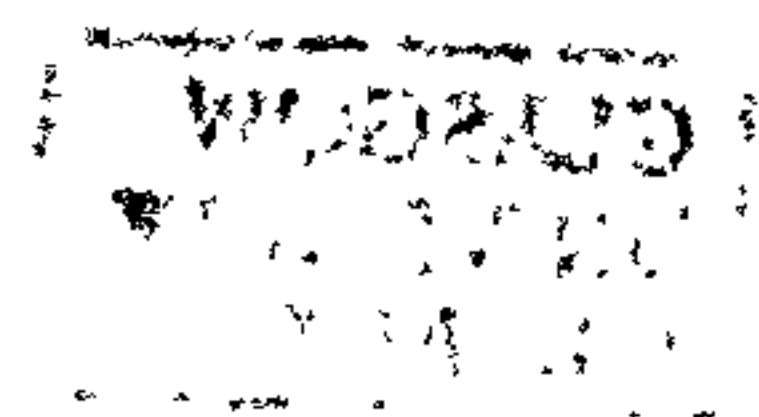
**Danish Naval Administration and Shipbuilding  
in the Reign of Christian IV (1596 – 1648)**

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**PhD Thesis**

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## Abstract

In the early 17th century Christian IV of Denmark created a highly impressive navy. This thesis investigates the uses to which the navy was put, and assesses the ships that were built to meet these needs. It shows that the Danish navy was for a time the largest state-owned navy in Europe and that the dockyard used to build and maintain these ships was one of the finest in Europe.

The administration of the navy is analysed in detail. It is shown that the lower administration of the dockyards and the seagoing navy was highly organised, but Christian IV's failure to reform the higher levels of administration seriously hampered the effectiveness of the navy. The navy grew beyond the bounds of what the state of Denmark-Norway could afford and naval finance became a highly contentious issue in the modernisation of the state.

To build the navy's ships Christian IV brought in master shipwrights from England and Scotland. The organisation of naval shipbuilding is examined in detail and the design of Danish warships is analysed. The Scot David Balfour is shown to be one of the most innovative and successful shipwrights of the early modern period.

The figure of Christian IV dominates the Danish navy in the early 17th century. He was involved in all aspects of its organisation from its use as a political force to the design of specific vessels. He created a highly impressive navy in terms of ships and dockyards but failed to see that it also needed an efficient administration to operate effectively.

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## Introduction

This thesis has developed from an initial interest in the Scottish shipwrights who worked for the Danish navy. Its scope was widened significantly after an attempt to find out more about how the navy operated in the reign of Christian IV (1596-1648) showed that, although it is highly symbolic in terms of Danish national identity, very little serious scholarly work has been carried out on it.

Christian IV is Denmark's equivalent of Henry VIII, a grand, domineering king who is remembered for his drinking, his womanising and his navy. Like Henry VIII, a great deal of mythology has grown around this larger than life monarch. Perhaps the most famous image of Christian IV is as the warrior king on the deck of his flagship leading his navy to victory after being blinded in one eye. Successive generations of Danes, in the face of military defeat and a steady contraction of national boundaries, have looked back in admiration at the great age of Denmark and at the king who valiantly fought to save his country. Christian IV and his navy were romanticised in this climate of nationalism to such a degree that it became difficult to tell myth from reality.

The first historians of the Danish navy were naval officers and their work is coloured by overt patriotism and professional pride. The first dedicated history of the navy came in 1818 from W. Graah<sup>1</sup>, a naval lieutenant, who openly admitted that he was aiming to put the Danish admirals on a par with those from England, France and Holland. A more thorough history came from a naval captain, Hans Georg Garde, in 1832<sup>2</sup>, but although he consulted a large amount of source material he did not

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1. W. Graah, *Udkast til Danmarks søekrigshistorie*, (København, 1818).

2. H.G. Garde, *Efterretninger om den danske og norske Sømagt*, (København, 1832), I-IV.

fully understand the state administration of the period or the sources that it produced. His interpretation was therefore often inaccurate and his figures frequently meaningless. His revised version of 1861<sup>3</sup> was much better although it was still imbued with a romantic notion of the navy and perpetuated many of his mistakes and misapprehensions. Another history was published in 1875 by J.C. Tuxen<sup>4</sup>, a teacher at the naval academy, who sought to provide a popular account of the navy's history. He reiterated the patriotism evident in the earlier works and provided little new in the way of interpretation.

These works were all general surveys of the Danish navy from earliest times to their date of publication. The first work to look specifically at Christian IV's navy came from the pen of a remarkable priest by the name of H.D. Lind, who between 1882 and 1924 published over 30 books and articles on the 17th century Danish navy. His book on Christian IV and his dockyard<sup>5</sup> was his first and, although very impressive in the amount of information that it contains, has some major flaws. Lind's grasp of the source material was much better than Garde's but he still made some mistakes in interpreting the political and administrative background to the navy. His approach was essentially genealogical and the majority of the book consists of biographical details of naval officers and master craftsmen. Where he does attempt to give some historical perspective he is clearly influenced by the aura of Christian IV as a great monarch and his analysis is uncritical and frequently naive. His genealogical approach

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3. H.G. Garde, *Den dansk-norske Sømagts Historie 1535-1700*, (København, 1861). This was a companion volume his *Den dansk-norske Sømagts Historie 1700-1814*, (København, 1852).

4. J.C. Tuxen, *Den danske og norske Sømagt fra de ældste Tider indtil vore Dage*, (København, 1875).

5. H.D. Lind, *Kong Kristian den Fjerde og hans Mænd paa Bremerholm*, (København, 1889).



also means that he concentrated on the higher echelons of the navy and more or less ignored the common seamen and craftsmen.

The only professional historian in the 19th century to investigate Christian IV's navy in any depth was Christian Bruun. His major work was a biography of the Dutch admiral Cort Adeler<sup>6</sup> and, although his subject did not join the Danish navy until the 1660s, Bruun provides some interesting background from the reign of Christian IV. He also published accounts of two of the major sea battles of Christian IV's reign<sup>7</sup> which, for the first time, began to strip down some of the myths of Christian IV as a great admiral and shed light on the real history of his navy.

In the 20th century many articles have been published on various aspects of Christian IV's navy, such as the development of the dockyards<sup>8</sup>, naval strength at particular times<sup>9</sup>, and various aspects of naval administration<sup>10</sup>. The most comprehensive work has been carried out by Niels Probst, whose interest in the technical details of shipbuilding and in the pictorial evidence of ship paintings has provided the most detailed analysis of the navy's ships to date<sup>11</sup>. However, although these articles have helped to build up a more accurate picture of Christian IV's

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6. Christian Bruun, *Curt Sivertsen Adelaer*, (København, 1871).

7. Bruun, *Slaget paa Kolberger Heide den 1. juli 1644 og de efterfølgende Begivenheder*, (København, 1879); 'Christian IV i Listerdyb', *Danske Samlinger*, VI (1871), 263-88.

8. Knud Klem, 'Christian IV og Bremerholm', *Handels- og Søfarts Museets Årbog*, 1977, 95-6; Ole Lisberg Jensen, 'Bremerholm eller Gammelholm', *Marinehistorisk Tidsskrift*, 1988/3; P. Wessel-Tolvig, Holmen og København. En beskrivelse af flådestationens betydning for byens udvikling, beskæftigelse og handel', *Historiallinen Arkisto*, 92 (1988), 89-107.

9. Preben Holck, 'Flaadelister omkring Krigsaarene 1644-45', *Tidsskrift for Søvæsen*, 114, 1943, 483-504 & 545-65; Jørgen H. Barfod, 'Norske defensionskibe og deres udrustning under Torstenssonfejden', *Handels- og Søfartsmuseets Årbog*, (1948), 99-129.

10. Steffen Heiberg, 'Søetatens økonomiske forvaltning under Christian IV', *Marinehistorisk tidsskrift*, (1/1980), 8-18; F.S. Grove-Stephensen, 'Marinens jurisdiktionsforhold før 1660', *Marinehistorisk tidsskrift*, (2/1984), 19-31.

11. See the bibliography for a full list of articles.



navy, its political and administrative importance has still not yet been addressed in any detail. Probst's general history of Christian IV's navy was due for publication in 1996<sup>12</sup> and may address these issues, but at the time of writing has yet to appear and its contents are unknown.

The fact that Christian IV's navy plays such an important role in popular Danish history and national identity makes it strange that so little has been written on its wider significance. It is even more surprising given that there has been a major debate and reappraisal of Christian IV's kingship over recent years and that the navy played such an important role in shaping his foreign and domestic policies<sup>13</sup>.

This lack of any comprehensive survey of the political and administrative background to Christian IV's navy can be seen in the work of contemporary historians of early modern Denmark, who still tend to rely heavily on the flawed and outdated works of Garde and Lind<sup>14</sup>, thereby perpetuating their mistaken premises and meaningless figures. This thesis aims to remedy this situation and provide a thorough investigation of the political aims and the administrative workings of the Danish navy in the reign of Christian IV. It also remains true to its original aim of assessing the careers and methods of the master shipwrights employed by Christian IV.

The thesis is divided into three separate sections. Part A deals with the politics of the navy and the way in which the navy and the state administration affected each other. The first issue to be addressed in Chapter 1 therefore is why Christian IV actually needed a navy. The role of the government officials concerned with the navy is investigated

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12. Niels Probst, *Christian 4.s flåde, 1588-1660*, (København, 1996).

13. See Chapter 2 for a fuller discussion of this debate.

14. For example Askgaard, Jespersen and Tandrup all use figures and assumptions based on their work: Finn Askgaard, *Christian IV: Rigets væbnede Arm*, (København, 1988); Leon Jespersen, 'The *Machtstaat* in Seventeenth-century Denmark', *Scandinavian Journal of History*, 10 (1985), 271-304; Leo Tandrup, *Mod triumf eller tragedie*, (Aarhus, 1979), I-II.

in Chapter 2, and the contentious nature of the navy's political control is also discussed. Christian IV essentially sought to maintain sole political control in order to influence both his foreign and domestic politics, but the fact that he needed his council to grant funding meant that a certain degree of co-operation was required. The complex nature of naval finance is discussed in Chapter 3 and the part played by the navy in Denmark's growing financial insolvency is analysed.

Part B analyses in detail the navy and its administration. The strength of the navy is analysed in Chapter 4, where it is shown that not only did Christian IV own some of the largest ships of the time but that the Danish state navy was the largest in Europe during the 1620s and 1630s. To service this growing fleet extensive naval dockyards were needed and in Chapter 5 the development of Copenhagen as one of the finest naval dockyards in northern Europe is discussed. In Chapter 6 the administration of the naval dockyard at Copenhagen is discussed in detail and Chapter 7 looks at the civil and military organisation of the sea-going navy. What comes out of this analysis is that, although the higher command of the navy was muddled and politically contentious, the organisation at the lower levels of naval administration was much more advanced than in many other countries.

Part C looks in detail at the men who built Christian IV's navy and at the ships they built. In Chapters 8 and 9 the careers of the state shipwrights and their role within the state system are discussed, while Chapter 10 looks at ships built for the navy under contract by private shipwrights. The section concludes in Chapter 11 with an analysis of the different ship design methods employed by the various shipwrights which shows that one shipwright in particular, David Balfour, was highly innovative and ought to be recognised as one of the major master shipwrights of early modern Europe.



The role of Denmark has frequently been overlooked or dismissed as relatively unimportant in discussions of early modern European history. In recent years this situation has improved to some extent through the endeavours of Munck<sup>15</sup>, Oakley<sup>16</sup>, Kirby<sup>17</sup> and Lockhart<sup>18</sup>. It is hoped that this thesis will build on their efforts and establish the Danish navy as an important *European* navy, influential in shaping the politics of northern Europe, forward looking in terms of its administration, and highly innovative in terms of dockyard development and ship design.

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15. Thomas Munck, *Seventeenth Century Europe: State Conflict and the Social Order in Europe 1598-1700*, (Basingstoke, 1990).

16. Stewart P. Oakley, *War and Peace in the Baltic 1560-1790*, (London, 1992).

17. David Kirby, *Northern Europe in the Early Modern Period: The Baltic World 1492-1772*, (London, 1990).

18. Paul Douglas Lockhart, *Denmark in the Thirty Years' War, 1618-1648: King Christian IV and the Decline of the Oldenburg State*, (London, 1996).

## Stylistic Conventions

Throughout the thesis various conventions have been used. To limit any confusion the Danish titles of officials and institutions have been used. The Danish form of proper and place names has also been used, apart from Copenhagen which has been preferred to København, except when citing Danish language publications. Some Danish terms are also more eloquent than their English counterparts and have been used to simplify the text, for example *Kejserkrig* is used instead of 'the Danish involvement in the Thirty Years War'. A glossary of the more commonly used terms is provided.

The translation of early 17th century texts is never easy and the original of all foreign texts is therefore given first, with a literal, and sometimes approximate, translation following. This may interrupt the flow of the text to some extent but it was felt important to cite the original text to minimise the risk of any errors or misinterpretations in translation being perpetuated.

The original units of measurement have been used throughout but where possible the S.I. equivalent is also given. The Danish monetary system saw many changes throughout Christian IV's reign and they are discussed at length in Chapter 3. Although the *rigsdaler* is generally taken as £0.25 during this period it was felt that the conversion of figures would only serve to further complicate matters.

## Glossary

<i>Alen</i>	Ell
<i>Bådsmænd</i>	Seamen
<i>Danske kancelli</i>	Danish Chancellery
<i>Håndfæstning</i>	Accession charter
<i>Kejserkrig</i>	The Danish involvement in the Thirty Years War (1625–29)
<i>Kongens eget kammer</i>	The King's own Chamber
LBP	Length between stem and stern posts
Lk	Keel length
<i>Len</i>	A local administrative region
<i>Lensmænd</i>	The local administrative official
<i>Mestersvend</i>	Senior craftsman
<i>Rentekammer</i>	Treasury
<i>Rentemester</i>	Official in charge of the <i>rentekammer</i>
<i>Rigsadmiral</i>	Lord High Admiral
<i>Rigshofmester</i>	The highest state official
<i>Rigsråd</i>	Council of the realm
<i>Skriver</i>	Clerk
<i>Stændermøde</i>	Meeting of the Estates General
<i>Svend</i>	Craftsman
<i>Torstenssonkrig</i>	The Danish–Swedish War (1643–45)
<i>Tyske kancelli</i>	German Chancellery



**PART A**

**THE DANISH STATE  
AND ITS NAVY**

## **1. The Function of Christian IV's Navy**

### **1.1. The Danish Navy in Europe**

The age of Christian IV (1596-1648) was a period of great change throughout Europe with religious strife and dynastic disputes resulting in a state of recurrent and protracted warfare. It was also a period which saw many countries going through crucial phases in their evolution from medieval feudal states into modern nation states with central governments and state controlled armies and navies. These changes significantly altered the political geography of Europe as the power of different states grew or declined, both through the fortunes of war, and through states developing more modern systems of government at different rates.

Nowhere was this change more evident than in the maritime powers. In the early 16th century Spain, Portugal and the Mediterranean powers were the main political and economic forces on the seas of Europe. However, the rise of the Dutch republic and the expansion of English shipping in the late 16th century saw a significant shift in power from Southern to Northern Europe. The northern powers had developed the new technology of the heavily armed sailing ship which could easily defeat the galleys of their southern adversaries. The impact of this technology saw the decline of the Mediterranean powers and the rise of the Atlantic powers. Spain and France held a foot in both camps and the early 17th century saw them trying to adapt to the changing balance of power with very different results. France made a conscious decision to become an Atlantic power in the 1620s and succeeded remarkably well, while Spain remained torn between the two seas and by the mid 17th century her naval influence had seriously begun to decline<sup>1</sup>.

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1. Jan Glete, *Navies and Nations: Warships, Navies and State Building in Europe and America, 1500-1860*, (Stockholm, 1993), I, 102-72.

In the Baltic Sweden and Denmark had eclipsed the power of the Hanse in the early 16th century to become the most powerful maritime states, but the Baltic itself remained largely on the periphery of European affairs until the rise of England and the Netherlands as maritime powers in the late 16th century. England's forest resources were becoming depleted and the Dutch had little to start with, therefore the trade in shipbuilding timber and other naval stores from the Baltic became essential to their survival as maritime powers. Control of the Baltic trade therefore took on massive significance and, with Denmark controlling entry to the Baltic, she acquired increasing economic and political weight in European affairs. To safe-guard this position of power the Danish navy expanded well beyond its previous level.

However, changing political geography was not the sole reason for the expansion of the Danish navy. The early 17th century was also the age of mercantilism and expanding commercial empires, with for example the Dutch and English governments fostering the development of East India companies. Christian IV was not one to let a good idea pass and firmly embraced the idea of mercantilism, establishing the Danish East India Company and many other state controlled shipping, trading and manufacturing companies. Denmark also had a potentially major advantage over her commercial rivals in that she claimed sovereignty in the northern seas. This provided certain benefits such as fishing and whaling rights, but it also meant that if the North East and North West passages, which were being so eagerly sought in the early 17th century, were found then she would be able to exploit any trade passing through them to the full. With this expansion of maritime trade and exploration the Danish navy needed to expand, both to safeguard Denmark's own trading interests and to fully exploit her right to levy tolls on foreign shipping in Danish sovereign waters.



The late 16th and early 17th centuries were also the time of the 'military revolution' in Europe which saw the size of armies and navies expand rapidly as the scale of warfare grew<sup>2</sup>. The navies of England, France, the Netherlands and Sweden all grew significantly, both in terms of the number of ships in the fleet and the size of individual ships. Christian IV recognised that if Denmark was to survive as a European maritime power then she too must keep up with these developments.

However, Denmark did not simply respond to changes elsewhere and in many ways Denmark was one of the leading nations in the naval side of the military revolution. In terms of the size of the navy, the size and design of its ships, and in the development of dockyard facilities Denmark was certainly at the forefront of developments. However, mere possession of a large fleet was no guarantee of success and when it came to naval tactics Denmark proved not to be so well advanced.

Another important aspect of the military revolution was the growing centralisation of government and the development of bureaucracies to administer the growing burdens of the state. In this process navies became much more a part of government and therefore took on far greater political importance than ever before. The obvious effect was on foreign policy, where political decisions regarding the navy could significantly alter a country's position, such as the decline of Spain as a maritime power under Olivares, who unsuccessfully attempted to maintain a diverse range of naval interests, and the rise of France as a result of Richelieu's policy of establishing France principally as an Atlantic naval power. However, navies could also play an extremely important role in internal state

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2. There is a growing literature on the theory of the military revolution. The more significant works are: Geoffrey Parker, *The Military Revolution: Military Innovation and the rise of the West, 1500-1800*, (Cambridge, 1988, 2nd. edition 1996); Jeremy Black, *A Military Revolution?: Military Change and European Society 1550-1800*, (Basingstoke, 1991); Clifford J. Rogers (ed.), *The Military Revolution Debate: readings on the military transformation of early modern Europe*, (Oxford, 1995).

politics, largely as a result of their massive expense, which can be seen to dramatic effect in the consequences of Charles I's 'ship money' policies.

Both foreign and internal politics played a major part in the development of Christian IV's navy. Apart from the obvious power struggle with Sweden in the Baltic the navy played an important role in Christian IV's policy of bringing Denmark much more into the mainstream of European affairs. His desire to see Denmark as a major European power, rather than simply a Baltic power, can be seen in his attempts to improve the status of his court by bringing in artists, architects and musicians from all over Europe to try and transcend its previous image as crude and uncultured. The navy, as an adjunct to the court, received similar attention and craftsmen were specially imported to build a more European style navy. Christian IV's visit to England 1606 was the most blatant use of the navy as a diplomatic tool to display to the rest of Europe the growing stature of Denmark, but there were numerous other occasions where the splendour of his new navy was used simply to impress foreign powers, such as at the royal wedding celebrations in 1635. Paradoxically the navy was only ever used in anger in the Baltic and the event that brought Christian IV really onto the European stage, his entry into the Thirty Years War, had little to do with the navy.

The Danish navy also played an equally important role in internal politics and become an important element in the process of Denmark's transition from a feudal society to a modern state. As we shall see in Chapter 2, the question of who controlled and financed the navy was one of the key issues that dominated the constitutional power struggle between the king and his council. Christian IV deliberately built up his navy to increase his own power and prestige in the face of direct opposition from his council. This constitutional crisis lead ultimately to the



abolition of the council and the establishment of an absolute monarchy in 1660. The difficulties in financing the navy also had an important effect on the modernisation of the Danish economy into a tax state<sup>3</sup>. Admittedly neither of these changes were completed under Christian IV, but he was undoubtedly responsible for precipitating the crisis in the first place by his extravagant spending on the court and navy.

Christian IV's navy therefore became very much a symbol, both of Denmark's growing aspirations in Europe and of the growing power of the king in his own country. However the role of the navy in protecting Denmark's sovereignty in the Baltic remained its main function and it is to this role that we must first turn our attention.

## 1.2. *Dominium Maris Baltici*

The primary aim of Christian IV's navy was without question to maintain the Danish claim to the *dominium maris Baltici*, the dominion of the Baltic Sea. The foundations of this claim lay in the Kalmar Union of 1397 when Denmark achieved dominance over all the Scandinavian lands stretching from the River Elbe in Holstein right round to Finnish Karelia. However, despite possessing all these coastal territories Denmark could not become a significant maritime power while the Hanse, the league of north German towns, controlled virtually all maritime trade in the Baltic.

A significant change came in the late fifteenth century when the arrival of Dutch and English traders in the Baltic saw the influence of the Hanse wane. This fragmentation of commercial power enabled Denmark to impose heavy tolls on shipping passing through the Sound, and her naval strength began to be steadily increased to enforce these tolls.

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3. The most important works on the transformation of the Danish economy are: E. Ladewig Petersen, 'From Domain State to Tax State', *Scandinavian Economic History Review*, 23 (1975), 116-48; Steffen Heiberg, 'De ti tønder guld: Rigsråd, kongemagt og statsfinanser i 1630'erne', *Historisk Tidsskrift*, 76, (1976), 25-58; Jens Engberg, *Danske finanshistorie i 1640'erne*, (Aarhus 1972); and Leon Jespersen, 'The *Machtstaat* in Seventeenth-century Denmark', *Scandinavian Journal of History*, 10 (1985), 271-304.

Ironically at the very time when the Hanse domination was coming to an end the Kalmar Union was also fragmenting. Sweden under Gustav Vasa once more become an independent power and began to assert her influence on Baltic trade. As a result of the so-called 'Count's War' (1534-35) the power of the Hanse was finally broken, but the threat to the Danish claim of dominion had, in the space of just a few years, been substituted by that of Sweden<sup>4</sup>.

Whilst Danish claims to the *dominium maris Baltici* were more or less justified by her geography, her claim to dominion over the southern Baltic coastal waters was less justifiable. Admittedly Denmark had owned possessions in Estonia and Finland but these had been ceded as far back as the 14th century. The impending collapse of Livonia in the 1550's, however, brought to a head the struggle for naval dominion in the Eastern Baltic. Denmark bought back the island of Øsel and a small foothold on the Livonian mainland, while Sweden, Poland and Muscovy fought over the remaining lands. Sweden's eastern expansion and growing claims for the *dominium maris Baltici* for herself angered Denmark, and the accession in close succession of two highly ambitious and warlike monarchs, Frederik II in Denmark, and Erik XIV in Sweden, made war inevitable<sup>5</sup>.

Although the cause of the Northern Seven Years War (1563-70) was nominally about the use of the symbol of the three crowns in the regalia of the two countries, the primary aim for Denmark was undoubtedly to once more subject Sweden under a restored Kalmar Union, and to gain undisputed dominion over the Baltic. The war at sea proved disastrous for Denmark, and Sweden was able to defeat the combined fleets of Den-

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4. David Kirby, *Northern Europe in the Early Modern Period: The Baltic World 1492-1772*, (London, 1990), 61-2.

5. Stewart P. Oakley, *War and Peace in the Baltic 1560-1790*, (London, 1992), 29-31.



mark and Lübeck time after time<sup>6</sup>. The almost complete destruction of the Danish fleet in a storm in 1566 effectively rendered Sweden the master of the Baltic<sup>7</sup>. However the dramatic gains by Sweden at sea were more than matched by Danish gains in the land campaign, and the resultant peace treaty proved much more favourable to Denmark.

The Treaty of Stettin was an unsatisfactory affair and was more of a formal cease-fire than a true peace treaty. The principal area of dispute was not resolved but merely postponed, and the unworkable compromise over the Livonian lands allowed Sweden to continue her expansionist ambitions in this area. The only decisive result was the agreed ransom for the return of Älvsborg to Sweden. The war had sown the seeds of bitter hatred between the two nations and the inconclusive peace treaty made a further outbreak of hostilities inevitable at some stage<sup>8</sup>.

The uneasy peace allowed Sweden to continue her campaign for territorial gains in the eastern Baltic, while in Denmark the war-weary Frederik II licked the wounds of his navy and set about reforming the state administration. It is a mystery why Sweden after having fought so hard to achieve dominance in the Baltic then allowed her navy to deteriorate after Erik XIV's death, but the financial strictures of the Stettin peace and the growing commitment of land forces in Livonia no doubt played their part. So while the Swedish navy gradually deteriorated to virtually nothing but small inshore craft in a poor state of repair by the end of the century<sup>9</sup>, Frederik II set about strengthening his navy, its dockyard and administration.

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6. R.C. Anderson, *Naval Wars in the Baltic 1522-1850*, (London, 1910), 4-16.

7. R. Nisbet Bain, *Scandinavia: A Political History of Denmark, Norway and Sweden from 1513 to 1900*, (Cambridge, 1905), 79-81.

8. Leo Tandrup, *Mod triumf eller tragedie*, (Aarhus, 1979), I, 62.

9. Michael Roberts, *Gustavus Adolphus: A History of Sweden 1611-1632*, II, (London, 1958), 285-6.

The quest for domination of the Baltic was no vain geopolitical pursuit. The levy of tolls on the vast volume of shipping passing through the Sound provided the Danish monarchy with massive financial resources which could be used without any authorisation from the *rigsråd*. The basis for the right to levy these tolls was that the Sound was regarded as a 'stream' passing through Danish territory. Although this was a rather dubious claim even Grotius, the champion of the *Mare Liberum*, acknowledged that enclosed seas and straits occupied on both shores could be regarded as sovereign territory, and tolls charged accordingly<sup>10</sup>.

The Sound tolls were first imposed in the 1420s to compensate for the fishing revenues lost when the herring migrated from the Baltic<sup>11</sup>, and as Dutch and British trade grew through the sixteenth century their value steadily increased. Then in 1567 Frederik II altered the assessment of levies from the ships themselves to their cargoes, which virtually trebled the revenue within the space of a year<sup>12</sup>.

Although Denmark's naval strength had diminished slightly during the minority government (1588-1596), this was the situation inherited by Christian IV. The Hanse had been ousted from their dominant position, Sweden's once victorious navy had all but vanished, and Denmark was reaping the benefits of the Sound tolls. However, Swedish gains in Livonia and the prospect of a united Polish-Swedish state under Sigismund, pointed to the storm clouds gathering over Denmark's Baltic domination. But, for the moment, with the possession of the strategic line of islands of Bornholm, Gotland, and Øsel stretching between Sweden and the continent, Denmark could be considered the undisputed master of the Baltic Sea.

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10. T.W. Fulton, *The Sovereignty of the Sea*, (Edinburgh, 1911), 347-50.

11. Charles E. Hill, *The Danish Sound Dues and the Command of the Baltic*, (Durham, N.C., 1926), 11-12.

12. Kirby, *The Baltic World*, 99.



This situation did not last long, however. Sweden had gained permanent control of Estonia and Narva in 1595, and then joined the war of succession in Muscovy in search of further territorial advantage in the area. The election of Sigismund III, rather than uniting Sweden and Poland, occasioned a bitter war between the two countries, and the subsequent privateering and blockading by the two countries significantly affected Denmark's toll revenues.

Also affecting Sound toll revenues was the free trade agreement between Denmark and Sweden, dating from the time of Hanse domination. Initially this exemption from paying Sound tolls made little impact since most of Sweden's comparatively negligible trade went via the southern Baltic ports. However from around 1600 her exports of iron, copper and forest products steadily increased and foreign goods were now also beginning to be carried in Swedish owned ships<sup>13</sup>. This double blow to Sound toll revenues, and therefore royal power, was not taken lightly by Christian IV.

From the very start of his reign Christian IV was clearly bursting to re-open the unfinished business of the Northern Seven Years War, and finally give to Sweden the blow which would enable the restitution of the Kalmar Union. The territorial gains of Sweden in the eastern Baltic and the subsequent disruption of trade there, as well as the issue of Sound toll exemption, provided only some of many excuses for Christian IV to declare war and after many years of wrangling with the pacific *rigsråd* he finally manipulated their consent in 1611.

The much strengthened navy proved a valuable tool in the ensuing Kalmar War (1611-1613). The poor Swedish fleet dared not risk a full scale naval encounter and resorted solely to opportunistic harrying of the Danes. Such was the Danish superiority that on more than one occasion

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13. Tandrup, *Mod triumf eller tragedie*, I, 67-70.



the Swedes scuttled their ships rather than risk defeat and see their ships incorporated into the Danish navy. This naval superiority left the Danes free to bombard coastal defences almost at will and enabled the capture of both Kalmar and Älvsborg. It was also able to enforce a successful blockade of Sweden, preventing goods and mercenaries coming in from either the west or the south. However, it was unable to strike the final blow and completely eradicate the Swedish navy, as at one stage seemed possible<sup>14</sup>.

Despite the overwhelming Danish success at sea the land campaign reached a stalemate, with Denmark having achieved the greater success. The young Gustav Adolf inherited a kingdom at war on three fronts and with the advice of Oxenstierna sued for peace with Denmark to concentrate on Sweden's campaigns in the east<sup>15</sup>.

The resultant Knærød peace treaty on the surface reflected the Danish victory, with Sweden capitulating to almost all of the Danish demands. However, Christian IV had been unable to deliver the crushing victory he had hoped for and Danish territorial gains were minimal. Sweden gave up her claims on Finmark and the fort of Sonnenburg on Øsel, and Älvsborg was ransomed at a price of one million *rigsdaler*, which Christian IV confidently hoped would prove impossible and therefore default to Denmark. However, this was hardly adequate territorial compensation for Swedish advances in the east if Denmark was to preserve its balance of power in the Baltic. The free trade agreement was also reinforced and Sweden was granted permission to levy tolls on shipping at Riga.

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14. Anderson, *Naval Wars in the Baltic*, 29-35.

15. Oakley, *War and Peace*, 48-9.

The harsh terms of the treaty with respect to the Älvsborg ransom in fact proved much more to Sweden's benefit in the long run. Britain and the United Provinces feared for the consequences of Danish aggrandisement on their trade. The Sound tolls had been increased for the duration of the war and official Dutch protests were met with an arrogant dismissal by Christian IV. Alarmed at this disrespect and the prospect of a Danish monopoly in the Baltic they allied themselves with Sweden as a safeguard against any further machinations by Denmark. This fifteen year defensive alliance proved invaluable to Sweden, who had previously been without any western allies at all, and to a large extent made possible the payment of the Älvsborg ransom<sup>16</sup>. Ominously the Dutch also promised to respect Sweden's *dominium maris Baltici*<sup>17</sup>.

The Knærød treaty has been likened to the Versailles peace treaty<sup>18</sup> and was regarded by all the players as unsatisfactory. There is no doubt that Gustav Adolf concluded peace to play for time whilst he dealt with Sweden's conflicts in the east, and that he would later come back to the conflict with Denmark at a more advantageous time. Christian IV had failed in his primary objectives and the harsh terms back-fired in his standing in international diplomacy. Further conflict would prove inevitable between the two nations in their fight for Baltic supremacy. As Leo Tandrup put it: it was a bad war and it resulted in a bad peace<sup>19</sup>.

Peace with Denmark enabled Sweden to push her advantage in her fight with Muscovy and the territorial gains from the resultant Stolbova peace treaty of 1617 gave her an unbroken coastline from Kalmar through

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16. Roberts, *Gustavus Adolphus*, I, 71-2.

17. Oakley, *War And Peace*, 53.

18. Kirby, *The Baltic World*, 143.

19. Tandrup, *Mod triumf eller tragedie*, I, 219-223.



to Estonia. In its turn the Stolbova peace enabled the Swedish fight to be concentrated against Poland and after faltering gains in Livonia, Riga was captured in 1621, and Danzig subjected to an enforced neutrality in 1623.

Whilst these Swedish gains were being added to her growing empire the issue of free trade with Denmark was being stretched to breaking point. Sweden had imposed an indirect sales tax which was seen by Danish merchants as a toll in contravention of the Stettin agreement. In addition Sweden was now levying tolls on the southern Baltic and was attempting to gain exemption from the Sound tolls for trade with her newly gained territories.

This was clearly a threat to Danish sovereignty in the Baltic and in 1622 Christian IV gained the *rigsråd's* sanction to resist this threat by banning the transport of Swedish war goods through Danish sovereign waters.<sup>20</sup> Christian IV also banned all warships and war materiel from passing the Sound and sanctioned high handed and malicious customs inspections on all Swedish shipping. Finally in 1623 tolls were imposed on Swedish shipping as a direct retaliation over the sales tax issue<sup>21</sup>.

Christian IV was keen to deliver a decisive show of force to preserve his supremacy against Sweden. However, in the meantime Gustav Adolf and the Swedish *riksråd* had concluded a truce with Poland and were well prepared to meet any Danish aggression. Only the Danish *rigsråd* sought to preserve the peace and forced a border meeting at Knærød in 1624. Despite blustering threats from Christian IV he knew that his army and navy had been starved of funds by the *rigsråd*<sup>22</sup>, and were in no fit state to engage a battle-ready Swedish force. The Swedes

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20. The *rigsråd* for the first time acknowledged and defined the limits of Danish sovereignty in the southern Baltic at this time. Rådets betænkning, 6 July 1622, Kr. Erslev, *Aktstykker og oplysninger til rigsraad og stændermødernes historie i Kristian IV's tid*, (København, 1883-90), I, 336-7.

21. Tandrup, *Mod triumf eller tragedie*, II, 539.

22. Erslev, *rigsraad og stændermødernes historie*, I, 401-2.



also knew they held the upper hand and tried to use their superiority to wrest control of the Sound from Denmark. In this they failed, but on all other points Christian IV was forced to agree to a humiliating capitulation which re-imposed the former free trade agreement and ensured free passage of Swedish war materiel through the Sound<sup>23</sup>.

The 1624 Knærød incident marks the decisive moment when the *dominium maris Baltici* slipped permanently from Denmark's grasp. The relative power of the two Baltic nations was now finely balanced, but with the scale inexorably tipping in Sweden's favour<sup>24</sup>. Before the treaty Denmark was recognised as the superior Baltic power but a humiliating climb down at once strengthened Sweden's and diminished Denmark's standing in international circles.

Meanwhile Christian IV's expansionist policy in northern Germany had not been as successful as he might have hoped. In an effort to retain his standing in international affairs after the Knærød treaty he hastily concluded an agreement with England which allowed him to lead the fight in Germany as head of the Evangelical League. A quick success here he hoped would also strengthen his position in relation to Sweden<sup>25</sup>.

Denmark's involvement in the Thirty Years War (1625-29), known as the *Kejserkrig*, made little demands on the navy in the Baltic, apart from coastal blockades, until the latter stages of the war. This dramatically changed in 1627 when Imperial troops overran Jutland, and threatened to push on to take the Danish islands. Superior Danish naval strength was instrumental in thwarting this threat, and the *rigsråd* noted that the

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23. Tandrup, *Mod triumf eller tragedie*, II, 335-352.

24. Roberts, *Gustavus Adolphus*, I, 234.

25. Tandrup, *Mod triumf eller tragedie*, II, 542.

navy was 'al Danmarkis (nest Gud) den største defens udi dene besværlige tid' (all Denmark's greatest defence, next to God, in these troubled times)<sup>26</sup>. However, Denmark's disastrous land campaign had led the Habsburgs to contemplate the possibility of taking control of the Baltic for themselves and a grand plan was conceived which would unite the Spanish and Polish fleets in the Baltic. Preparations were also begun in Wismar for the building of an Imperial fleet and in 1628 Wallenstein assumed the grandiose title of General of the Baltic and Oceanic Seas<sup>27</sup>.

To combat this threat Sweden agreed to support Denmark in her fight and a three year alliance was concluded in April 1628. This was no great pact of friendship but a tactical manoeuvre which both sides hoped would preserve their national security. After Jutland had been overrun Denmark was wary of a threatened sea-borne invasion of her islands and was keen to sue for peace on favourable terms. An alliance with Sweden greatly strengthened her bargaining position. Sweden, on her part, knew that if Denmark capitulated there would be little to stop the Imperial forces from launching an attack against her. Gustav Adolf had also made the decision to involve himself in the German war but needed Denmark to maintain the fight until his war with Poland was ended and Sweden was in a more able position to launch an attack in Germany. By the terms of the treaty Sweden was to provide eight warships to strengthen the Danish navy and in return Denmark was to stop the passage of any ships sailing to Danzig. Although the treaty was limited it was significant in that the two Scandinavian powers suspended their contest for the *dominium maris Baltici* to see off the threat from a third party<sup>28</sup>.

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26. Erslev, *rigsraad og stændermødernes historie*, II, 50-1.

27. Kirby, *The Baltic World*, 170-2.

28. Roberts, *Gustavus Adolphus*, II, 351-6.



The test of the alliance was not long in coming. Wallenstein had found Wismar an unsuitable naval base and had therefore also decided to take Stralsund, and laid siege to the town in May 1628. An Imperial victory here would give them control of virtually the whole north German coast, the consequences of which would have been grave for both Denmark and Sweden. The relief of the siege by the combined Scandinavian forces gave each party what they wanted. Denmark had gained an important bargaining counter for her peace negotiations, and Sweden had gained a foothold in north Germany and a valid excuse for entry into the conflict.

In 1629 the Danish navy was able to further strengthen Denmark's hand in the peace negotiations. One squadron mounted a successful blockade of Wismar, whilst a force of 150 warships and transports enabled the landing of ten thousand troops in Slesvig to cut off the Imperial forces in northern Jutland<sup>29</sup>.

Despite these successes the terms demanded for peace were still unacceptable to Christian IV. In a last throw of the dice he invited Gustav Adolf to a border meeting at Ulvsbäck. Ostensibly this was to discuss how the two countries might defeat the Habsburgs maritime pretensions once and for all. However Christian refused to co-operate on any matter and the meeting ended in acrimony. The meeting had, however, served its true purpose for Christian IV in displaying a facade of Scandinavian unity. Wallenstein hurriedly settled the peace negotiations which proved more than generous to Denmark in the circumstances. The treaty of Lübeck has been described as 'the greatest diplomatic coup in Danish history'<sup>30</sup>, and although Christian IV was excluded from the Lower Saxon Circle, no Danish territory was lost, nor did Denmark have to pay any

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29. Anderson, *Naval Wars in the Baltic*, 43.

30. Paul Douglas Lockhart, *Denmark in the Thirty Years' War, 1618-1648: King Christian IV and the Decline of the Oldenburg State*, (London, 1996), 205.



form of reparation.

Christian IV may have succeeded in his short term aims with his pretence at Ulvsbäck but the long term consequences were bleak. If Gustav Adolf were to fail to keep the Imperial forces at bay the Baltic would then be open to Habsburg domination. However, if he were to succeed then Sweden would be the undisputed master of the Baltic. Either way Denmark had irrevocably lost her control. Coupled with this Christian IV had also lost the respect of her western allies and Denmark could no longer to be regarded as a European state of the first rank. The original aims of the war had been reversed completely and Christian IV's personal humiliation was total<sup>31</sup>.

Sweden's truce of Altmark with Poland, and the subsequent successes of Gustav Adolf in Germany left no-one in doubt as to who was the new master of the Baltic. Sweden controlled, and levied tolls on, virtually the entire southern Baltic coastline. Christian IV recognised the danger of Sweden enlarging its area of *Ius Dominij Maris Balticj*<sup>32</sup> and warned the *rigsråd* in 1630 that a fleet still needed to be maintained to prevent any further encroachment on Denmark's sovereignty, but Danish policy in the Baltic remained somewhat hesitant in the years immediately after the peace of Lübeck.

However, the death of Gustav Adolf in 1632 and the subsequent reverses experienced by the Swedes on the continent emboldened Christian IV to once again re-assert his claims on the Baltic<sup>33</sup>. He asked the *rigsråd* in December 1632 how 'Rigets Rettighed over Østersøen kunde

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31. Roberts, *Gustavus Adolphus*, II, 380-8.

32. Letter to *rigsråd*, 4 April 1630, C.F. Bricka & J.A. Fredericia (eds.), *Kong Christian den Fjerdes egenhændige Breve*, II, 258-9.

33. Hill, *Danish Sound Dues*, 102-8.

hævdes og en flaae holdes udrustet' (the state's sovereignty over the Baltic could be reinforced and a navy kept mobilised), to which they responded with the granting of a corn tax<sup>34</sup>. A naval rebuilding programme was also begun and the navy was put in a state of readiness in what amounted to a state of armed neutrality.

By the mid 1630s Christian IV was in a position to resume his aggressive attitude to Baltic politics. Prompted by the impending end of the truce between Sweden and Poland, the fleet was ordered to be as strong as possible in 1635 and 1400 new seamen were to be recruited<sup>35</sup>. This mobilisation may simply have been a precautionary measure but the fact that excuses were ready prepared for the Emperor in case he questioned the 'Starcke ausrustung zur Sehe'<sup>36</sup> (strong mobilisation at sea) would suggest that Christian IV saw the impending outbreak of hostilities as an opportunity to regain power over the Southern Baltic. The negotiations leading to the Peace of Prague in May 1635, which would have significantly strengthened the Imperial position in northern Germany, could also have also been a factor in Christian IV's thinking. In any case the Swedish-Polish truce was renewed and the peace of Prague proved to be elusive. The new recruits were stood down<sup>37</sup> and the main Danish fleet went after pirates off Norway instead.

Poland had now begun to be seen as a major threat to Danish pretensions in the Baltic with its small but growing fleet. It had also begun to levy tolls on shipping entering Danzig, clearly violating Denmark's claims of sovereignty. Christian IV met this threat with force

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34. Erslev, *rigsraad og stændermødernes historie*, II, 339.

35. Letter to *rentemestrene*, 13 February 1635, *egenhændige Breve*, III, 333-4.

36. Letter to Frederik Günther, 24 February 1635, *egenhændige Breve*, III, 340.

37. Letter to *rentemestrene*, 1 August 1635, *egenhændige Breve*, III, 411.



and two Polish warships were seized off Danzig in 1637<sup>38</sup>. He also had a pamphlet published in 1638 entitled *Mare Balticum* which laid out Denmark's claims to dominion, aimed at the Polish infringements<sup>39</sup>, and wrote directly to the king of Poland threatening action unless the Danish *dominium* was recognised<sup>40</sup>.

Christian IV's renewed aggressive Baltic stance soon made itself felt on his Sound toll politics and he began to regulate once more the passage of war goods through the Sound<sup>41</sup>. In 1639 the Sound tolls were raised by 1% while at the same time the units of measure were reduced, resulting in a virtual doubling of revenue<sup>42</sup>. This naturally infuriated the Dutch who sent a delegation to negotiate a reduction. This was met with belligerence by Christian IV and the Dutch attempted an unsuccessful boycott of the Sound. There then came rumours of a fleet of 300 Dutch sail which was to attempt to force the Sound without paying dues. This threat was met by an immediate mobilisation of the Danish navy and 35 warships assembled in readiness in the Sound<sup>43</sup>. Nothing actually came of the threat but Christian IV did relent to Dutch pressure and agreed to certain concessions, including the publication of the first table of tariffs<sup>44</sup>.

Dutch annoyance with Denmark was further compounded with the sending of a Danish ambassador to Spain and the apparent possibility of an alliance between the two countries. Sweden was also becoming incensed

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38. Anderson, *Naval Wars in the Baltic*, 46.

39. Hill, *Danish Sound Dues*, 108-9.

40. Letter to Frederik Günther, January 1638, *egenhændige Breve*, IV, 172-4.

41. Hill, *Danish Sound Dues*, 109-114.

42. Hill, *Danish Sound Dues*, 115.

43. Navy list 7 May 1640, *egenhændige Breve*, IV, 333-6.

44. Hill, *Danish Sound Dues*, 118-121.



with Denmark's increasingly aggressive and insensitive attitude. This reached a climax when Danish ships were used in the escape of the Swedish queen mother and her subsequent residence in Denmark. The natural conclusion was a renewed defensive alliance between Sweden and the Netherlands against Danish aggression, which was signed in 1640<sup>45</sup>.

During the 1640s Denmark continued her aggressive stance in the Baltic and there were numerous petty disputes over salutes and the like. Despite the raising of tolls in 1639 revenues began to decline once more in 1642, and to compensate ever more vigorous and thorough visitations were made on shipping passing through the Sound. Then in 1643 Denmark blockaded Hamburg and started to levy tolls on shipping off Rügen, which directly affected Swedish war supplies<sup>46</sup>. At the same time Christian IV was presenting himself as a mediator in the Thirty Years War, and although he was claiming impartiality, the Swedes naturally feared for the consequences of a peace brokered by her avowed enemy<sup>47</sup>.

The situation had now become intolerable to Sweden and in 1643 the *riksdag* resolved to proceed with a pre-emptive attack on Denmark with the intentions of removing Christian IV from the negotiating table and of gaining control of the Sound. Christian IV completely failed to see the impending danger, and the Swedes were able to capture Jutland almost unopposed. This was the start of the so-called *Torstenssonkrig* (1643-45).

The Swedish land forces were undeniably far superior to Denmark's but at sea the story was different. The Danish navy had been steadily built up during the 1630s while the Swedes had let theirs diminish while their war effort was concentrated in Germany. Although the Danish fleet was not in a state of readiness the timing of the Swedish attack in

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45. Hill, *Danish Sound Dues*, 122-3.

46. Hill, *Danish Sound Dues*, 131-2.

47. C.V. Wedgwood, *The Thirty Years War*, (Harmondsworth, 1957), 413.

December allowed a full mobilisation to be completed for the summer sailing season. To meet this threat Louis de Geer was charged with raising a fleet in the Netherlands to join the Swedes in the Baltic. Although official reaction by the States General was cool since Sweden had violated their treaty by declaring war without prior consultation, there were enough disgruntled merchants who jumped at the possibility of seeing the Danish control of the Sound broken to see a fleet of thirty sail assembled. They sailed initially to aid the Swedish forces in Holstein and before they could head for the Baltic they were met by two separate small Danish squadrons. These squadrons failed to link up but were able to inflict successive defeats on the Dutch who only just managed to escape before their complete destruction.

Meanwhile the Swedish navy was preparing to launch an attack in the Baltic and the Danish squadrons hastily made their way back. They returned to find that the Swedes had already captured the island of Femern and were about to launch an attack on Copenhagen. The two fleets met off Kolberger Heide and an all out battle between the two countries' navies was fought out. The result was hotly disputed with both sides claiming victory, but in the aftermath the Danes were able to command a position of strength by blockading the Swedes in Kiel fjord. However, despite continual Danish manoeuvring and abortive strikes the Swedes after three weeks were able to slip through the blockade at night, unnoticed by the Danes.

From a seemingly overwhelming position of strength Denmark now found herself hopelessly divided. The Swedes had escaped and at the same time a second Dutch fleet was entering the Baltic to join them. Christian IV made a decisive tactical error by dividing his fleet into three to search out both enemies at once. This policy met with disaster. The Swedes and Dutch managed to meet up unhindered and pounced on one of the smaller Danish squadrons. Of the seventeen Danish ships ten



were taken as prizes and only two made it back safely to Copenhagen. The balance of sea power had altered decisively in Sweden's favour and only the lateness of the season prevented an all out assault on Copenhagen. By the end of the campaign the Danish navy had lost around a quarter of its ships and over a third of its potential firepower. But despite this crushing defeat the Danish navy had succeeded in deterring a Swedish assault on the islands which, had it been successful, would have had disastrous consequences.

While these events were taking place an official Dutch navy under the command of de Witt had convoyed a fleet of merchantmen to the mouth of the Sound to ensure their free passage. The following year he returned with forty eight warships and convoyed the merchantmen through the Sound without paying any dues. The weakened Danish navy was unable to do anything but watch.

The peace negotiations were begun in 1644 and, with both the Swedish and Dutch navies free to sail the Baltic at will, Denmark had little option but to capitulate<sup>48</sup>. The Dutch fearing Swedish domination of the Sound were able to moderate some of the demands but the result was still a complete humiliation for Denmark.

Two separate treaties were signed with the Swedes and the Dutch reflecting their own interests. The treaty of Brömsebro gave Sweden and her newly conquered territories complete freedom from tolls, including war goods, and the hostile visitations were abolished; warships were allowed free passage through the Sound; the Danish Rügen tolls were abolished; Gotland, Øsel and Arendsborg were ceded to Sweden; and Halland was given over as surety for thirty years. All claims regarding the *dominium maris baltici* were also to be rescinded. The treaty of Chris-

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48. Hill, *Danish Sound Dues*, 142-7.



tianopol signed with the Netherlands limited the Sound dues to 1% *ad valorem* and all other ancillary charges were abolished. France, Britain and the Hanse towns also obtained similar treaties<sup>49</sup>.

Christian IV began his reign as undisputed master of the Baltic, with great hopes of extending his power base into Sweden and the continent. He ended it in humiliation, having lost control of the Baltic, and forced to accept a diminution of his powers in the Sound. After the Peace of Westphalia ended the Thirty Years War in 1648 Denmark found herself virtually encircled by Sweden and with her strength and reputation in Europe in tatters, which were the very results that Christian IV had striven so hard to avoid.

### 1.3. *Dominium Maris Septentrionalis*

Like the Baltic, the northern seas from Norway to Greenland were considered as sovereign possessions by the Danish-Norwegian monarchy. The basis for these claims were the two definitions recognised by international law for the right of sovereignty over open seas<sup>50</sup>. The first was that the seas in gulfs and bays of a country were held by that country. This justified earlier claims when it was believed that Norway was connected to Greenland and that the northern seas constituted one vast bay. Although this had long been proved to be erroneous the second definition, that if a country held the territory on both sides of a sea it could be considered sovereign, came into force. Norsemen had begun to settle Greenland in the 10th century and although no contact had been made since the 15th century Greenland was still considered to be a Norwegian possession. Possession of Iceland and the Faroes, as well as the continued

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49. Hill, *Danish Sound Dues*, 147-51.

50. Fulton, *Sovereignty of the Sea*, 3 & 35.

belief that the Orkneys and Shetland remained only in pawn to Scotland, further strengthened the claims to the so-called *dominium maris septentrionalis*<sup>51</sup>. Despite the tenuous nature of Danish claims they were strongly believed in and were driven by the same principles of *mare clausum* which governed her Baltic policies. If other nations were to use these seas then they must be prepared to pay for that privilege.

From the time of the Kalmar union the Danish monarch had lain claim to all the coastal waters of Norway and from 1523 an administrative centre was established at Vardøhus on the northern tip of Finmark. However it was not until 1586 that Frederik II formally claimed the whole of Finmark and Samiland for Denmark-Norway. The value of these northern waters had been increased dramatically in 1553 when Richard Chancellor succeeded in rounding the North Cape and reached the Dvina<sup>52</sup>. The resultant exploitation of the Russian trade by the English Muscovy Company provided a welcome source of revenue. The English at first hotly disputed the Danish right to levy tolls but in 1583 an agreement was reached whereby England paid an annual fee of 100 Rosenobler to Denmark for the right to sail these waters, thereby explicitly acknowledging Danish sovereignty. Similar agreements were also reached with France and Hamburg a few years later.

Much as this modest income was welcomed the potential of a North East Passage to the 'Indies' promised riches that would rival the Sound tolls and explains Denmark's determination to maintain control of these waters. Although the North East Passage proved impractical, unlicensed Russian trade did increase at a pace which eventually forced Christian IV

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51. Sune Dalgård, 'Østersø, Vestersø, Nordsø. Dominium maris Baltici & maris Septentrionalis 1638', *Historisk Tidsskrift*, 11 Rk. 5 Bd. (1956-59), 295-320.

52. Sir William Foster, *England's Quest of Eastern Trade*, (London, 1966), 8-12.



to establish a fort in 1642 to 'thuiinge alle dem, som søger *Archangelo* at giiffue sammestedt en anseendtlig toll' (enforce all those seeking Archangel to give there a considerable toll)<sup>53</sup>.

English attempts to find the North West Passage also excited the interests of the Danish monarchy. Danish claims over Greenland were at the moment undisputed, but if Denmark wanted to exploit this position and control all northern access to the Indies, and levy tolls accordingly, her sovereignty had to be reinforced. The tenuous geographical claim was strengthened by the equally tenuous belief that the Inuit were descendants of old Norse settlers from the 10th century. If Denmark-Norway could re-establish contact with its old 'colony' then her position would, she believed, be unassailable.

Frederik II sent two unsuccessful expeditions to Greenland in 1579 and 1581 but Christian IV greatly increased these efforts. Expeditions were sent out in 1605, 1606 and 1607 with the purpose of exploring the Greenland coast and formally claiming the land as Danish-Norwegian sovereign territory. There were also strong hopes of finding great mineral wealth<sup>54</sup>. These early expeditions were not entirely successful but at least they did reach their destination and returned with some promise. The final arctic expedition of Christian IV's reign was little more than a complete disaster. Jens Munk's well documented attempt to find the North West Passage in 1619 ended with the loss of all but two of the crew. A further expedition was planned in 1621<sup>55</sup> but the understandable lack of volunteers ended Danish hopes for Greenland for the time being<sup>56</sup>.

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53. Letter to Corfitz Ulfeldt, 29 March 1642, *egenhændige Breve*, VIII, 165-6.

54. Finn Gad, *Grønlands Historie*, (København, 1967), I, 264-83.

55. Letter to Christian Friis, 10 March 1621, *egenhændige Breve*, I, 199.

56. Thorkild Hansen, *Jens Munk*, (København, 1965), 357-360.



Although the promise of great riches from tolls on the North East and North West Passages was to remain nothing more than a dream there were very real riches to be had from the fishing and whaling industries. Both England and the Netherlands were very active in the northern waters and both contested Denmark's right to claim sovereignty and espoused the right of freedom to fish in open waters. The English case was weakened by intermittently agreeing to pay for fishing licences but the Dutch steadfastly refused to acknowledge any claims to sovereignty of the seas and championed the concept of *Mare Liberum*. The discovery of Spitzbergen and its rich whaling grounds further complicated matters. Although the Dutch claimed discovery in 1596 the English were the first to exploit the whaling and claimed the islands as sovereign territory in 1613. The Dutch retaliated in force in following years and attempted to negotiate the division of sovereignty of the island with England. The result was that English, Dutch and French whaling stations were established, and English and Dutch warships sailed, in an area which Christian IV regarded as unquestionable Norwegian sovereign territory<sup>57</sup>.

This situation led to numerous violations of Denmark's supposed sovereignty, and the diplomatic correspondence with Denmark is littered with disputes over fishing and trading rights. The Hanse monopoly in the Icelandic trade with Denmark was rescinded in 1602 and transferred to Danish merchants<sup>58</sup> and Christian IV's instructions to a policing expedition in 1618 clearly outline his policy on Norwegian waters:

paa ueien allestedtz Erfhaare, om nogen, Ihuad Nation hand uerre  
kan, paa Norriess reffuerer eller strømme y nogen maade wlofflig  
fiiskeri eller handel vden Pass bruger

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57. Fulton, *Sovereignty of the Sea*, 181-4.

58. Ole Feldbæk, 'The Danish Trading Companies of the Seventeenth and Eighteenth Centuries', *Scandinavian Economic History Review*, 34 (1986), 211.

on the way always ensure that no-one, whatever their nationality, in any way carries out any illegal fishing or trade on Norway's coast and rivers without a pass<sup>59</sup>.

He also attempted to forbid all foreign whaling off the coasts of northern Norway, Iceland, the Faroes and Greenland. Clearly he was determined that only Denmark would gain from exploiting these seas.

Several private merchant companies were encouraged to do just this, and Christian IV even involved himself with a whaling enterprise from 1619-22 when Danish warships were used, rather unsuccessfully, to catch whales<sup>60</sup>. The Greenland Company of 1635 was intended to exploit the Greenland whaling but also raised hopes of re-colonisation of that country for a time. By far the most important of these companies though was the Icelandic Company. This received the grant of a monopoly in 1619 for trading and fishing in the area and became the principal importer of fish into Denmark. The company had bases in Copenhagen and Glückstadt and operated a very considerable fleet of cargo ships and large armed merchantmen, which were occasionally requisitioned by the navy.

However, Danish hopes of monopolising the northern seas were clearly forlorn. Danish capital and expertise were far too limited, relying largely on imported Dutch and Biscayan technology and business methods, to fully establish any Danish supremacy. The area was also far too vast to police effectively and the riches too great a temptation to be overlooked by other nations. A change in whaling methods during the 1630s further reduced the Danish hold on the trade. Instead of requiring a coastal base to render the oil this was increasingly done aboard ship and

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59. 22 April 1618, *egenhændige Breve*, I, 138-9.

60. Sune Dalgård, *Dansk-Norsk hvalfangst 1615-1660*, (København, 1962), 413-429.



despite Danish claims to sovereignty over all northern coastal areas there was little that could be done to prevent ships sailing freely in the open seas. This was recognised in 1641 when Denmark was forced to concede to Dutch pressure for rights to uncharted whaling at sea, ending all hopes of a Danish monopoly<sup>61</sup>.

The problems of effectively policing the northern seas are well illustrated by a voyage undertaken in 1616 by Jøn Olafsson<sup>62</sup>. He sailed from Copenhagen with six ships up the Norwegian coast to Vardøhus and the Kola peninsula, then on to Iceland, the Faroes, and back to Norway before returning to Copenhagen. During the 22 week voyage they encountered only one small convoy of Hamburg merchants sailing to Archangel, whose papers were in order. On the way the ships nearly ran aground, two of them were separated in a storm, and there was an outbreak of scurvy. Although this was probably a much more extensive tour than usual it clearly shows the impossibility of one squadron of just a few ships patrolling the entire northern seas, especially given the heavy weather frequently encountered and the shortness of the season. In fact these difficulties meant that for all practical purposes the strictly regulated sovereignty was limited only to around 20 miles off the coast Norway and around the Atlantic islands<sup>63</sup>.

Fishing and the levying of tolls were not the only considerations to be taken account of in this area. The coast of Norway also had the added advantage to Denmark that it kept Sweden securely locked into the Baltic and therefore the politics of Baltic domination also encroach onto Norwegian waters. The only free access to the west that Sweden had outside the Baltic was the small strip of land between Danish Halland and Norway

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61. Dalgård, *Dansk-norsk hvalfangst*, 418.

62. *Memorier og Breve, I, Islænderen Jon Olafssons oplevelser som bøssekytte under Christian IV*, (København, 1966), 132-150.

63. Fulton, *Sovereignty of the Sea*, 527-8.



fighting was confined very much to the Baltic arena. The successful outcome of the war for Denmark further reinforced Danish sovereignty over all Norwegian waters up to Vardøhus, and to a lesser extent over the Kola peninsula as well. Christian IV also confidently believed that the seemingly impossible Älvsborg ransom would mean that this territory would also finally become Danish.

From the time of Christian IV's involvement in the Thirty Years War Danish interest in the northern seas waned significantly. The increasingly difficult political situation in the Baltic and northern Germany took first priority and the worsening financial situation made effective policing of the northern seas impossible. The area could not be completely neglected however, and the solution arrived at were the so called *defensionskibe*.

Norwegian complaints over increasing piracy at the Oslo *stændermøde* in 1628 resulted in an ordinance of 1630 whereby each Norwegian *len* was to build from one to four specially designed ships, providing a dedicated Norwegian fleet of 21 ships<sup>65</sup>. These ships, in contrast to the small galleys and skerry-boats formerly used for coastal defence, were designed as ocean-warships. They were also able to be used as merchantmen, trading with special privileges, and were operated by private individuals. As their name suggests they were primarily intended for coastal protection but they could also be enlisted into the main fleet in times of emergency. The result was that the Norwegian coasts were patrolled by locally maintained ships, theoretically leaving the main Danish fleet free for other purposes.

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65. Yngvar Nielsen, *Jens Bielke til Østråt* (København, 1872), 158-60.

The Danish navy did not, however, abandon the northern seas altogether. Periodic shows of strength were undertaken to maintain Danish claims of sovereignty, especially with respect to Spitzbergen. Warships were sent there in 1637 and 1638 to attack the French and Dutch whaling stations<sup>66</sup> and it was finally established as Norwegian sovereign territory in 1643, although by this time its significance to the whaling industry was minimal. Christian IV also continued to make a point of sailing the Norwegian waters himself right up to 1646<sup>67</sup> and Danish warships continued to be used to protect the Icelandic fishing grounds and trade routes.

#### 1.4. The Exploitation and Protection of Trade

Another important role for the Danish navy was to support Christian IV's ambitious mercantilist politics. They did this by three different methods. The first was for warships to take part in trade themselves, the second was to protect merchant shipping by keeping the seas clear of pirates and convoying merchant fleets in times of danger, and thirdly, and by far the most important economically, to enforce the collection of tolls in Danish territorial waters.

The first trading company, and the most important as far as naval participation was concerned, was the Danish East India Company. This received its charter in 1616 and was originally a private venture based largely on the Dutch East India Company, with Christian IV as one of the principal shareholders. The vessels involved in the trade were a mixture of small naval warships and merchant ships, but the distinction was blurred greatly by the king's active involvement in the company. This involvement increased from 1630 when the company essentially became a royal concern, trading insolvently, but maintained simply to bolster the

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66. Dalgård, 'Østersø, Vesterø, Nordsø', 311.

67. H.D. Lind, *Kong Kristian den Fjerde og hans Mænd paa Bremerholm*, (København, 1889), 10.



king's prestige at home and abroad. Vessels such as the *Christianshavn* were company owned ships, but were manned to a large extent by naval personnel and received spares and victuals from the naval dockyard.

The number of purely naval vessels involved was not great, around eight ships over a twenty year period, but the method of Danish trade meant that they could be away from home for several years<sup>68</sup>. In contrast to the Dutch and English companies the Danes principally traded amongst merchants in the east, rather than sending regular cargoes back and forth to Europe. The dangers from the weather, and from Dutch and Portuguese competitors also took their toll on the ships with several being badly damaged and some lost altogether.

Another short lived trading company sought to exploit the supplies of ebony in Mauritius. The company had the backing of the king and the warship *Flensborg* was used on the one and only voyage between 1622-24<sup>69</sup>.

The trading companies in the northern seas did not use warships directly, although, as already mentioned, Christian IV was not above experimenting with warships in whaling expeditions. The navy's principal role in this area was to keep competitors at bay and to keep the seas clear of pirates. The Spanish Company was the only other trading company of any great significance to the navy. The involvement of naval vessels in this trade was minimal, involving only the occasional convoy duty when piracy was interfering with trade, but from time to time small warships were sent to trade Norwegian timber for Spanish salt<sup>70</sup>. Warships were also used fairly frequently to transport naval supplies to the dock-

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68. Sanjay Subrahmanyam, 'The Coromandel Trade of the Danish East India Company, 1618-1649', *Scandinavian Economic History Review*, 37 (1989), 41-56.

69. Sune Dalgård, 'Danish Enterprise and Mauritius Ebony 1621-24', *Scandinavian Economic History Review*, 4 (1956), 3-16.

70. Letter to *rentemestrene*, 6 August 1640, *egenhændige Breve*, IV, 376-7.



yard in tandem with the royal cargo fleet.

Piracy was evident on the Baltic to some extent, mainly by Swedish and Polish privateers, but the area known as the Vestersø, encompassing all waters from Spain to Norway, was notoriously infested with Pirates from England, Spain, Dunkirk and even Algiers. Action against pirates was sporadic and appears to have been driven to a large extent by public opinion. This was particularly the case with the hunt for Mendoza and his supposed brothers in 1615 and 1616. The mid 1630s proved particularly bad for Dunkirkers and in 1635 nine ships were used to convoy vessels from Norway and a total of 13 ships were sent after pirates in the northern seas<sup>71</sup>. The employment of warships against pirates was limited by the use of privateers, but unfortunately very little research has been carried out on Danish privateers in the early modern period<sup>72</sup> and it is impossible at this stage to quantify the number of ships involved, their impact on combating piracy or their economic significance. The issue also becomes confused with the Norwegian *defensionskibe*, which were also primarily intended to meet the increasing threat of piracy in the 1630s.

A much more important role, both politically and economically, for the navy was to enforce the collection of tolls from foreign shipping using Danish sovereign waters. This was closely linked with claims to sovereignty over the Baltic and the northern seas and little more needs be said about the importance of the Sound dues or of Danish aspirations for the control of the North East and North West Passages. The other principal area where the question of sovereignty and tolls occurs is in northern Germany.

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71. Letter to *rigsråd*, 1 December 1635, *egenhændige Breve*, III, 445-6.

72. H.C. Berg, *Dansk Marinehistorisk Bibliografi 1500-1975*, (København, 1975), 73.

Christian IV's position as Duke of Holstein dominated the claim to sovereignty in northern Germany. The Danish monarchy had long envied the trading superiority of Hamburg which, although located in Holstein, maintained a strongly guarded independence<sup>73</sup>. His establishment of the fortified port town of Glückstadt on the Elbe in 1616 was designed to divert trade away from Hamburg and to reinforce Christian IV's ambitions to command the estuaries of the Elbe and Weser<sup>74</sup>. He made his intentions perfectly clear when he stated that 'med Gudtz hielp ... bliiffuer Glycks-tadt En Bye och Hamborg En landsbye'<sup>75</sup> (with God's help Glückstadt will become a town and Hamburg a village). It would also thwart any Dutch plans to evade the Sound dues by the construction of a canal to the Baltic.

Christian IV's interest in the area was also closely linked with the struggle for Baltic supremacy. While Sweden increased her possessions in the eastern Baltic Christian IV recognised the need to counterbalance this with increased Danish control over the north German states. His position in the area was greatly strengthened by the appointment of his family members in the bishoprics of Bremen, Verden, Schwerin and Halberstadt, and resulted in his own election as Captain-General of the Lower Saxon Circle in 1625<sup>76</sup>.

The humiliation suffered in the Thirty Years War stripped Christian IV of his authority in the Lower Saxon Circle but strengthened his resolve to increase his powers as Duke of Holstein. This is seen in his decision to impose tolls on the Elbe. He obtained a grant from the Em-

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73. Johan Jørgensen, 'Denmark's Relations with Lübeck and Hamburg in the Seventeenth Century', *Scandinavian Economic History Review*, 11 (1963), 73-79.

74. Although sovereignty was claimed on the Weser and all ships had to strike their colours in recognition of this, no attempt was made to levy tolls there (*Kancelliets Brevbøger*, 8 July 1625).

75. Letter to Corfitz Ulfeldt, 17 June 1640, *egenhændige Breve*, IV, 358.

76. Roberts, *Gustavus Adolphus*, I, 197-99, & 242.



peror after signing the Peace of Lübeck in 1629 for the levying of tolls on the river. This incensed the town of Hamburg as, although it had actually acceded its sovereignty to Holstein in 1621, it still disputed the sovereignty of the river and claimed 'antient priuileges and the freedom of Commerce upon the River Elue for all people and all nations that use the same'<sup>77</sup>. To make matters worse they had been granted, just the previous year, a confirmation by the Emperor, of their exemption of all tolls on the river<sup>78</sup>.

When tolls were imposed in 1630 it immediately came to open hostilities. Hamburg succeeded in capturing a small Danish naval squadron at Glückstadt and blockaded the town. The entire Danish fleet was then sent round from Copenhagen and after a fight of several weeks the blockade was broken and the Hamburgers forced to accept defeat<sup>79</sup>. The Danish naval presence on the Elbe was thereafter greatly strengthened to avoid any repeat of Hamburg's resistance.

Although the right to levy tolls on the Elbe was rescinded by the Emperor in 1637 Christian IV still maintained his claims over the river and forbade all trade with Hamburg. The dispute dragged on, with Hamburg trying to extricate itself from Holstein's sovereignty<sup>80</sup>, but by 1643 Christian IV decided to blockade Hamburg<sup>81</sup>, and succeeded in extracting a sizeable ransom and the recognition of his sovereignty not just of the town but also of the Elbe. This situation did not last long, however, as

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77. *Outline of the History of Denmark*, Bodleian Library, MS Rawl. C737, 3, f.77-8.

78. *Outline of the History of Austria*, Bodleian Library, MS Rawl. C737, 3, f.160.

79. Battle instructions to Klavs Daa, 24 August - 6 September 1630 *egenhændige Breve*, II, 280-291.

80. Justification for attack against Hamburg, 22 February 1643, *egenhændige Breve*, V, 303-4.

81. Letter to *rigsråd*, 22 February 1643, *egenhændige Breve*, V, 304-7.

after the *Torstenssonkrig* in 1645 Sweden gained control of the Bremen side of the Elbe and all Danish claims to sovereignty had to be abandoned.

The tolls collected on the river went some way to alleviate Christian IV's penury after the Thirty Years War but his dream of Glückstadt eclipsing Hamburg proved unrealistic, with even Danish merchants still preferring to use the well established facilities and trading links of Hamburg<sup>82</sup>.

### 1.5. Royal Prestige

The question of royal prestige played a great part in the navy of Christian IV. It is evident that he was a highly ambitious monarch with great pretensions of taking a leading role in European politics and the concept of 'royal reputation' in the formation of the king's diplomatic philosophy has been strongly stressed<sup>83</sup>. The navy, as the most visible instrument of foreign policy, was therefore greatly influenced by these considerations, especially in the early years of his reign. The navy also played an important role in internal politics, becoming a pawn in the power struggle between the king and the *rigsråd*<sup>84</sup>.

A writer on 20th century naval policy gives an interesting analysis of the question of prestige which could easily be applied to the time of Christian IV:

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82. Jørgensen, 'Denmark's Relations with Lübeck and Hamburg', 73-79.

83. Paul Douglas Lockhart, 'Denmark and the Empire, A Reassessment of Danish Foreign Policy under King Christian IV', *Scandinavian Studies*, 64 (1992), 390-416.

84. See Chapter 2 for a discussion of this power struggle.



prestige is sought not merely or mainly to serve the national interest (although actions are justified in these terms), but as a political end in itself. Prestige is sought not so much to promote other ends, but for the glory and satisfaction which come from having a recognised reputation.<sup>85</sup>

The ships built directly after Christian IV's accession demonstrate his attitude towards his own status and how this was reflected in his navy. Great ships such as *Victor*, *Argo* and, above all *Tre kroner*, were far larger and much more extravagantly decorated than was practicable for real warships. They were designed not so much for operational duties but to impress foreign powers and to signal to the rest of Europe that Denmark was a maritime power to be reckoned with. The great importance attached to his status as a maritime monarch is further emphasised by the fact that Christian IV was regularly portrayed in pageants and allegories as Neptune, the divine ruler of the seas<sup>86</sup>.

The first exposure of the new Danish fleet to the western world occurred in 1606 when Christian IV took a squadron of eight ships on a state visit to James I/VI in London. The impact was immediate. Pamphleteers and commentators all praised the ships, their ordnance and men, and news of the visit rapidly spread across Europe. The visit had no overt diplomatic purpose and it seems that the visit, apart from the obvious family reasons, was arranged purely as a show of naval strength<sup>87</sup>.

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85. Ken Booth, *Navies and Foreign Policy*, (New York, 1979), 52.

86. Mara R. Wade, 'Festival Books as Historical Literature: the Reign of Christian IV of Denmark (1596-1648)', *The Seventeenth Century*, VII (1992), 1-14.

87. Martin Bellamy, 'Naval Aspects of Christian IV's Visit to England in 1606', forthcoming in *Mariner's Mirror*.

The Kalmar War gave the navy its first chance to impress the world with its fighting abilities. Although no great naval battle was fought the navy did impress foreign observers by its size and for its part in taking the forts of Kalmar and Älvsborg. The Frenchman Julien Peleus was particularly effusive in his praise, although his description must be tempered by the fact that he also compared Christian IV and his generals to Alexander, Cæsar and Hannibal<sup>88</sup>:

...vne flotte de beaux & grands Nauires, que l'on pouuoit appeller les merueilles de l'Ocean: car ce n'estoient pas tant des Nauires que des Chasteaux & puissantes forteresses flottates sur la mer, en aucunes desquelles étoiet des quatre-vingts pieces de métal, belles par excellence. L'équipage estoit somptueux & magnifique, & si l'Ocean eust eu des yeux, il l'eut admiré avec estonnement, aussi estoit-il digne d'un tel Prince.

... a fleet of large and beautiful ships which might be called marvels of the ocean as they were not just ships but castles and powerful fortresses floating on the sea, in any of which there were eighty first-rate bronze cannon. Their fittings were sumptuous and magnificent and if the ocean had had eyes it would have admired it with astonishment as it was worthy of such a prince.

Impressive squadrons were sent abroad in succeeding years on diplomatic missions, and a very favourable impression of Christian IV and his navy persisted among foreign powers until his setbacks in the Thirty Years War. A typical view is reflected by Robert Munro, who was certainly impressed by what he saw at the start of that campaign<sup>89</sup>:

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88. Julien Peleus, *L'Histoire de la dernière guerre de Suède... contre les Danois*, (Paris, 1622), 274-5.



The King is powerfull by Sea, and is mightily well furnished of all things necessary for warres, of Armes, Artillery, Ammunition, victualls, money, and what else is requisite to set forwards a warre; and, which is more, a noble, and a liberall Master, as ever I did serve.

His humiliation removed any chances of recovering his previous promise as a European leader. His defeat on land did however strengthen his resolve to remain powerful at sea, as demonstrated by his naval rebuilding programme of the 1630s. The greatest show of royal prestige of his reign was the great double wedding of 1634 and significantly among the delights arranged for the assembled foreign dignitaries was a parade of the fleet and a mock naval battle<sup>90</sup>. To some extent he did regain the respect of the maritime powers during the 1630s, but despite his posturing the memory of military humiliation still hampered his standing in Europe. This standing was completely destroyed after the naval defeat of 1644.

The navy's role in internal politics was equally troublesome and was closely linked with the king's foreign policy ambitions. The *rigsråd* held a political strangle-hold over the country's foreign policy by having an absolute veto on the declaration of war and the granting of extraordinary taxes. However, the confused nature of state finance and Christian IV's personal fortune allowed him to build up the naval hardware needed for his own ambitions independently of any government control.

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89. Robert Munro, *Monro His Expedition with the worthy Scots Regiment (called Mac-Keyes Regiment) levied in August 1626*, (London, 1637), I, 20.

90. Charles Ogier, *Ephemerides, Sive Iter Danicum...*, (Paris, 1656), 59-61.

This was in contrast to the army which required less in the way of capital expenditure and much more co-operation with the nobility. Land forces were still based on the outmoded principle of knights' service, and therefore mercenary troops were heavily relied upon. The *lensmænd* resisted any move to expend their local revenues on the improvement of a force whose deployment may have endangered their own financial and political interests, and attempts to institute a peasant militia in 1614 resulted in a force that was famously 'worse than beasts'. Only when Christian IV's fortune had been exhausted by two expensive campaigns conducted mainly by mercenary troops, and significant political concessions were able to be extracted by the *rigsråd*, was a standing army established in 1637. The navy therefore provided a much easier tool to manipulate in the king's struggle with the *rigsråd* over foreign policy ambitions than the army ever could.

The pacific *rigsråd* saw the navy first and foremost as a defensive safeguard. However, Christian IV's refusal to appoint a *rigsadmiral* until 1610 ensured that its political leadership lay with himself and not with the *rigsråd*. The more powerful the navy became, the stronger Christian IV's prestige became and his position in the power struggle was strengthened, enabling him to follow policies at variance with the *rigsråd's* wishes<sup>91</sup>.

This policy was fine during Christian IV's financially secure early years, when he was effectively able to pay for the naval expansion from his own purse, but it became increasingly hard to maintain this position as his financial state deteriorated. The main problem was that although the king paid for capital expenditure the state was expected to meet the running costs of men and victuals. This gave the *rigsråd* an equally powerful hand against the king when he wished to mobilise the fleet. The

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91. See Chapter 2 for a fuller discussion of this.



most dramatic aspect of this internal power struggle came in the 1624 confrontation with Sweden. Whilst the king was pursuing an aggressive policy dependent on a strong navy, the *rigsråd* steadfastly refused to grant funds to mobilise the fleet.

The defeat in the Thirty Years War saw political and monetary concessions granted to the *rigsråd* and the worsening condition of the state's finances saw the navy becoming an ever more contentious pawn in the power struggle to control state expenditure and disputes over the role and financing of the navy continued until the end of the reign<sup>92</sup>.

The king's mercantile projects were also based to a large extent on royal prestige. The East India Company was established largely as a result of envy and jealousy of the English and Dutch companies. Even when the company proved unprofitable he refused to let it be liquidated fearing that this would reflect badly on his own prestige at home and abroad. He also planned a West Indian Company for similar reasons, although this plan came to naught. The imposition of tolls on the Elbe can also be regarded in the light of royal prestige. Christian IV wanted to eclipse the republican city with his own town of Glückstadt, and to enforce his ducal sovereignty over Hamburg.

## 1.6. Conclusion

The numerous roles that Christian IV's navy was expected to take on clearly involved a number of commitments which were far larger than any one navy could hope to meet adequately. This compelled the navy to be used largely as a defensive force, with the size and number of ships being designed very much as a deterrent. Several minor acts of aggression were witnessed by small squadrons of the navy during the reign but only during the Kalmar war was the navy as a whole used aggressively.

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92. See Chapter 3 for a full analysis of naval finance.

The importance of the navy in national defence was clearly demonstrated at the end of the *Kejserkrig*. It should also have been used to similar effect in the *Torstenssonkrig*, but lack of experience or ingenuity in using the whole fleet in a battle situation proved decisive in its defeat.

The geography of the kingdom drove the requirements for the navy. It was necessary to maintain a number of different types of vessel and to operate a number of separate fleets at the same time, to patrol all the vast areas of claimed sovereign seas. Effectively three navies were needed to cover all the areas involved, reflecting Christian IV's triple embodiment as King of Denmark, King of Norway, and Duke of Holstein. Geography provided Denmark-Norway with a great many advantages, such as being able to control the Sound, but it also proved one of the kingdoms major disadvantages. If the entire fleet ever needed to be mobilised in any one area it left the other areas vulnerable to attack or unlicensed commercial exploitation.

Connections to Sweden and the continent made Denmark vulnerable to attack by land, demonstrated so ruthlessly in the case of Jutland in 1627 and 1643. Although border defences were greatly strengthened under Christian IV, the army remained under strength, poorly trained and inefficient. The navy could only be one part of the country's defence but personal ambition and difficult political circumstances meant that Christian IV paid far more attention to it than perhaps he ought to have done. Any improvement in the army required the political co-operation of the *rigsråd* and the landowning nobility. Christian IV's aggressive foreign policies meant that this co-operation was limited and the result of the army reforms after the *kejserkrig* was that Christian IV steadily lost his influence over the army at the expense of the nobility<sup>93</sup>. In comparison to the army, Christian IV enjoyed relative autonomy in the development

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93. Gunnar Lind, *Hæren og magten i Danmark 1614-1662*, (Odense, 1994).



and deployment of the navy and this helps to explain why so much of his resources went into building up such a large navy while the army remained relatively small.

The result of this strategy was that during the Thirty Years War the failure of the army twice resulted in the imposing navy being used only to provide the last line of defence in defeat. Petersen<sup>94</sup> comes to the conclusion that Denmark was not in fact a true maritime power, but was torn between wanting to be both a great maritime power and a great continental power, and succeeded ultimately in being neither.

Having said that it must be admitted that, given the limitations, the navy was relatively successful in its endeavours. Its role as a deterrent at sea was unquestioned, and when called upon to fight it was on the whole competent, although by no means spectacular. Where setbacks were encountered they were largely as a result of diplomatic or tactical incompetence on the part of the king himself. Christian IV failed to appreciate that impressive military hardware was no substitute for guile and tact in international negotiations or astute military tactics. His clumsy attempts at diplomacy outdid any advantage he hoped to gain by the admiration of his powerful navy, and more or less negated its role in international power politics. Royal prestige depended first and foremost on the monarch, if he himself was perceived as conceited and inept then no amount of military hardware could alter that impression.

He also overlooked the fact that a large powerful navy was useless unless it was effectively commanded by a tactician and strategist of some skill. The philosophy of royal prestige built up the navy to what it was in 1644, but the same philosophy also caused its defeat. Christian IV's belligerent attitude precipitated the Swedish attack in the first place and his insistence on dictating naval strategy at the expense of a better

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94. Charles William Petersen, 'England and Danish Naval Strategy in the Seventeenth Century', (unpublished PhD thesis, University of Maine at Orno, 1975), 308-16.

qualified or skilled commander resulted in the tactical error that ended with the navy being all but annihilated. As one expert states, in words which could easily have been written to describe Christian IV's policy, 'used without care, a policy of prestige can contribute to overcommitment, exposure, lack of vigilance, arrogance and ultimately failure'<sup>95</sup>.

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95. Booth, *Navies and Foreign Policy*, 55



## 2. Political Control of the State and the Navy

Having seen why Denmark, and in particular Christian IV, needed a navy we should now look at how the navy was controlled and the ways in which this affected the development of both the state and the navy. To do this it is first necessary to outline the way in which Denmark was governed and how the central administration of the state worked before turning to the question of who held overall political control of both the state and the navy. This is a very complex issue and before attempting any analysis we must look at what actually constituted the 'Danish state'.

When the Kalmar union of the three Scandinavian kingdoms of Denmark, Norway and Sweden<sup>1</sup> was established under Queen Margrethe the constitutions of the separate member states were maintained. It was a union of crowns rather than a union of governments. When the union disintegrated in the early 16th century Denmark and Norway retained their union of crowns, since by now Norway had effectively become just a Danish province. It no longer had its own government or administration and was governed directly from Denmark. The term Denmark-Norway is therefore used to describe this joint kingdom.

Denmark itself consisted of a number of different provinces. The island of Sjælland, which included Copenhagen and Kronborg Castle, was the most important politically. Jutland, Funen, and the Scanian provinces of Skåne, Halland and Blekinge provided the best agricultural land. The smaller islands were of lesser importance and were administratively grouped under the title of Smålande. In addition Iceland and, at various times, the Baltic islands of Bornholm, Gotland and Øsel also came under Danish jurisdiction.

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<sup>1</sup>. Finland was not yet considered a separate kingdom.

Of all these areas the Danish-Norwegian monarchy owned nearly half of the land<sup>2</sup>. These crown lands were divided into administrative units called *len*, which were administered by noble officials called *lensmænd*. The distribution of *len* was at the discretion of the king and as noblemen progressed in their careers they were steadily awarded larger and more important *len*. This created the paradox that as officials were promoted to greater responsibility within the central government they were at the same time also expected to take on greater local administrative responsibilities.

In addition to being king of Denmark-Norway the Danish monarch also held the title of Duke of Schleswig and Holstein. Schleswig had long been assimilated into Denmark, but Holstein remained an independent duchy and an integral part of the Holy Roman Empire. There was therefore a separate administration for Holstein, with its own council and ministers.

Various other ancient peoples and lands were traditionally claimed by the king. This is reflected in the formal diplomatic title accorded to Christian IV, which stated that he was 'King of Denmark and Norway and of the Goths and Vandals, Duke of Schleswig-Holstein, Stormarn and the Dithmarshes, Count of Oldenburg and Delmenhorst'<sup>3</sup>. Although the lesser titles had by now no real political weight they were a significant factor behind Christian's expansionist policy in northern Germany.

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2. E. Ladewig Petersen, 'From Domain State to Tax State', *Scandinavian Economic History Review*, 23 (1975), 126.

3. Ronald L. Meldrum, *The letters of King James I to King Christian IV 1603-1625*, (Surrey, 1976), letter dated 30 September 1615.



## 2.1. The System of Government

Since the 13th century Denmark had been a constitutional monarchy. The king was elected by the *rigsråd* (Council of the Realm) and representatives of the three higher estates of the realm. Before taking up his position as elected head of state the king was obliged to sign a *håndfæstning* (accession charter) in which he agreed to abide by the decisions of the *rigsråd*, to ensure that the number of members within it were maintained at a required level, and that certain positions in the central administration were filled.

This situation, that the king was both the servant and the master of the *rigsråd*, having to accept their rulings, but at the same time being able to choose its members, lies at the heart of the problem in analysing the precise boundaries of control within the Danish central administration in the reign of Christian IV.

Policy making was basically a dual responsibility between the king and the *rigsråd* linked in a dyarchic administrative system. This system was explained when Arild Huitfeldt wrote his history of Denmark for the instruction of the young Christian when he detailed his views on the constitution with a suitable nautical analogy:

Da skall en Første oc Herre samle til sig forstandige vise oc forneme Folck, deris Raad skal hand bruge, Saa at huad vdi hannom fattis, kand ved deris gode Raad bliffue erstadit oc opret, oc formiske Regimentit met flere. Oc ligeruijs som paa it Skib foruden Styremand, huilcken dog er den Fornemste, ere andre flere, som tilhielp, Skibit eller Menigheden oc Seylaßen, det er, Regieringen oc rette Kaas at driffue, En sidder ved Styrit, andre lætte Acker op, andre fire oc hale Skød: Saa skal oc en forstandig Herre giore, at hand bruger fleris Raad oc Hielp, end sin egen, heldst de

forstandigis, Thi flere Øyen see mere end it, oc mangel aff egn Forstand bedrager sig selff, oc kommer baade sig oc flere paa Wlykke.<sup>4</sup>

Then shall a prince and master gather unto him intelligent, wise and distinguished people, their counsel shall he use, so that what he in himself lacks can be substituted and created with their good advice, and appropriately organised, and so forth. And likewise, as on a ship in addition to a steersman<sup>5</sup>, who, after all is the top ranking, has others there who help the ship, its crew and its sailing, and determine the right course to steer. One sits by the rudder, others draw up the anchor and others slacken and haul the sheets: So shall an intelligent master do, that he uses others advice and help than his own, preferably the most knowledgeable<sup>6</sup>, since more eyes see better than one, and many a man relying on his own intelligence deceives himself, and puts both himself and others in danger.

Although the decision making process was therefore complex, a powerful *rigsråd* could provide a safety net, looking after the interests of the realm, in the teeth of an over-ambitious or aggressive king. This system broke down though, as Christian IV was able to dictate foreign policy from his independent and unchallengable position as Duke of Holstein, and the *rigsråd* also tended to look after the personal interests of its own members rather more than those of the state as a whole.

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4. Arild Huitfeldt, *En kaart Historiske Beskriffuelse ... Christian den Tredie*, (København, 1595), f. :iij. (Danske Krønike 9 Bd.)

5. In fact the *skipper* was the senior seafaring officer. See Chapter 7.

6. i.e. the high nobility.



In theory the *rigsråd* was to represent the views of the three higher estates of the realm, the nobility, the clergy and the burghers. However, in practice it represented only the interests of the ruling clique of higher nobility who maintained a self-perpetuating hold on the *rigsråd*. The *håndfæstning*, which was drawn up by the *rigsråd*, was in many respects a guarantee for the ruling nobility that their status and privileges would be safeguarded. Certain names crop up time and again, such as Ulfeldt, Sehested, Rantzau and Urne, and it was not unusual for both father and son, brothers or cousins to serve at the same time. Indeed, of the 48 members elected during Christian IV's reign only two had no family connection with other *rigsråd* members<sup>7</sup>.

The opinions of the estates were sought at *stændermøder* (meetings of the estates general), which were held infrequently in different parts of the country. Theoretically members of all four estates were to attend, but in practice the burghers and peasantry were only occasionally invited, and from 1631 the peasantry were excluded altogether<sup>8</sup>. These *stændermøder* were initially only a formal protocol with little real influence, but they began to take on increasing importance through the reign. At the meeting in Odense in 1638 the estates forced the *rigsråd* to recognise their right to better representation and forced the more regular calling of *stændermøder*. The estates' interest and influence, however, was largely restricted to taxation and their own privileges rather more than wider political issues. Their opposition to increased taxes in order to pay for the army, though, did have its impact on Christian IV's foreign policy.

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7. Leon Jespersen, 'Rekrutteringen til rigsrådet i Christian IV's tid', in K.J.V. Jespersen, (ed.), *Rigsråd, adel og opposition 1570-1648*, (Odense, 1980), 108-9.

8. Kr. Erslev, *Aktstykker og oplysninger til rigsrådet og stændermødernes historie i Kristian IV's tid*, (København, 1883-90), III, 595.

At the meeting in Copenhagen after the Swedish war in 1645 the estates strengthened their political position when it was agreed that a noble *landkommissær* was to be appointed in every province who was to consult members of the other estates and then present their combined grievances to the *rigsråd*. The burgers also established their own yearly meeting to which a royal representative was expected to attend.

## 2.2. The *Rigsråd* and the State Officials

The *rigsråd* was not simply a compliant body that rubber stamped the king's policies but was an institution with real political power, able to force the king to alter policy with which it disagreed. Their approval was needed for the raising of any extraordinary taxes and they had an absolute veto on the declaration of war. The choice of members was therefore of vital importance if Christian IV was to succeed in carrying out his own political agenda.

Although he had a relatively free rein in choosing its members he did tend to abide by the recommendations of the sitting members, presumably so as not to unduly antagonise those whose approval he needed. In later years he attempted to gain influence within the *rigsråd* by marrying off his daughters to members of the ruling noble families and electing them to serve in the *rigsråd*. This *svigersønpolitik* (son-in-law politics) eventually backfired when Corfitz Ulfeldt and Hannibal Sehested manipulated their position within the *rigsråd* to increase their own power at the expense of the king's.

The number of members within the *rigsråd* varied widely but averaged around fifteen. Although Christian IV's *håndfæstning* required him to maintain a suitable, though unspecified, number of members, his appointment of new members was highly erratic. They were elected for life, but instead of electing new members as old ones died Christian IV tended to wait until it was absolutely necessary to replace members and



then appoint a number of them at the same time. In 1596, after the long minority had taken its toll, it was necessary to appoint nine new members, in 1616 he appointed six new members at one go, in 1627 another four, and in 1640 six again. He did appoint some individually but only when he was forced to, or when he felt it was convenient or expedient to do so.

In 1645 Christian IV agreed that the number of members should be permanently maintained at 22<sup>9</sup>, although typically he made no attempt to comply with this. At the same time he agreed that the estates could select their own list of suitable candidates for new *rigsråd* members, from which the *rigsråd* could make a further choice and present their recommendations to him. He did, however, retain the right to have the final say in the choice. Figure 2.1. shows the variation in the number of *rigsråd* members during Christian IV's reign<sup>10</sup>.

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9. Letter to *rigsråd*, 17 August 1645, C.F. Bricka & J.A. Fredericia (eds.), *Kong Christian den Fjerdes egenhændige Breve*, VI, 56-7. This concession was offered in return for the *rigsråd* granting sufficient funds to keep the navy mobilised.

10. The figures shown are as of 31st December, which obscures to some extent the wide fluctuation in numbers. The number dropped to as low as nine in the summer of 1616, and the highest number was 21 at the very start of the reign.

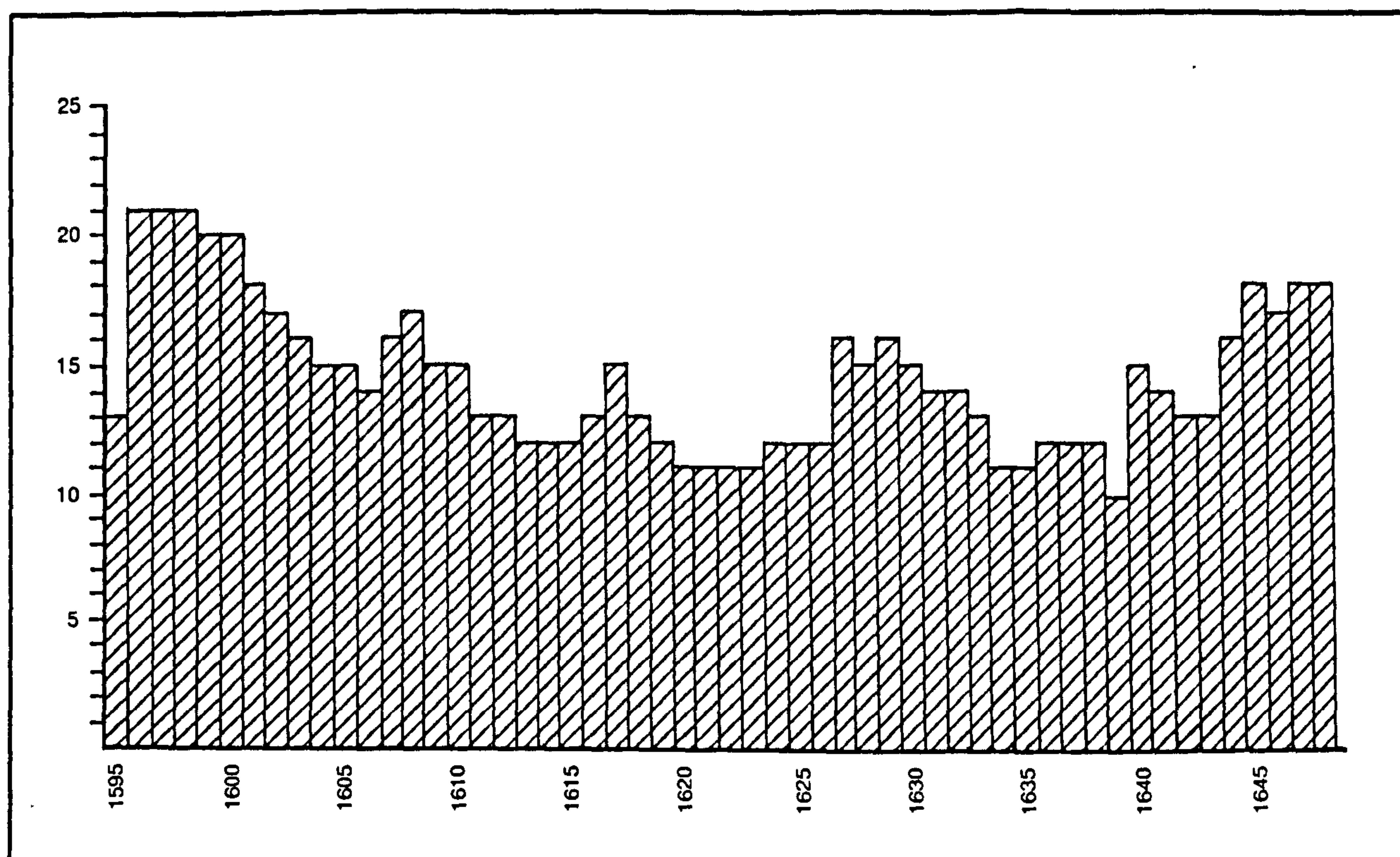


Figure 2.1. Number of *Rigsråd* Members

Source: Kr. Erslev, *Aktstykker og oplysninger til rigsraad og stændermødernes historie i Kristian IV's tid*, (København, 1883-90).

The range of ages within the *rigsråd* varied greatly, from those in their twenties to those who made it into their seventies. Some retired officially from the *rigsråd* in their old age such, as Peder Munk and Holger Rosenkrantz, but others nominally remained members although they had become 'gamle och wformugsom'<sup>11</sup> (old and incapable) and took no further part in its proceedings.

New *rigsråd* members had to swear an oath which outlined their formal obligations<sup>12</sup>. This essentially committed them to swear allegiance to, and uphold the reputation of the king and the realm, to uphold the protestant religion, to be impartial in their judgements and to treat the rich and poor as equals. Their vote was to be strictly confidential and

11. Letter to *rigsråd*, 1 Dec 1616, *egenhændige Breve*, I, 106.

12. Erslev, *Aktstykker*, III, 576.



they were not to countermand any resolution which had been agreed. Christian IV drew up a revised oath in 1644 which further bound the *rigsråd* members to abide by all mandates and orders issued by the king<sup>13</sup>.

Within the *rigsråd* there were a number of high state officials who were responsible for various aspects of the running of the country. Under Christian IV's *håndfæstning* he was obliged to have at all times a *rigshofmester*, a *kongens kansler* and a *rigsmarsk*<sup>14</sup>. The king had a free choice in the selection of *rigshofmester* and *kongens kansler* but the *rigsråd* could exercise their power in the choice of the other posts of *rigsadmiraal*, *rigskansler* and Norwegian stadtholder.

As in all aspects of Christian IV's government the practice did not quite match the theory. Many of the posts were filled only intermittently and, in direct contradiction of his *håndfæstning*, the highest post of *rigshofmester* was the one least likely to be filled. When there was no *rigshofmester* the administrative duties of the post were split between the proxy post of *stadtholder i København* and the *kongens kansler*, but it is not always clear who assumed the duties of the other offices if they stood vacant. Figure 2.2. shows the times at which the various state posts were occupied or vacant.

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13. 8 Dec 1644, *egenhændige Breve*, V, 541.

14. Jespersen, 'Rekruttering til rigsrådet', 39.

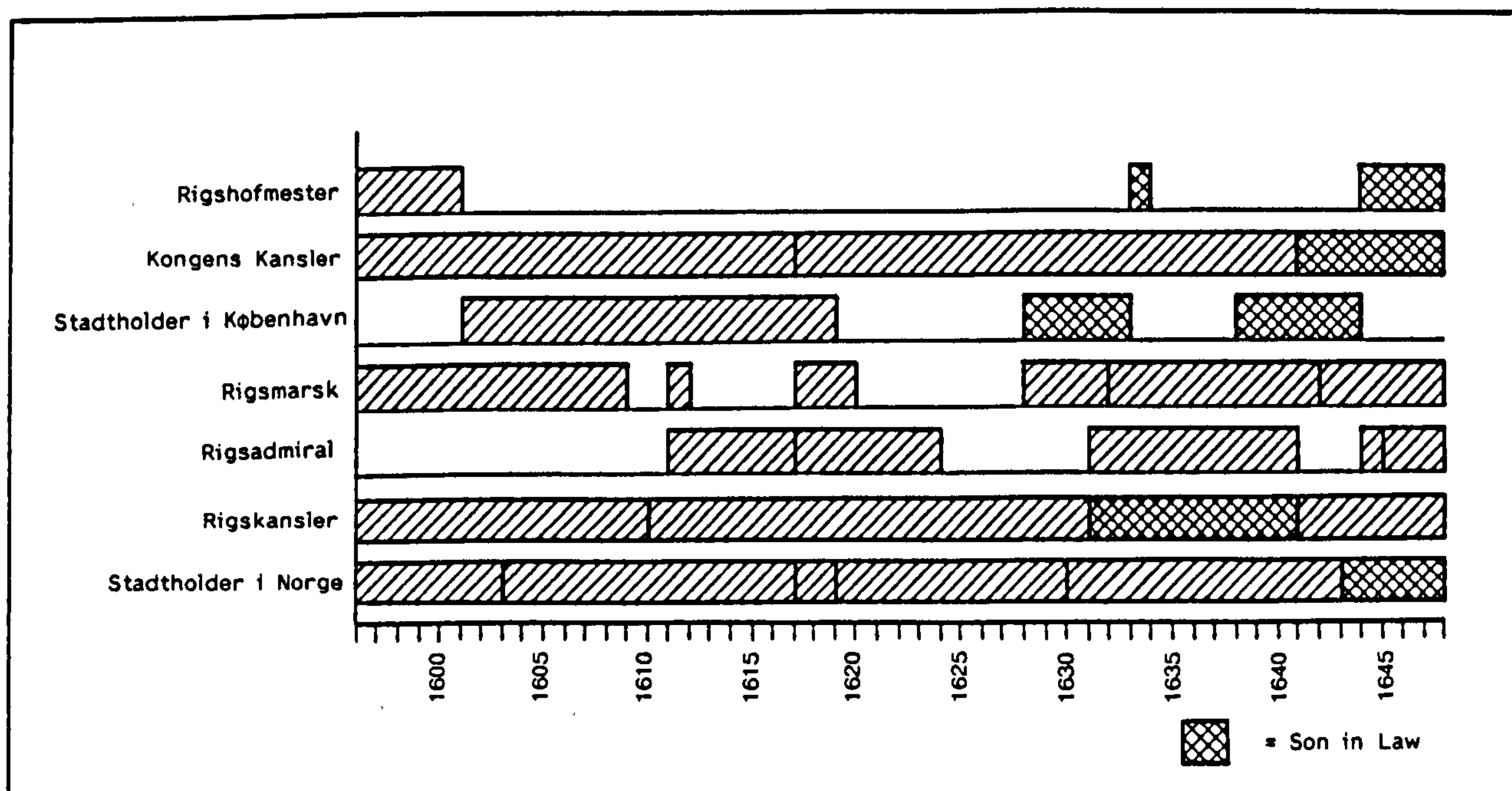


Figure 2.2. High Officials of State in Office

Source: Kr. Erslev, *Aktstykker og oplysninger til rigsraad og stændermødernes historie i Kristian IV's tid* (København, 1883-90).

There was certainly no career structure with regard to the appointment of officials, or their subsequent promotion to other posts. The offices were generally filled for life by the appointees. Of the 27 officials during the reign of Christian IV only one was forced to leave office<sup>15</sup>, and just five were promoted between offices. Of these, three were sons-in-law and another appears to have been moved to make way for a son-in-law. The only clear cut move was from *stadtholder* to *rigshofmester*.

The duties assumed by the different officials and the political power they wielded was very much dependent on the individual who held office. Occasionally Christian IV would formulate a written 'contract' outlining their terms of reference but these were ambiguously worded and referred only to the duties of a particular individual who was taking up office, and did not constitute a formal outline of the responsibilities of the office itself.

15. Rigsadmiral Albert Skeel, see later.



### 2.2.1. Christian IV's Letters

In order to get a clearer picture of the role of these officials the letters of Christian IV have been analysed to determine which officials dealt with which issues in the running of the state.

Christian IV's collected letters were published between 1887 and 1928 in eight volumes and provide a remarkable source. In all there are more than 3000 letters ranging from simple one line notes to extensive diplomatic correspondence. The range of interests discussed in these letters is phenomenal and the king's obsession with trivial matters shines through. The majority of letters demonstrate a rapid flow of ideas that were put to paper without any structure so that domestic household issues are frequently discussed alongside international diplomacy. To demonstrate the style of these letters it is worth giving one example. Many letters consist simply of a list of instructions, such as the one to *kongens kansler* Christian Friis in 1618, given here in summary<sup>16</sup>:

1. The plasterer shall send one of his swains here with some plaster to repair some plasterwork which has fallen off two beams.
2. A hole shall be dug between the altar and the pulpit to see if a stair can go into the church.
3. The burgers militia shall be ready to be mustered when required.
4. The *kansler* shall write to Jacob Ulfeldt to prepare a room at Nyborg for a noble guest.
5. The prisoners in the tower at Copenhagen should follow *Spes* and those at Helsingør should follow *Markatten*. On each of the galleys should be a ship's drummer.

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16. Letter to Christian Friis, April-May 1618, *egenhændige Breve*, VII, 17-8.

6. The vice-kapelmester should exercise his musicians and Hendrik Trumpeter should join the company to learn the new piece by Mogens.
7. The wine cellarer shall follow the two captains who are going to the Belt, each is to have some wine.
8. Sten Villumsen shall have the two ships with the two galleys ready to sail this week.
9. Since Waldkirch has arrived and has my wares with him he should immediately be sent a message.
10. Clauss Soll has a cauldron which belongs to Hendrik Frisch and he should immediately return it.

The use of these letters to unravel the function of the state officials is therefore somewhat flawed as the king may have instructed an addressee to do certain things simply because he happened to be writing to him at the time the thought occurred to him. The letters are also very much skewed towards the latter period of Christian's reign, with very few existing for the period up to around 1620. The vast majority of them date from the 1630s and 1640s. Whether this is because Christian IV wrote so many more letters in this period or whether earlier letters have simply been lost is not known. Most likely there is an element of both.

These facts naturally distort the results of the analysis to some extent. The distinction between officials is blurred by the nature of the letters and the date skew will weight the changing concerns of later years at the expense of the earlier period. This is evident in the greater importance seemingly attached to finance and foreign affairs over commerce and building works, which would have been more significant in the earlier years. However, in the absence of more comprehensive material<sup>17</sup>,

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17. The directives issued from the *Danske Kancelli*, published in *Kancelliets Brevbøger*, deal more with the officials' roles as *lensmænd* than as state officials.



the use of Christian IV's letters for this study is felt to be justified.

Ten broad categories were chosen as the basis of the analysis and all correspondence on these subjects to each individual member of the *rigsråd* was catalogued under the following headings: The Royal Court; Foreign Affairs; Finance; Government Administration; The Navy; Law and Order; Building Work; Army and Land Defence; Commerce; and The German Duchies.

By restricting it to these categories there will of course be a certain amount of simplification. Within each category no degree of importance has been attached to what was being discussed. If we look at how the letter the Christian Friis above was categorised we see that it comes under the royal household (for paragraphs 4, 6 & 10), the navy (paras 5, 7 & 8), building works (paras 1 & 2), the army and land defences (para 3), and commerce (para 9). Paragraph 9 hardly has the same weight as, for example, a discussion of investments in the Danish East India Company, but it is still concerned with commerce. Similarly the finance category contains all orders for petty cash payments as well as discussions relating to tolls, taxes and state finance.

Most of the letters cover more than one subject, and of the 1093 letters addressed to *rigsråd* members 50 are jointly addressed to two, three, or four individuals. All letters which were jointly addressed and those which deal with a number of different subjects are therefore counted more than once. The total number of letters addressed to the *rigsråd* members are shown in Table 2.1.

<u>Addressee</u>	<u>No.</u>	<u>%</u>
<i>Rigshofmester</i>	342	31.3
<i>Kongens Kansler</i>	457	41.8
<i>Stadtholder</i>	224	20.5
<i>Rigsmarsk</i>	13	1.2
<i>Rigsadmiral</i>	36	3.3
<i>Rigskansler</i>	8	0.7
<i>Stadtholder i Norge</i>	8	0.7
<i>Rigsråd members without office</i>	55	5.0

**Table 2.1. Total Number of Letters to *Rigsråd* Members**

Sources: C.F. Bricka & J.A. Fredericia (eds.), *Kong Christian den Fjerdes egenhændige breve*, (København, 1878-86), I - VII;  
J. Skovgaard, *Kong Christian den Fjerdes egenhændige breve*, (København, 1928), VIII.

The role of the individual office holders will be discussed separately, but as a basis for comparison the results of the analysis for *rigsråd* members without office are given first, in Table 2.2.

	<u>Subject</u>	<u>No.</u>	<u>%</u>
1.	The Royal Court	7	12.7
2.	Foreign Affairs	24	43.6
3.	Finance	16	29.1
4.	Government Administration	13	23.6
5.	The Navy	9	16.4
6.	Law and Order	4	7.2
7.	Building Work	5	9.1
8.	Army and Land Defences	11	20.0
9.	Commerce	13	23.6
10.	The German Duchies	3	5.5

**Table 2.2. Number of Letters to *Rigsråd* Members Without Office**

Sources: C.F. Bricka & J.A. Fredericia (eds.), *Kong Christian den Fjerdes egenhændige breve*, I - VII ;  
J. Skovgaard, *Kong Christian den Fjerdes egenhændige breve*, (København, 1928), VIII.

The reason that foreign affairs appear so important is because a number of *rigsråd* members were chosen to go on diplomatic missions to foreign powers. The rest of the figures show a fairly even spread between the subjects, as might be expected.



### 2.2.2. *Rigshofmester*

The *rigshofmester* was the highest office of state and was in essence a viceroy. He appeared to hold complete authority over the government, was accountable only to the king, and acted as his deputy in his absence. When Baron Cormenin<sup>18</sup> visited Copenhagen in 1629 he noted that the 'grand Maistre' was 'le souverain pouvoir apres le Roy, sur les affaires concernans l'Estat & le Royaume, c'est comme le Lieutenant au gouvernement' (the sovereign power after the king, in affairs concerning the state and the monarchy, that is like the Lieutenant of government).

This was essentially true, although a little simplified. The role was primarily a financial one, being directly responsible for the running of the *rentekammer* (treasury). This supervision of state finance also meant that the operation of the navy and the army, fortifications and crown building works also came under his jurisdiction.

An oath was drawn up by Christian IV outlining the responsibilities of Corfitz Ulfeldt when he took up the post in 1643<sup>19</sup>. The principal commitment was that he was to 'haffue god och flitig opsiicht pa E: k: M: Indecht och udgiifft, saat derudi E: k: M: inted skal skee forkordt y Nogen made' (have good and diligent supervision over His Royal Majesty's income and expenditure so that His Royal Majesty will not thereby be in any way left short). Ironically in the light of Ulfeldt's subsequent behaviour<sup>20</sup>, much of the oath details that his authority was to be used to limit any fraud or embezzlement that might occur within in the administration and its suppliers:

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18. Des Hayes, *Les voyages de Monsieur Des Hayes, Baron de Covrmesvin, en Dannemarc*, (Paris, 1664), 245.

19. 2 April 1643, *egenhændige Breve*, VIII, 234-5.

20. See Chapter 3.

Rendtemeisterne och dem, aff dem *dependerer*, med all lensmend, toller och Syssemeister, *item* dem, som tiil Holmen, Briggers och Bagers, Prouyandthus och *Artholoriit* Regnis, med all dem som nogiit vnder henderne haffuer, wiil ieg vden *Respect* Indseend haffue, tiil derris Egiit Nytte och E: k: M: til skade. Ieg uyl med al fliid och *Authoritet* holde Enhuer y sit sted, At dy derris betroede Embede troeligen och uel forrestaar, Och at dy gør Arlygen Regenskab for derris *Administration* Och ingen *Respitt* giiffue dem, som skildig bliffuer, at dy io betaler ded, dy skiildig bliiffuer, mens strax lade dem forfølge med Retten, saat E: k: M: ingen skade deroffuer lyder.

I will supervise the *rentemestre* and their subordinates, along with all *lensmænd*, toll collectors and excisemen, and those who are accounted with the dockyard, brewers and bakers, victualling store and Artillery, with all those who have connection with these, to ensure they do not operate to their own advantage, and to His Royal Majesty's loss. I will with all diligence and authority keep everyone in their place, ensure that they faithfully and thoroughly understand the office entrusted to them and that they complete yearly accounts for their administration, and give no respite to those who are debtors and if they do not pay up, to immediately prosecute them in court, so that His Royal Majesty will not thereby be put at a loss.

In addition he was to have no connection with any native or foreigner without the express command of the king, and was to obey all of the kings orders, so help him God.



The analysis of letters bears out the fact that the *rigshofmester* was involved in all aspects of the state administration. Although not specifically mentioned in his oath, the most frequent subject in the correspondence was foreign affairs, all of which dates from the 1640s when discord with Sweden was increasing.

	<u>Subject</u>	<u>No.</u>	<u>%</u>
1.	The Royal Court	80	23.4
2.	Foreign Affairs	123	34.9
3.	Finance	86	24.4
4.	Government Administration	79	22.4
5.	The Navy	77	21.9
6.	Law and Order	23	6.5
7.	Building Work	42	11.9
8.	Army and Land Defences	80	22.7
9.	Commerce	52	14.8
10.	The German Duchies	16	4.5

**Table 2.3. Number of Letters to *Rigshofmestre***

Sources: C.F. Bricka & J.A. Fredericia (eds.), *Kong Christian den Fjerdes egenhændige breve*, I - VII ;  
J. Skovgaard, *Kong Christian den Fjerdes egenhændige breve*, (København, 1928), VIII.

Despite its seeming importance it was, as previously mentioned, the least likely of the state offices to be filled. The reason for this was undoubtedly Christian IV's unwillingness to have such a powerful member in his *rigsråd* and thereby concede a greater amount of political power to it than he was prepared to sanction. The appointment of Christoffer Valkendorf to the post in 1596 can be regarded largely as a rebuff to the minority government, when Christian IV was trying to establish his own authority. The ageing Valkendorf was at that time nearing the end of his long political career and did not have much of an impact in the post, apart from his accounting duties at the *rentekammer*, and was definitely under Christian IV's shadow<sup>21</sup>. He died in 1601.

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21. Arthur G. Hassø, *Rigshofmester Kristoffer Valkendorf til Glorup (1525-1601)*, (København, 1933), 174-88.

More than thirty years then elapsed before Christian IV felt able to appoint someone else to the post. As Cormenin observed 'cette Charge n'est pas remplie, à cause que le dernier qui la possédoit s'étoit rendu trop puissant' (that office is not occupied because the last who held it proved too powerful). The choice fell on Frans Rantzau, the first of his sons-in-law and a close drinking companion, whom Christian IV obviously believed he could trust not to subvert his own power. Rantzau did not have long to prove his abilities, however, as within a few months of his appointment he drowned in the castle moat after a particularly heavy drinking session with the king.

A further decade then elapsed before Corfitz Ulfeldt, another son-in-law, was chosen to take the office in 1643. Christian IV came to severely regret this decision after Ulfeldt turned against him and used his position and influence to indulge in large scale embezzlement and pompous delusions of grandeur.

The king's inability to restrain the activities of Ulfeldt would perhaps suggest that he had been right to contravene his *håndfæstning* by not having the office filled at all times. However, the king's growing old age did make it easier for someone like Ulfeldt to take advantage of the trust placed in them.

### 2.2.3. *Kongens Kansler*

In direct contrast to that of the *rigshofmester* the position of *kongens kansler* (or simply *kansler*) was always filled. The choice of *kansler* was the sole prerogative of the king and was particularly important as he tended to operate as the king's right hand man and confidante in the absence of a *rigshofmester*. However, unlike the *rigshofmester* his power was limited by the fact that he was not such an autonomous figure, but the leader of the government and general secretary of the *rigsråd*<sup>22</sup>.

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22. Svend Ellehøj, *Christian IV.s tidsalder*, (*Danmarks historie*, 7), (København, 1964), 61.



No formal description of the duties of the *kansler* exists but it is clear that he had two main administrative functions within the state, as leader of both the *rigsråd* and of the *Danske kancelli*, as well as having many other minor duties.

As the leader of the *rigsråd* he was the intermediary between it and the king and was therefore in the difficult position of trying to keep both satisfied. Quite how much political leadership in the *rigsråd* he was expected to have is hard to judge, but it appears that he may have been more of a spokesman than a real 'leader'. He was also responsible for overseeing the establishment of all new laws and statutes approved by the *rigsråd*, copies of which were kept in the state archives along with all previous legislation. The *kansler* was the sole key-holder of these archives and was therefore the custodian of the constitution<sup>23</sup>.

Being in charge of the *Danske kancelli* was also a great responsibility. It was the administrative body through which most correspondence concerning the internal running of the state, as well as that directed to Sweden and Russia was controlled. It is probably reasonable to assume that the *kansler* was not actually involved in its day to day running, given the number of his other duties, but he kept a watchful eye on its operation under the command of its chief secretary.

Other areas of responsibility which the *kansler* was charged with included education, principally as chancellor of Copenhagen University, the church, and to a lesser extent the courts of law.

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23. Ole Degn, *Christian 4.s kansler*, (Viborg, 1987), 47-8.

	<u>Subject</u>	<u>No.</u>	<u>%</u>
1.	The Royal Court	128	28.0
2.	Foreign Affairs	209	45.7
3.	Finance	99	21.7
4.	Government Administration	158	34.8
5.	The Navy	37	8.1
6.	Law and Order	43	9.6
7.	Building Work	30	6.6
8.	Army and Land Defences	77	16.8
9.	Commerce	51	10.9
10.	The German Duchies	28	6.1

**Table 2.4. Number of Letters to *Kongens Kanslere***

Sources: C.F. Bricka & J.A. Fredericia (eds.), *Kong Christian den Fjerdes egenhændige breve*, I - VII ;  
J. Skovgaard, *Kong Christian den Fjerdes egenhændige breve*, (København, 1928), VIII.

As can be seen from Table 2.4., the *kansler* was also closely involved with finances and all other aspects of the administration. Those letters dealing with the navy and building works date mainly from periods when there was neither *rigshofmester* nor *stadtholder*, during which time the *kansler* also partly assumed leadership of the *rentekammer*.

#### **2.2.4. *Stadtholder i København***

The position of *stadtholder i København* was an anomaly. Technically it was not one of the high state offices, but because the position of *rigshofmester* was so seldom filled it assumed a much greater importance than it ought to have warranted. In many ways being *stadtholder* was a form of apprenticeship to becoming *rigshofmester*. All three of the men appointed to the post in Christian IV's reign had previously held the position of *stadtholder*, although Breide Rantzau did hold the post of *stadtholder* for 18 years without being promoted.

It is not clear what happened to the position when a *rigshofmester* was appointed. Either both positions were held by the same man or the office of *stadtholder* then became redundant. At no time was there ever both a *rigshofmester* and a *stadtholder i København* simultaneously.



The responsibilities of the office were laid down in 1637 when Corfitz Ulfeldt took office<sup>24</sup>. In short the duties were outlined as follows:

1. He is to represent the king in his absence without bringing him into disrepute
2. He is to comport himself with decency at home and abroad, and when foreign ambassadors or others of importance visit he is to accompany and entertain them to the best of his abilities.
3. He is to ensure that justice is upheld in Copenhagen.
4. He is not to allow anyone to trade outwith the lawful statutes, and is to meet the town factor once a week to supervise the collection of excise duty.
5. He is to hold the key to Østerport and ensure that it is opened and closed at the correct time every day. The keys to the other gates are to be entrusted to the burgomasters who are to open and close them at the correct time.
6. All gates are to be locked immediately in the event of a murder or manslaughter and are not to be opened until the guilty man is caught. All other escape routes are also to be guarded.
7. Those at the town gates are to report every day to the stadtholder the numbers who have entered and left the town by horse, wagon or on foot.
8. A watch is to be kept on the harbour and every day a report is to be given on all those who have entered the town by sea. No-one is to enter the town from the harbour without permission nor are men or goods to be shipped there without permission.
9. He is to oversee all buildings as far as Sjælland stretches and to ensure that none are altered without express permission.

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24. 24 April 1637, *egenhændige Breve*, IV, 130-32.

Apart from the first two points these terms of reference in no way convey the importance which the *stadtholder* held within the government. The description provided by Baron Cormenin<sup>25</sup> of the role of Frans Rantzau as stadtholder in 1629 is much more instructive:

il y a encores la Charge de Statholder du Royaume, c'est à dire Viceroy, & bien qu'il n'ait sceance au Conseil du Royaume, que par cette qualité de Conseiller jointe à la premiere, & encores à la sceance selon le tems de sa reception; C'est la plus belle Charge du Royaume, aujourd'huy c'est comme Sur-Intendant des Finances, & plus encores, sa fonction est en l'absence du Roy de donner passeports, de remedier à tout les Finances du Roy, tous les petits receveurs du Lot des Domaines, soit de la Tolle d'Elseneur, rendent conte aux Rentemestres, qui sont comme Tresoirs de l'Espargne, & les deux Rentemestres rendent comte au Statholder, qui ne rend conte de toute sa Charge à personne qu'au Roy: son pouvoir est encores plus absolu que M. Ransau ne le fait valoir, partie de ses fonctions luy sont disputées par le Chancelier du Roy, mesmes la qualité de Statholder du Royaume, qu'il veut réduire à Statholder de Copenhague seulement, mais cettuy-cy est appuyé de la faveur & autorité de son Maistre; on ne connoist pas bien encores la vraye fonction de cette Charge, d'autant qu'elle n'est establie que depuis que celle de grand Maistre n'a plus esté remplie, laquelle si elle l'estoit, le statholder n'auroit rien à faire; quant à moy, je croy que c'est une Charge a lieu de l'autre, avec changement de tiltre, pour diminuer l'autorité de la premiere, & la faire comme renaistre en cette seconde, avec moins de credit & d'autorité

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25. Des Hayes, *Les voyages de Monsieur Des Hayes*, 245-253.



There is also the office of Stadtholder of the Realm, that is to say Viceroy, and although he has a seat on the Council of the Realm only by virtue of this stature of Councillor held with the first (office of state, i.e. *rigshofmester*), and only has the seat according to the terms of his admittance; It is the greatest office of the realm today, it is like the *Surintendant de Finances* and much more besides, his function is, in the absence of the king, to issue passports, to supervise all finances of the king, all the small revenues from the domains, as well as the tolls of Helsingør, provide details to the *rentemestre*, who are like the *Trésoriers de l'Epargne*, and the two *rentemestre* deliver accounts to the stadtholder, who provides all details of his office to no-one but the king; his powers are even more absolute since M. Rantzau does not value the portion of his powers which are disputed with the Chancellor of the King (*kongens kansler*), even the status of Stadtholder of the Realm, though he could be reduced to Stadtholder of Copenhagen alone, but that he is supported by the favour and authority of his master; one does not know well the old function of this office, especially since it has been established only after that of grand master (*rigshofmester*) has been left unfilled, which if it were, the *stadtholder* would have nothing to do; as far as I can judge, I believe it is an office like the other with a change of title, to diminish the authority of the first, and revived as this second, with less credit and authority.

Thus the suspicion that the post of *stadtholder* was used as a substitute for *rigshofmester*, but with limited authority, is confirmed.

Despite the terms of office drawn up by Christian IV, which make no mention of the *rentekammer*, it is clear that, like the *rigshofmester*, the *stadtholder* was its overseer. This supposition is further

strengthened by evidence from Christian IV's letters. When Rantzau died in 1632 the number of letters to the *rentekammer* soared. As soon as Ulfeldt was installed in 1637 the number immediately drops again<sup>26</sup>. Further evidence that by the early 1640s the *rentekammer* was under his direct control is provided by a letter which the king addressed to 'Stadtholderen H: Corfidtz wlfeldt till hand, Och y hans frauerrelsse Rentemeisterne at Opbriide' (Stadtholder Corfitz Ulfeldt by hand, and in his absence the *rentemestre* to set in motion)<sup>27</sup>.

Although not expressly mentioned in the terms of office, the navy, the victualling store and the arsenal also came under his jurisdiction, all being based in Copenhagen. In addition point nine of the terms of office hardly reflects the huge importance that the *stadtholder* had with respect to the supervision of building works in Copenhagen. Most of Christian IV's building projects were carried out under the immediate superintendence of the *stadtholder*, working closely, of course, with the king himself.

	<u>Subject</u>	<u>No.</u>	<u>%</u>
1.	The Royal Court	48	21.4
2.	Foreign Affairs	119	53.1
3.	Finance	45	20.1
4.	Government Administration	27	12.1
5.	The Navy	77	34.4
6.	Law and Order	19	8.5
7.	Building Work	39	17.4
8.	Army and Land Defences	41	18.3
9.	Commerce	49	21.9
10.	The German Duchies	7	3.1

Table 2.5. Number of Letters to the *Stadtholder i København*

Sources: C.F. Bricka & J.A. Fredericia (eds.), *Kong Christian den Fjerdes egenhændige breve, I - VII*; J. Skovgaard, *Kong Christian den Fjerdes egenhændige breve, (København, 1928), VIII*.

26. Engberg suggests that Ulfeldt may not have officially taken over the supervision of the *Rentekammer* until after the death of the *kongens kansler* in 1639. (Jens Engberg, *Danske finanshistorie i 1640'erne*, (Aarhus 1972), 44 & 131).

27. 8 May 1641, *egenhændige Breve*, V, 86.



The figures in Table 2.5. are very similar to the distribution of letters for the *rigshofmester*, further substantiating the view that the *stadtholder* was a kind of apprentice *rigshofmester*. The only significant difference being in foreign affairs, which is accounted for by the entertainment of foreign ambassadors as dictated in the terms of reference.

#### 2.2.5. *Rigsmarsk*

The *rigsmarsk* (State Marshal) was the official in charge of the Danish military, although in practice he held rather more political than administrative power<sup>28</sup>. The main duties were the recruiting of troops, especially the *rostjeneste* (noble cavalymen), and the command of the army in wartime. Within the *rigsråd* the *rigsmarsk* also played an influential part in the granting of finances to the army.

Unlike the previous positions the selection of a *rigsmarsk* had to be approved by the *rigsråd*. This authority was enforced in 1627 when Christian IV was forced to accept the appointment of Jørgen Skeel to the post after his own leadership of the army had proved so disastrous. The appointment thereby ensured that the military and financial command of the army was brought back within the control of the *rigsråd*<sup>29</sup>. At the same time a *generalkrigskommissær* (War Commissioner) was appointed to take on the day to day administration of the war effort, leaving the *rigsmarsk* relatively free of actual administrative duties.

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28. Ellehøj, *Danmarks Historie*, 63-4.

29. E. Ladewig Petersen, 'Defence War and Finance: Christian IV and the Council of the Realm 1596-1629', *Scandinavian Journal of History*, 7 (1982), 309.

That the *rigsmarsk* had few administrative duties is demonstrated by the fact that, despite the office being occupied for most of the reign, only 13 letters were addressed to a *rigsmarsk*, and of those, eight were jointly addressed to either *kansler* or *stadtholder* and were largely concerned with matters pertaining to the Court.

#### 2.2.6. *Rigsadmiral*

Like the *rigsmarsk*, the main responsibilities of the *rigsadmiral* (State Admiral) were not administrative but operational. He was expected to command the fleet at sea both in peace-time and in times of war, and the position would therefore seem to have required an established naval officer with extensive seagoing experience, although this was not always the case.

The office itself was only stabilised when Peder Munk assumed control during the Northern Seven Years War. The earlier commanders of the navy held varying titles including *Kongens Admiral* (the king's admiral) and *Øverste Admiral* (highest admiral) and held office for only one or two years<sup>30</sup>. Peder Munk was promoted to *Øverste Admiral* in 1567 and by 1575 he became known as *Rigens Admiral*, a title he held until his promotion to *rigsmarsk* in 1596.

The first official terms of office date from 1616 when Albert Skeel was appointed to the post<sup>31</sup>. In summary his duties were as follows:

1. To command the navy in peace and war, sail to wherever the king directs, and carry out his orders to the best of his ability.

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30. H.D. Lind, *Fra kong Frederik den andens tid*, (København, 1902).

31. 1 December 1616, *egenhændige Breve*, I, 108-110.



2. To maintain good order and discipline and uphold the king's reputation in home and foreign ports.
3. To inspect the fleet yearly and report to the king on its strength, so that at all times it can be kept ready to sail, should the need arise.
4. To keep a register of all seamen in his service.
5. To keep a register of the number of seamen able to be conscripted in the king's lands.
6. To protect the men of the king's navy against any wrongdoing, and to judge and sentence, according to the king's articles.
7. To order his Captains, skippers and other officers not to fraternise with the ordinary seamen.
8. To hold religious services every morning and evening and to employ chaplains to conduct them.

The role of the *rigsadmiral* within the central administration was very much linked to the use of the navy as an instrument of foreign policy. Only five of the 36 letters addressed to the *rigsadmiral* make no mention of the navy and of those, three are primarily concerned with foreign affairs.

	<u>Subject</u>	<u>No.</u>	<u>%</u>
1.	The Royal Court	0	0.0
2.	Foreign Affairs	19	52.7
3.	Finance	3	8.3
4.	Government Administration	2	5.6
5.	The Navy	31	86.1
6.	Law and Order	3	8.3
7.	Building Work	0	0.0
8.	Army and Land Defences	2	5.6
9.	Commerce	4	11.1
10.	The German Duchies	0	0.0

**Table 2.6. Number of Letters to *Rigsadmiraler***

Sources: C.F. Bricka & J.A. Fredericia (eds.), *Kong Christian den Fjerdes egenhåndige breve, I - VII* ;  
J. Skovgaard, *Kong Christian den Fjerdes egenhåndige breve*, (København, 1928), VIII.

### 2.2.7. *Rigskansler*

The *rigskansler* was, as his latin title of *Justitiarius* suggests, the equivalent of the English Lord Chancellor. He was the chancellor of the *Kongens Retterting* (high court), acting as the king's deputy at times when he was unable to preside in court himself. He was responsible for drawing up all new statutes of judicial law and for the administration of justice throughout the realm. In addition he was the secretary of the *Herredag*, the assembly of the nobility and high clergy.

Until 1646, when Christian IV raised the status of both *rigskansler* and *stadtholder i Norge* to the same ranking as *rigsadmira<sup>l</sup>*<sup>32</sup>, the post was not officially restricted to members of the *rigsråd*, although it invariably was in practice. It was usually filled by someone of very great wisdom and learning such as Arild Huitfeldt or Jakob Ulfeldt.

There are only eight letters extant from the king to his *rigskanslere*, most of which are concerned with government administration. Strangely none is concerned with law and order.

### 2.2.8. *Stadtholder i Norge*

The position of *stadtholder i Norge* (Norwegian stadtholder) was created in 1572, after the Northern Seven Years War, and supplanted the earlier position of *Norge riges kansler* (Norway state chancellor)<sup>33</sup>. For most of the time it was merely an additional title for the holder of the largest Norwegian *len* of Akershus, and their responsibilities tended to be restricted simply to their own *len*. Their main duties were the collection of taxes and tolls, the maintenance of an army, and the administration of justice.

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32. Letter to Corfitz Ulfeldt & Christen Thomesen Sehested, 21 May 1646, *egenhændige Breve*, VIII, 384-6.

33. Rolf Fladeby, *Norges historie*, 6, (Oslo, 1977), 87-91.



When Hannibal Sehested took over the post in 1642 he extended his powers to cover the whole of Norway and acted very much as a viceroy in that kingdom. Under his leadership there grew a separate Norwegian central administration with its own *rentekammer*. Sehested also established a strong independent Norwegian army, and administered the operation of the *defensionskibe* fleet<sup>34</sup>.

Again the number of letters to the *stadtholder i norge* is scant. Only eight exist, concerning matters mainly to do with finance and government administration.

### 2.3. The Administrative Institutions of Government

In addition to the *rigsråd* there were three principal institutions of government which dealt with the administration of the state. These were the *Danske kancelli* (Danish chancellery), the *Tyske kancelli* (German chancellery), and the *rentekammer*, which relate in very simplistic terms to the 'home office', the 'foreign office' and the 'treasury'. Both the *Tyske kancelli* and the *rentekammer* had their origins as sub-departments within the *Danske kancelli* but by the 17th century had become distinct bodies in their own right, although nominally still remaining under its supervision.

Both the *Danske kancelli* and the *rentekammer* were controlled by members within the *rigsråd*. In contrast the *Tyske kancelli* effectively had no noble supervision and was very different in the way in which it was run.

The distinction between what should be dealt with by the *Danske kancelli* and the *Tyske kancelli* was dictated not by subject matter but by the language in which it was to be written. As many of the functionaries and servants of the state were of German origin, or under-

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34. Sverre Steen, *Det norske folks liv og historie*, 6, (Oslo 1930), 79-93.

See also Chapter 10 for details of Sehested's role as a shipbuilding contractor.

stood German better than Danish, there was a great deal of overlap between the boundaries of the two chancelleries with regard to matters within the kingdom of Denmark-Norway.

### 2.3.1. The *Danske Kancelli*

The *Danske kancelli* dealt with all state correspondence which was written in Danish. This meant that its areas of responsibility encompassed the internal functioning of the Danish and Norwegian kingdoms as well as foreign relations with Sweden and occasionally Russia. Its business was organised by geographical region rather than by subject matter and separate copy-books were kept for each province. This may have been suitable from the point of view of *len* administration but was clearly inefficient as a means of central government.

It was supervised by the *kongens kansler*, but governed on a day to day basis by an *oversekretær* (chief secretary). Beneath him were a number of under-secretaries and clerks. These positions were manned largely by young noblemen who were working their way up the career ladder to eventually become *rigsråd* members or *lensmænd*<sup>35</sup> For a short time Iver Vind functioned as both *rigsråd* member and *oversekretær*.

Table 2.7. shows those letters specifically directed to the *Danske kancelli*, excluding those to the *kongens kansler* whose many other duties would only confuse matters. As might be expected the majority of letters are concerned with matters to do with the court and government.

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35. Daniel O. Fisher, 'Kongens unge mænd: Christian 4.s kancellisekretærer', in K.J.V. Jespersen (ed.), *Rigsråd, adel og opposition 1570-1648*, (Odense, 1980), 169-94.



	<u>Subject</u>	<u>No.</u>	<u>%</u>
1.	The Royal Court	11	50.0
2.	Foreign Affairs	4	18.2
3.	Finance	0	0.0
4.	Government	5	22.7
5.	The navy	2	9.1
6.	Law and order	2	9.1
7.	Building work	0	0.0
8.	Army and land defences	0	0.0
9.	Commerce	2	9.1
10.	The German duchies	0	0.0

**Table 2.7. Letters to *Danske kancelli* officials**

Sources: C.F. Bricka & J.A. Fredericia (eds.), *Kong Christian den Fjerdes egenhändige breve, I - VII* ;  
J. Skovgaard, *Kong Christian den Fjerdes egenhändige breve, (København, 1928), VIII.*

### **2.3.2. The *Tyske Kancelli***

The *Tyske kancelli* dealt with all correspondence written in German and in Latin. Its principle concern was with the German duchies and foreign relations with the German states, the Netherlands, France, Britain and Spain. However this did not exclude it from also dealing with domestic or with Swedish or Russian matters.

Unlike the *Danske kancelli* it was run almost entirely by commoners of the burgher class, many of them from the German duchies and states. Only one official of the *Tyske kancelli* later went on to become a *rigsråd* member<sup>36</sup>. Theoretically it should have come under the supervision of the *kongens kansler* but in practice Christian IV himself took a very active personal control of it. This brought him into conflict with the *rigsråd* who, justifiably, were concerned about the accountability of such an important section of the Danish administration, and tried to enforce the *kongens kansler's* right to oversee its running.

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36. Jespersen, 'Rekrutteringen til rigsrådet', 35-92.

The *Tyske kancelli*, like the *Danske kancelli*, was led by an *oversekretær* but in this case their political power was very much greater. For most of Christian IV's reign the position was held by Frederik Günther, who was his chief adviser on non-Swedish foreign affairs for many years.

The Danish involvement in the Thirty Years War brought with it a greater need for German diplomacy. In 1628 a new post of *tyske kansler* (German chancellor) was created to head the chancellery. However, he was based principally in Glückstadt and appears initially to have operated more as a royal ambassador in the German duchies and states rather than as an administrative official. In addition the Holstein stadtholder, Christian Pentz, became increasingly involved in Danish foreign policy after marrying one of the king's daughters, much to the disgust of the *rigsråd*<sup>37</sup>. To compound their annoyance the appointment of Ditlev Reventlow as *Tyske kansler* in 1632 effectively resulted in the *kongens kansler*, and therefore the *rigsråd*, finally losing all control of this chancellery.

However, despite all these changes the *oversekretær* back in Copenhagen still retained much of his power and authority, and Günther remained the chief official with whom the king corresponded on matters concerning the *Tyske kancelli*. The great number of letters addressed to Günther and other members of the *Tyske kancelli*, shown in Table 2.8., demonstrate how important Christian IV viewed this body, not least because of the autonomy it allowed him away from the interference of the *rigsråd*.

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37. Ellehøj, *Danmarks Historie*, 296-7.



	<u>Subject</u>	<u>No.</u>	<u>%</u>
1.	The Royal Court	41	18.1
2.	Foreign Affairs	144	63.4
3.	Finance	53	23.3
4.	Government	10	4.4
5.	The navy	3	1.3
6.	Law and order	3	1.3
7.	Building work	5	2.2
8.	Army and land defences	27	11.9
9.	Commerce	26	11.5
10.	The German duchies	99	43.6

Table 2.8. Letters to *Tyske kancelli* officials

Sources: C.F. Bricka & J.A. Fredericia (eds.), *Kong Christian den Fjerdes egenhåndige breve, I - VII* ;  
J. Skovgaard, *Kong Christian den Fjerdes egenhåndige breve, (København, 1928), VIII.*

### 2.3.3. The *Rentekammer*

The *rentekammer* was the department through which most, though by no means all, state revenue and expenditure was administered<sup>38</sup>. It was originally a subsidiary of the *Danske kancelli* but by the early 17th century it had become a virtually independent institution in its own right, although much of its correspondence was still directed through the *kancelli*.

At its head were an *ældste rentemester* and an *anden rentemester* (senior and junior treasurer), both of noble lineage. From 1625 it was decreed that one should undertake the principal accounts of the *rentekammer* itself, while the other audited the accounts of all other state offices. The *rentemestre* were selected personally by the king and were invariably promoted from the position of *sekretær* in the *Danske kancelli*. Eventually a *rentemester* could hope to become a member of the *rigsråd*. In the early 1640s Jørgen Vind was promoted to the *rigsråd* whilst still

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38. Details of precisely which finances were dealt with by the *rentekammer* are discussed in Chap 5.

maintaining his position as *rentemester*, but this was unusual. During this time an *underrentemester* (under treasurer) was appointed, who eventually superseded Vind as full *rentemester*.

Beneath the *rentemestre* were two *øverste renteskrivere* (senior treasury clerks) and a staff of around 25 junior *renteskrivere*. In contrast to the *Danske kancelli* these junior positions were manned by commoners, albeit from an elite class of wealthy burghers<sup>39</sup>.

The *rentekammer* was overseen from the *rigsråd* by the *rigshofmester* or *stadtholder*, and to a lesser extent by the *kongens kansler*, when neither of these positions were filled. Judging by the number of his petty requests for payment the king himself also kept a very close eye on its day to day running.

Being in charge of virtually all state expenditure meant that the *rentekammer* also became very much involved in the procurement of materials and the supervision of state suppliers. This was particularly true with respect to the dockyard, arsenal, and victualling store where their duties extended much further than simple accounting. The reasoning behind this was presumably that if they ensured that they operated efficiently there could be considerable savings for the state. Table 2.9. is based solely on the king's letters to the *rentemestre* and *renteskrivere*, not the *stadtholder* or *rigshofmester*, and shows the wide range of duties with which they were concerned, outwith the strictly financial.

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39. Engberg, *Danske finanshistorie*, 29-43.



	<u>Subject</u>	<u>No.</u>	<u>%</u>
1.	The Royal Court	110	20.9
2.	Foreign Affairs	26	4.9
3.	Finance	239	45.4
4.	Government Administration	40	7.6
5.	The Navy	73	13.9
6.	Law and Order	25	4.8
7.	Building Work	93	17.7
8.	Army and Land Defences	16	3.0
9.	Commerce	191	36.3
10.	The German Duchies	6	1.1

**Table 2.9. Number of Letters to *Rentekammer* Officials**

Sources: C.F. Bricka & J.A. Fredericia (eds.), *Kong Christian den Fjerdes egenhändige breve, I - VII*; J. Skovgaard, *Kong Christian den Fjerdes egenhändige breve, (København, 1928), VIII.*

#### **2.3.4. An Administrative System?**

From the above analysis it can be seen that the central administration was very disjointed and inefficient. So much depended on personality and context, and on personal relationships with the king that any formal definition of roles becomes virtually meaningless, which explains the very fluid boundaries between the state officials and even the central institutions of government. Many of the practices were outmoded and much too rudimentary for the growing responsibilities and workload which the central administration was having to undertake. In fact the size of government was actually very small, amounting to not much more than around sixty or seventy permanent members of staff in the *rigsråd* and the three government institutions<sup>40</sup>. Given the geographical size of Denmark-Norway, and the ambitions that Christian IV had for its expansion, the central government would appear far too small to govern effectively, certainly when compared to the size of the administrations in England, France, and above all Spain<sup>41</sup>.

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40. Approximately 30 staff in the *rentekammer*, 20 in the *Danske kancelli*, 12 in the *Tyske Kancelli* and the six high state officials in the *rigsråd*.

41. Among the most informative studies on the central administrations of these countries are: G.E. Aylmer, *The King's Servants: The Civil Service of Charles I 1625-1642*, (London & Boston, 1974), 7-68; J.H. Shennan, *Government and Society in France 1461-1661*, (London, 1969); I.A.A. Thompson, *War and Government in Habsburg Spain 1560-1620*, (London, 1976).

Despite these inadequacies no attempt was made by the king to reform the system, and much of its functioning continued to depend on his direct supervision. This was in part a deliberate ploy to maintain as much political control as possible. The background behind this reasoning, and the profound impact that it had on the control of the navy, ought now to be addressed.

#### 2.4. The King, the *Rigsråd*, and Political Control of the Navy

The issues raised in Chapter One gave some indication of the character and personality of Christian IV, but it is worth now looking more closely at this and how it affected his relations with the *rigsråd*. This is a subject which has aroused great passions with historians for centuries and each generation has moulded his character to suit their own political ideologies<sup>42</sup>. The first historians, such as Ludvig Holberg and Niels Slange writing in the early part of the 18th century, were patriotically minded and portrayed him as a righteous and noble king who stood up to the 'bad neighbour' and his meddlesome *rigsråd*, and who was simply unlucky when things went wrong. This idealised and romantic view held sway until the late 19th century when there began a critical backlash from liberal historians like J.A. Fredericia, and especially the marxist, Erik Arup, who painted him as an arrogant, incompetent, and brutal tyrant who subjected his people to unnecessary war and hardship. Thankfully the debate has moved on significantly in recent years<sup>43</sup> and it is now possible to attempt a more reasonable and subjective assessment of the king and his political

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42. Leo Tandrup, 'En brav, blakket eller brutal konge: Christian IV i den mønsterdannende danske historieskrivning og litteratur fra Holberg til vor tid', in Ellehøj (ed.), *Christian IVs verden*, (København, 1988), 378-411.

43. The works of Svend Ellehøj, Leo Tandrup and E. Ladewig Petersen stand out above all others. Lockhart's recent study also assesses Christian IV's character but he displays an obvious affection for his subject and perhaps overstates the king's ingenuity in foreign affairs. Paul Douglas Lockhart, *Denmark in the Thirty Years' War, 1618-1648: King Christian IV and the Decline of the Oldenburg State*, (London, 1996), 55-80.



talents and shortcomings.

There can be no doubt that Christian IV was an arrogant and self-centred monarch whose belief in his own destiny was overpowering. He was a king who believed that if his own and his realm's power remained static then it was a sign of weakness and decline, and he was therefore constantly striving for greater prestige and recognition, both at home and abroad<sup>44</sup>. This in part explains his innate distrust of subordinate officials and his inability to delegate effectively. He seems to have felt that by delegating duties to anyone else he was in some way diminishing his own powers.

A common fault attributed to him is that this inability to delegate meant that he was so caught up in the minutiae of every-day activities that he often failed to see the bigger picture. This is undoubtedly true to some extent, but despite being frequently distracted by so many seemingly trivial matters, he never lost sight of his overall objectives for long.

The long-term approach was a definite problem for him, though. It was his nature to go all out on whatever project had taken his fancy at the time. Once he was bitten by a certain scheme or other his enthusiasm was often overwhelming and any opposition he encountered was frequently quelled by bullying his opponents into submission. If things did not at first go as well as he had hoped he easily lost interest and tried to achieve his aims by an easier route, or else was diverted altogether by some other project. This character trait was as true in foreign policy as in his various building projects, and was a serious obstacle to his greater acceptance in diplomatic circles.

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44. Tandrup, *Mod triumf eller tragedie*, I, 88-90.

Christian IV was seriously affected by his defeat in the Thirty Years War. Everything he had done previously was aimed at increasing his power base. Defeat was simply not a possibility to be contemplated. To make things even worse, in the same year as this defeat, his lover Kirsten Munk left him for another man, and Kronborg Castle, the great symbol of Danish supremacy on the Baltic, was burnt down. Thus in the space of a few short years his position as a monarch, as a warrior, and even simply as a man, had suffered irreparable damage.

After 1629 Christian IV's feeling of confidence was replaced by bitterness. Whereas before his policies were based on an assumption of divine right and royal prerogative, afterwards his main motives seem to have been based more on vengeance and jealousy, and a vain attempt to restore his previous position of supremacy.

His relationship with the *rigsråd* was fundamental to the effective governing of the state, but from the very beginning it was highly strained. It has been suggested that this was due to his long minority, during which time the *rigsråd* delayed his coronation until his nineteenth year, despite his assumption of sovereignty of the German duchies at sixteen<sup>45</sup>. The fact that the *rigsråd* also won the bitter struggle with his mother to supervise his education also played a strong part.

The *rigsråd* was much more conservative than the king. Its members were first and foremost landowners and this mentality can be seen to influence virtually all their decisions. The high nobility owned their estates and administered the most important *len* in the rich farming areas of Jutland and Scania. Their livelihoods were therefore threatened by any actions which would lead to fighting in these border areas and their initial reaction was always to safeguard peace at all costs.

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45. Knud J.V. Jespersen, 'Herremænd i kongeklæder', in Ellehøj (ed.), *Christian IV's Verden*, (København, 1988), 126-30.



Christian's policy of expansion in Sweden and northern Germany was consequently in direct opposition to their own wishes. Quite apart from the loss of revenue caused by warfare they stood to lose a great deal of their power and privilege if Christian IV gained any more territory outside of Denmark. Their fears of an ever increasing German administration have already been mentioned, but if Christian were also to succeed in gaining Sweden then the Danish *rigsråd* would become the ruling council of only one part of a joint state in which Christian regarded himself as hereditary and absolute monarch of Norway and Sweden<sup>46</sup>.

In matters of foreign policy they therefore always sought the easiest route to the preservation of peace, which frequently meant a policy of appeasement. They were so concerned with preserving the status quo that they failed to recognise that at times the best means of defence was attack. Only reluctantly did they eventually agree to the Kalmar War after Swedish manoeuvring had gone too far, and, more significantly, after Christian IV had threatened to declare war independently as Duke of Holstein.

Thereafter they steadfastly refused to sanction any aggression against their neighbour. Their stubborn attitude is demonstrated by their response to the crisis in 1624. By refusing to back up the king by granting taxes to enable a naval mobilisation they managed to avoid a conflict with Sweden. However, they failed to appreciate the impact this humiliation would have on Christian IV who immediately sought to save face by defying his council and hastily entered the Thirty Years War as Duke of Holstein.

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46. If Sweden were taken then it would also negate the Stettin Treaty which guaranteed many of the *rigsråd's* privileges. (Tandrup, *Mod triumf eller tragedie*, 106).

As this campaign turned to disaster the *rigsråd* managed to gain significant financial and political concessions from the king in return for their help in extricating him from the mess. In return for their granting funds to enable the war to be continued the *rigsråd* gained control of all war finances. However Christian IV in turn also managed to extort funds from the *rigsråd* by threatening not to sign the Treaty of Lübeck<sup>47</sup>.

The relations between king and *rigsråd* became increasingly more strained. The king had lost his financial independence and was now forced to consult the *rigsråd* more regularly<sup>48</sup> and was unable to keep the high offices of state unfilled for any significant length of time. Christian IV sought to compensate for this loss of power by promoting his sons-in-law to the high state posts. However as we have seen this policy largely back-fired as they in turn exploited their own positions of power. The policy also served to antagonise the other council members and the *rigsråd* gradually split into two factions.

With this background of distrust and tension between the king and *rigsråd*, especially in the field of foreign policy, it comes as no surprise that Christian IV was determined to maintain a free hand in the leadership of the navy. This determination is reflected in the appointment, or otherwise, of officials to the post of *rigsadmiraal*.

Right from the very beginning of his reign Christian IV began manipulating the role of this office. Peder Munk, who had been the leading admiral since the 1560s, could have presented a threat to Christian IV's personal control if he remained in office as *rigsadmiraal*. He was also no doubt regarded as too old and set in his ways to be of any use to Christian IV in the more dynamic role he saw for the navy. Despite being

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47. See Chapter 3 for a fuller discussion of this.

48. The average number of *rigsråd* and *Herredag* meetings before 1627 was 1.6 per year. After 1627 this figure rises to 3.1. (Erslev, *Aktstykker*, I, 500-5; II, 644-50; III, 454-5.)



old and feeble and unable to follow the Court<sup>49</sup>, he obviously still presented a potential threat and rather than being injudiciously removed from power altogether Munk was promoted to the office of *rigsmarsk*<sup>50</sup>. This move would have tempered any allegations that such an influential naval leader was being removed from his post for political reasons, since he still remained in the *rigsråd*, although it certainly looks as though Munk was promoted out of harms way.

Thus Christian IV took away any political control which the *rigsråd* had with regard to the navy and now held that control himself. When *rigshofmester* Christoffer Valkendorf died in 1601 he also assumed complete financial control over it as well.

This control was immediately exerted and the navy began to be used less as a defensive force and much more as an instrument of foreign policy, as witnessed by the Arctic expeditions and the voyage to England in 1606<sup>51</sup>. The naval build-up Christian IV presided over also enabled him to begin to seriously threaten Sweden and helped to force the *rigsråd* into granting permission for the Kalmar war.

The appointment of Mogens Ulfeldt, who was considered 'the king's man'<sup>52</sup>, as *rigsadmiral* in 1610 can be seen as a convenient ruse to gain support for the Swedish war. Ulfeldt was a born warrior who had impressed the king as *vicekaptejn* (vice captain) during his 1599 trip to the North Cape, and as *underadmiral* on the English trip in 1606. Just

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49. Fynes Moryson, *The fourth Part of an Itinerary*, Library of Corpus Christi College, Oxford, MS. C.C.C.94, f.235.

50. Heiberg maintains that Munk retained his position as *rigsadmiral* but all records after 1596 refer to him simply as *rigsmarsk*, even when he commanded the naval squadron to England in 1606. (Steffen Heiberg, 'Peder Munk', *Dansk Biografisk Lexikon*, 10, 126-7; and *Christian 4.: monarken, mennesket og myten*, (København, 1988), 49)

51. See Chapter 1.

52. Heiberg, *Christian 4.*, 165.

prior to his appointment as *rigsadmiral* he had also been in charge of the naval manoeuvres in the Baltic designed to reinforce Denmark's *dominium maris Baltici*<sup>53</sup>.

By appointing Ulfeldt Christian IV gained in two ways. Firstly Ulfeldt's views on the Swedish war were similar to his own and so he gained a valuable political lever within the *rigsråd*. This is demonstrated by the fact that Ulfeldt was one of the few *rigsråd* members not to vote against the war moves. In addition Christian IV could also claim that the *rigsråd* was regaining some control over the navy since a new *rigsadmiral* had been appointed for the first time during his reign.

While Ulfeldt's appointment can be seen as an astute move by the king, the appointment of his successor Albert Skeel, after Ulfeldt's death in 1616, must be viewed as decidedly odd. Skeel was not at all like Ulfeldt. He was primarily a professional politician, with only limited experience at sea. He was certainly not so well disposed to the king's foreign policy objectives or to the use of the navy as an extension of royal power<sup>54</sup>.

It is perhaps significant that when he took up office as *rigsadmiral* in 1616 he had to sign Christian IV's terms of office which strictly limited his areas of responsibility to operational matters. It is tempting to think that while Christian IV was becoming more preoccupied with his machinations in northern Germany he needed someone in Copenhagen to supervise the running of the navy. However, if this were the case then why not then choose someone more attuned to the running of the navy? It also seems very odd that Skeel was also used extensively in negotiations in Bremen and Verden. It may be that Christian IV felt he could not risk

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53. Leo Tandrup, 'Mogens Ulfeldt', *Dansk biografisk leksikon*, 15, 151-2; H.D. Lind, *Kong Kristian den Fjerde og hans Mænd paa Bremerholm*, (København, 1889), 39-43.

54. Leo Tandrup, 'Albret Skeel', *Dansk biografisk leksikon*, 13, 418-21; Lind, *Kong Kristian og hans Mænd*, 43-5.



the possibility of a more professional seaman wresting control from him in his absence. By involving Skeel in Germany so much he could also keep a close eye on him and prevent him assuming too much control over the navy, although this would seem to defeat the object of appointing him in the first place.

Skeel's appointment appears even more peculiar in the light of his subsequent violent disagreements over the Swedish situation. If the navy was designed to maintain the Danish *dominium* and prevent any Swedish encroachment, why then appoint someone as *rigsadmiral* who belonged to the camp of *rigsråd* members who believed in peace at any price? In the end Skeel became so outraged at Christian IV's political manoeuvring that he had to resign his post in 1622<sup>55</sup> after a particularly heated argument. But perhaps this situation was astutely engineered by Christian IV in order to once again take over complete control of the navy at a time when his attentions were becoming once more focused on Sweden.

In any event the post of *rigsadmiral* now became vacant, and with the post of *rigsmarsk* also vacant, Christian IV assumed complete political control over all the country's armed forces. This undoubtedly played its part in the precipitation of the Swedish crisis in 1624 and the subsequent entry into the Thirty Years War.

After things had gone badly and Jutland had been overrun in 1627 it seems as though Christian IV initially panicked over the lack of a *rigsadmiral*. He wrote to the *rigsråd* in November asking for their suggestions<sup>56</sup>, although they were not at all clear whether it was a 'general rigens admiral, som tilforn havfer verred' (*rigsadmiral* which

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55. Tandrup, *Mod triumf eller tragedia*, I, 95-6.

56. Letter to *rigsråd*, 11 November 1627, *egenhændige Breve*, II, 117.

there previously has been), or a 'søe admiral, som pro tempore skulde commandiere en particulier flode' (sea admiral who should temporarily command a particular fleet)<sup>57</sup>. For the former post they suggested Jens Sparre, a nobleman who was not a member of the *rigsråd*, though whom they obviously wished to be. Christian IV was not convinced though. The fact that he had already appointed four new *rigsråd* members that year as well as a *rigsmarsk* who inevitably also became a member shortly thereafter, seems to have influenced his decision, and he opted instead to go for an existing *rigsråd* member in Klaus Daa<sup>58</sup>.

Again this was a rather curious choice. Daa had no experience of the navy or seafaring. He was much more experienced with army affairs, having served in the Kalmar War as a cavalryman, and was *krigskommisær* to the army in 1626. In fact Daa was not actually appointed to the post of *rigsadmiral* until 1630, and by then he had taken an active role in forcing the review of war finance which brought it under the control of the *rigsråd*<sup>59</sup>. So again Christian IV appointed someone with little practical knowledge of the navy and who was an open critic of his policies.

It is clear that Christian IV was not happy with the choice. After the initial panic had abated he managed to avoid actually installing him in his post. In 1629 he attempted to persuade Jens Juel to take on the post, who would have been a much more suitable candidate. Although he was not a professional seaman he had great administrative gifts and as Norwegian stadtholder he had supervised the establishment of the *defensionskibe* programme and had greatly improved the recruitment of seamen

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57. Erslev, *Aktstykker*, II, 77-8.

58. Letter to *rigsråd*, 15 November 1627, *egenhændige Breve*, II, 125.

59. Steffen Heiberg, 'Claus Daa', *Dansk biografisk leksikon*, 4, 89-90; Lind, *Kong Kristian og hans Mænd*, 45-6.



in Norway<sup>60</sup>. He declined to take the post ostensibly on health grounds but it seems there was something more behind his decision. Christian IV was furious at his refusal to take the post<sup>61</sup>:

y nu med hannem om samme leiighed skall taale och hannem *demonstrere*, at hannem sliig vndskilling inted anstaar, eptherdi hand er disse Riiger *obligerit* at tiene y huiss maade hannem mueligt Er.

you (the *rigsråd*) should now take the opportunity to speak to him and demonstrate that he has no suitable excuses, since he is obliged to serve this state in whatever way he possibly can.

Ill health was only one of the many reasons cited why he could not take up the post, which clearly did not impress the king, and he was immediately stripped of his post as Norwegian stadtholder. Whatever the real reason for his refusal it did not prevent him from accepting the post of *rigsmarsk* in 1631.

This left the post of *rigsadmiral* still unfilled and it is likely that the *rigsråd*, no doubt fully aware of Christian IV's earlier proposal to appoint Klaus Daa, forced his hand and compelled him to honour his previous commitment. Daa was finally appointed as *rigsadmiral* in July 1630, although he had received some orders concerning the navy the previous year.

Almost immediately he was put in charge of the fleet sailing to attack Hamburg, which he had explicitly advised against in the *rigsråd*. His lack of experience and reluctance for the fight is shown by the steady

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60. Steffen Heiberg, 'Jens Juel' *Dansk biografisk leksikon*, 7, 562-3.

61. Letter to *rigsråd*, April 1629, *egenhændige Breve*, II, 197-8.

stream of letters to him from Christian IV concerning the conduct of the battle. The initial failure of the attack was blamed on him, although in his defence he could claim, with some justification, that he had received no training for his office.

Daa remained in office throughout the period of armed neutrality in the 1630s and despite the *rigsråd's* nervousness at putting the fleet to sea Daa seems to have acquitted his duties as *rigsadmiral* as well as could be expected of him. Christian IV seems to have kept a very close eye on him though and of the 36 letters addressed to his *rigsadmiraler* 32 were addressed to Daa. This may simply reflect the growing concern with naval matters in the 1630s and the fact that Daa proved the longest serving of any *rigsadmiral*, but it does seem disproportionate and suggests that perhaps Christian IV could not trust him to act on his own initiative.

In 1634 the king's illegitimate son Hans Ulrik Gyldenløve was sent to Copenhagen to learn about the navy and artillery<sup>62</sup>. It has been suggested that he was in fact being groomed to take over as *rigsadmiral*, although he was still only 19. He did go to sea on a number of occasions in the following years but he did not take to the sea well and his navigation instructor declared that he 'havde intet Hoved eller Ingenium dertil' (had no head or talent for it)<sup>63</sup>.

Quite how serious the intention was to make Hans Ulrik *rigsadmiral* is unknown. If this was in fact the true intention then it reflects poorly on Daa's competence, although it would make sense from a political perspective, with the king's son naturally expected to be much more com-

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62. Letter to *rentemestrene*, 27 November 1634, *egenhændige Breve*, III, 302-3.

63. Lind, *Kong Kristian og hans Mænd*, 299-302.



pliant with any political objectives than Daa. Even after Daa's death in 1641 Hans Ulrik did not take up the post. Later that year Erik Ottesen was temporarily suspended from his post as *Holmens admiral*<sup>64</sup> and Hans Ulrik appears to have taken charge of Bremerholm, in tandem with *rentemester* Sten Beck<sup>65</sup>. However, this was only a temporary measure, and the post of *rigsadmiral* remained vacant.

Even before the death of Daa the *rentemester* Jørgen Vind had become increasingly more involved with naval affairs. He was a well experienced seaman and had been a trusted naval captain during the 1620s, before joining the *rentekammer*<sup>66</sup>. His naval experience was used to good effect to help out Daa as *rigsadmiral* and a number of letters on naval affairs were jointly addressed to both men. After Daa's death Vind essentially became *rigsadmiral* elect, as can be seen from his instructions given just a few weeks afterwards:

Han skal have tilsyn med Bremerholm for København, at Arbejdet som er befalit at forfærdiges der gaar for sig. Desuden skal han have opsyn med Flaaden, som ligger for København<sup>67</sup>.

He shall have command of Bremerholm in Copenhagen, so that the work which has been ordered is completed. In addition he shall have supervision over the navy, which lies in Copenhagen.

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64. See Chapter 6.

65. Letters to Sten Beck and Hans Ulrik Gyldenløve, 13 and 18 June 1641, *egenhændige Breve*, V, 98 & 104.

66. Hans Fussing, 'Jørgen Vind', *Dansk biografisk leksikon*, 15, 576-7; Lind, *Kong kristian og hans mænd*, 46-9.

67. Instructions to Jørgen Vind, *Kancelliets Brevbøger*, 18 June 1641.

He still retained his post in the *rentekammer*, however, until 1643, when preparations for the renewed offensive against Hamburg saw him installed formally as *rigsadmiral*. Like Mogens Ulfeldt Vind appears to have been a supporter, or at any rate not an active opponent, of Christian IV's naval politics, and with his experience at sea, the king once again had a man he could trust.

Unfortunately for the king, Vind was wounded in action at the Battle of Kolberger Heide in 1644 and died of his wounds shortly thereafter. This left Christian IV with a tricky decision in the middle of a naval campaign which could prove vital to the security of the nation. The choice was again made in haste, and again the man chosen was not perhaps the most suitable.

Ove Giedde was a curious man who has gone down in Danish folklore as the leader of the first East India expedition. The truth of the matter was that it was Jens Munk who was the original choice for this mission and it seems that Giedde exerted his influence in the court to gain this potentially valuable command<sup>68</sup>. He had no previous experience at sea and proved to be a poor master and a poor judge of the political intricacies of the mission. He was however a good self-publicist<sup>69</sup> and retained his contacts in the court. On his return he was awarded the post of *lensmand* to one of the larger Norwegian len<sup>70</sup>.

Apart from his East Indian journey he had had little to do with naval affairs, although he was responsible for the transfer of the Norwegian galley fleet to Copenhagen in 1628. As a Norwegian *lensmand* he was also put in charge of a fleet of *defensionskibe* at the start of the

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68. Thorkild Hansen, *Jens Munk*, (København, 1965), 240-7.

69. He wrote his own glowing account of the Indian expedition. (Ove Giedde, 'Fortegnelse paa alt, hvad paa den Indianske Reise forfalden er', in Schlegel (ed.) *Samlung zur Danischen Geschichte*, I, (Kopenhagen, 1772).)

70. His administrative competence here later came under scrutiny.



*Torstenssonkrig* but he did not distinguish himself very well in this respect, failing to arrive off Gøteborg in time for Christian IV to maintain the blockade<sup>71</sup>.

It is strange then that when Vind died Giedde was chosen as *rigsadmiral*. On the face of it he was far from an ideal choice at such a critical time, and it has been suggested that he gained his post through his friendship with the Norwegian stadtholder, Hannibal Sehested, who was at the time the king's favourite son in law. This certainly sounds plausible since there were other more distinguished noble admirals who would surely have had a better claim to the post.

His reputation as *rigsadmiral* was poor and his only contribution to the war in 1645 was to wreck his flagship *Store Sophia*, one of the largest ships of the navy, and lose another ship to the Swedes. An investigation later found Giedde completely to blame and recommended that he pay 70,000 Rdlr. compensation, although this was never enforced. It was later said of him that 'Rigsadmiralen har været i Indien, men har intet godt Navn, ej heller holdes for at være en god Sømand' (the *rigsadmiral* has been to India, but does not have a good name, neither is he considered a good seaman)<sup>72</sup>.

Given this damning judgement it comes as no surprise that a *rigsviceadmiral* (state vice admiral) was appointed for the first time in 1645. The reason was ostensibly that Giedde had broken his leg in escaping from *Store Sophia* and was unable to continue with his duties, but for the king to create a completely new position, with a seat on the *rigsråd*, within just a few months of Giedde's appointment shows just how worried he must have been about the competence of Giedde. This is shown in his communications with the *rigsråd*<sup>73</sup> :

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71. Th. Topsøe-Jensen, 'Ove Giedde', *Dansk biografisk leksikon*, 5, 179-81; Lind, *Kong Kristian og hans Mænd*, 49-53.

72. Lind, *Kong Kristian og hans Mænd*, 49-53.

73. Raadet, 31 May 1645, Erslev, *Aktstykker*, III, 69.

Efterad dette bref var skrefven, kom rigens admiral Ove Gedde med floden her paa reden, hvilket hans Mayt. hafver verrit ilde tilfreds med. Nu hafver hand Mayt. resolverit sig strax at forordne tvende vice admiraler; den første skulle stedse blifve udi bestillingen och nu commendere floden, den anden skal vere admiralen paa Holmen. Er os derfor strax befalit at talle med Niels Trolle, som forskrefne først vice admirals bestilling strax skulle antage och forestaa, mens hand vegrer sig endnu der udi, prætenderendis sin uforfarenhed udi slig en høi office.

After that letter was written the *rigsadmiral* Ove Giedde came with his fleet upon the roadstead, which his majesty has been poorly satisfied with. His majesty has now resolved to immediately appoint two vice admirals; the first should always be in position and now command the navy, the second shall be admiral on Bremerholm<sup>74</sup>. We therefore are immediately ordered to talk to Niels Trolle, to be immediately put in charge of the aforementioned first vice admiral position, although he still asserts his inexperience for such a high office.

Giedde was clearly not a man to be trusted, and any correspondence concerning the navy thereafter referred to Giedde in tandem with either one or both of his new vice admirals. However, the choice of Niels Trolle is again slightly curious since, although he came from a strong seafaring family, he had very little experience of the sea himself. It can only be assumed that Christian IV had been impressed with him in his

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74. i.e. the post of Holmens admiral, see chapter 6.



earlier position of *lensmand* for Copenhagen Castle, which would have given him some insight into the navy's victualling and the workings of Bremerholm<sup>75</sup>.

Having now assessed the appointments and abilities of the men appointed to the post of *rigsadmiral* it is worth looking at who actually held the real political control over the navy. Clearly the primary control lay with the king while the *rigsadmiral* could be considered as the second in command of its operational side. Given this, Christian IV's selection of *rigsadmiraler*, apart from Mogens Ulfeldt and Jørgen Vind, therefore appears very strange. It seems likely that he was panicked into appointing both Klaus Daa and Ove Giedde in times of war when the Danish position had become perilous, but the reasoning behind the appointment of Albert Skeel still remains a mystery. However, as we have seen, when the *rigsadmiral's* own political views concerning the navy came into conflict with the king's they did not really have much sway. Skeel was forced to resign his position, and Daa was forced into naval operations to which he was opposed.

The absence of a *rigsadmiral* in the earlier part of his reign meant that Christian IV could basically do what he wanted with the navy on the operational side with little regard to the *rigsråd*. When it came to the civil control of the navy, i.e. its financing and the running of the dockyard, the situation became much more complex. The *rigsadmiral* really had little to do with the navy's infrastructure, and this aspect of naval control fell into the hands of the *rigshofmester*, *stadtholder*, or to a lesser extent the *kansler*, depending on which office was filled at the time.

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75. In the early 16th century the *lensmænd* of Copenhagen Castle carried out the functions of the *Holmens admiral* and probably retained some involvement with Bremerholm even after this post was established. Jørgen H. Barfod, *Christian 3.s flåde*, (København, 1995), 124; Lind, *Kong Kristian og hans Mænd*, 53-6.

However no strict delineation of responsibilities can be made, and again much depended on personality and circumstance. In the 23 years that Breide and Frans Rantzau held the post of *stadtholder* they each received only two direct instructions from the king concerning the navy, but Corfitz Ulfeldt in just 6 years received more than 70. Heiberg<sup>76</sup> suggests that the reason that naval affairs were not included in Ulfeldt's oath of office was because Christian IV wanted to restrict his remit until he was sure of his loyalty, so in effect he was really on a kind of probation. This argument seems plausible, since although Ulfeldt received just as many instructions concerning the navy as *stadtholder* as he did as *rigshofmester*, these are skewed very much towards the end of his *stadtholdership*. However, this theory may prejudice attitudes stemming from his later behaviour to some extent. From around 1640 Ulfeldt became increasingly more involved with naval affairs and it may be that with the king now in his sixties he was glad of the opportunity of delegating some of his responsibilities to someone he thought he was able to trust. Ulfeldt after becoming *rigshofmester* became essentially the chief political leader of the civil side of the navy, a position which he was to exploit to his own advantage. However, after the suspicion of maladministration came to light at the start of the *Torstenssonkrig*<sup>77</sup>, only a handful of instructions concerning minor details were issued to Ulfeldt and it can reasonably be assumed that the king once again took a more active role in the civil side of the navy.

The formation of the Norwegian *defensionskibe* fleet also serves to complicate matters. Although they were ostensibly privately owned armed merchantmen, they came under the direct control of the Norwegian *stadtholder*. So from the late 1620s this official also had some control over

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76. Steffen Heiberg, *Enhjørningen: Corfitz Ulfeldt*, (København, 1993), 30-31.

77. See chapter 3.



naval affairs. This became increasingly so under the stadtholdership of Hannibal Sehested who also radically reformed the Norwegian administration to create a virtually independent Norwegian navy. Although this came under the direct control of the king and *rigsadmiral* in times of war, its civil administration remained basically autonomous.

The most striking fact that comes out this analysis is that the boundaries between different officials was so fluid. This may reflect the fact that the high officials were also *lensmænd* and had responsibilities to their local administration as well as to the central administration. The issuing of orders was therefore greatly influenced by who happened to be in Copenhagen at the time and actually able to carry out any instructions concerning the navy, rather than by any strict delineation of duties. This probably also partly explains why the *rentemestre* occasionally received large numbers of instructions, since they were more likely to remain in Copenhagen than any of the high officials<sup>78</sup>. This lack of formal boundaries is demonstrated by the number of letters that Christian IV addressed to more than one official and those which he addressed rather enigmatically, for example, to 'Riigens Admirall Eller huem som Paa Bremerholmen commanderer' (*rigsadmiral* or whoever is in command at Bremerholm)<sup>79</sup>.

In terms of policy formation the king held absolute sway. However, he was only able to carry out his policies freely, even when key posts in the administration were deliberately kept vacant, up to the point when large amounts of money were needed, at which point the *rigsråd* was able to influence naval policy. Arild Huitfeldt, in his history of Denmark, took

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78. The *øverste sekretær* of the *Danske kancelli* also received detailed instructions concerning the repair of ships at one stage. (Letter to Iver Vind, 14 January 1639, *egenhændige Breve*, VIII, 136-7).

79. 13 June 1637, *egenhændige Breve*, IV, 143.

pains to stress the need for a strong 'krigs Armada', stating that 'huer veed at den er fornøden, oc en Deel voris Velmact staar der paa, Thi disse Lande ere omflot'<sup>80</sup> (everyone knows that it is necessary, and a part of our security depends on it, since these lands are afloat), but defence was to be its only role. The *rigsråd* consistently reiterated its belief that the navy was simply a defensive force and ought to be kept at a level that maintained the security of the state, but any wider objectives, which they considered might endanger the status quo, ought to be resisted.

Only by achieving financial independence from the *rigsråd*, or by manipulating events so that the *rigsråd*, or individual officials, were forced to accept his wishes, was Christian IV able to maintain his control over the navy and use it as he saw fit. After the *Kejserkrig* he lost his financial independence and also to a large degree his political freedom, in that he was forced to be more consistent in keeping the high offices filled, even if the men selected did not share the king's own political views. However, to some extent the views of the the king and *rigsråd* coincided in the 1630s, with both recognising the need to keep a large fleet in readiness for the security of the realm. Where they differed though was that while Christian IV wanted to re-establish Danish supremacy, the *rigsråd* preferred a more pacific approach with regard to both Sweden and the Imperial forces.

Despite the political and financial concessions granted to the *rigsråd*, the fact that both their interests roughly coincided meant that the king was able to retain almost absolute political control. The fight against Hamburg in 1630<sup>81</sup> proved a decisive phase in the king's ability to retain this power. In April the king had insisted to the *rigsråd* that a

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80. Arild Huitfeldt, *Historiske Beskriffuelse om ... Christiern den Første*, (*Danske Krønike*, 5 Bd.), (København, 1599) f. bij.

81. See Chapter 1.



squadron ought to put to sea in the Baltic, but they in turn declared that although the fleet should be kept in readiness it should not put to sea<sup>82</sup>. When Hamburg blockaded Glückstadt the *rigsråd* strongly urged the king not to proceed with any retaliation as the navy was now the country's only line of defence. By June Christian IV had completely disregarded their wishes by not only putting the fleet to sea but removing most of it from the Baltic altogether. Thus the Hamburg attack on Glückstadt provided a convenient excuse not just to subject Hamburg to Christian IV's sovereignty, but also for him to re-exert control over the navy and to impose his will on a reluctant new *rigsadmiral*.

That the king succeeded in retaining his political control is demonstrated by the increasingly heavy handed use of the navy in the Sound and the Baltic in the late 1630s and early 1640s. Even though Ulfeldt had largely assumed leadership of the civil side of the navy the king remained its military leader. When the Swedes attacked in 1643 there was therefore no question but that Christian IV would personally supervise the preparations and lead the military campaigns of the navy in the coming season.

By the end of his reign Christian IV had therefore come full circle and held virtually absolute control of both the civil and military sides of the navy. At the start of his reign this was a deliberate policy but by the end a combination of bad luck and bad judgement left him with an incompetent *rigsadmiral* and a dishonest *rigshofmester*, which forced the situation upon him.

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82. Erslev, *Aktstykker*, II, 227.

### 3. The Financial Administration of the Navy

With the navy proving such a contentious issue in terms of the running of the state we should now turn our attention to one of the principal areas of dispute: naval finance. The cost of building and maintaining a large navy was phenomenal, and both the raising of finance for it and the running of its financial administration proved to be problematic issue for both king and *rigsråd*. Before looking in detail at these problems we should first outline the way in which the machinery of state and naval finance worked.

#### 3.1. The Machinery of Naval Finance

Danish state finance in the early 17th century was essentially still organised along late medieval lines and, although many improvements were instituted in the late 16th century, the system became increasingly inadequate for the ever growing state budget<sup>1</sup>. The machinery of naval finance was therefore extremely rudimentary and ill-defined. With the size of the navy rapidly expanding the system was stretched to its limits, and the financing of the navy became highly complex and confusing. Expenditure on the navy accounted for between a third and a half of the total state budget and so the management of the navy's finances was inextricably linked to the overall financial administration of the state, and its complex and confusing nature is a reflection of the as yet immature, and consequently chaotic, system of state finance.

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1. Two excellent studies of Danish state finance (Søren Balle, *Statsfinanserne på Christian 3.s tid*, (Aarhus, 1992), and Jens Engberg, *Dansk finanshistorie i 1640'erne*, (Aarhus, 1972)) show that there was little structural change between the 1540s and the 1640s.



The immature nature of the Danish state economy is reflected by the fact that the state's income and expenditure were by no means paid only in hard cash. *Lensmænd* regularly paid their revenues in kind with goods produced on their land, that were 'paid' directly into the central victualling store, or used locally to feed troops. Crown servants and contractors could also expect to be paid, at least partly, in kind. When cash was used there were so many different parallel units of currency in circulation that its true value was often unclear. It is therefore impossible to assess the financial situation of the state without first looking at the Danish system of currency.

In the late 16th century an attempt was made to rationalise the currency system. From 1582 it was based on the Daler (Dlr.) a silver coin of 30 grams, that was divided into 4 Marks (Mk.) at 16 Skilling (Sk. or  $\beta$ ). The skilling was further divided into 12 Penning. However, the Danish currency was still tied very much to the German markets and the constant inflation and fluctuation in exchange rates saw the number of Skilling reckoned in the silver Daler increase rapidly<sup>2</sup>. The original 64 Sk. Daler, however, continued in accounting practice and was known as a Sletdaler (poor daler).

In 1619 the currency system was altered again and two new daler were introduced. The silver Rigsdaler (Rdlr.) was fixed at 96 skilling and replaced the fluctuating Daler while the Kurantdaler (Kdlr.) was essentially an accounting daler reckoned at 80 skilling. Both were divided into 4 Marks, with the Rigsmark (or Ort) equivalent to 24 skilling and the Kurantmark to 20 skilling. The skilling continued to be equivalent to 12 Penning.

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2. Hans Jørgen Marker, 'Sletdalerbegrebet i første fjerdedel af 17. århundrede', *Historie*, XV (1985), 633-40.

Around 1626 the pressure of inflation meant that the new silver Rigsdaler coin had now also become undervalued. To account for this the coins themselves were now termed Enkende daler (Edlr.)<sup>3</sup> and were re-valued initially to 100 skilling. This was increased in 1627 to 102, and then in 1647 to 104 skilling<sup>4</sup>. The 96 skilling Rigsdaler, however, continued as the principal accounting currency. The skilling equivalent of the different daler in use at varying times is shown in Table 3.1.

	<u>Dir.</u>	<u>Mark</u>	<u>Rdlr.</u>	<u>Rmk.</u>	<u>Kdlr.</u>	<u>Kmk.</u>	<u>Edlr.</u>	<u>Sletdaler</u>	<u>Sletmark</u>
1582-1602	64	16	-	-	-	-	-	-	-
1602-1609	66	16.5	-	-	-	-	-	64	16
1609-1610	68	17	-	-	-	-	-	64	16
1610-1616	74	18.5	-	-	-	-	-	64	16
1616-1618	80	20	-	-	-	-	-	64	16
1618-1619	84	20/21?	-	-	-	-	-	64	16
1619-1626	-	-	96	24	80	20	-	64	16
1626-1627	-	-	96	24	80	20	100	64	16
1627-1647	-	-	96	24	80	20	102	64	16
1647-1648	-	-	96	24	80	20	104	64	16

**Table 3.1. Skilling equivalents of Daler/Rigsdaler**

Sources: Hans Jørgen Marker, 'Sletdalerbegrebet i første fjerdedel af 17. århundrede', *Historia*, XV (1985), 633-40;  
J. Wilcke, *Christian IV's Monetpolitik 1588-1625*, (København, 1919); *Rentemesterregnskaber 1596/97 - 1647/48*.

Foreign coins, particularly the German thaler, also continued in common circulation and revenues from tolls brought in coinage from all over Europe. The summaries in the account books listing all the different coinages passing through the *rentekammer* frequently run into several pages. The most common of these was probably the gold Rose Noble, which was generally reckoned at 400 skilling. All these different currencies were liberally mixed up in the accounts and little attempt was ever made to rationalise them.

3. Engberg, *Dansk finanshistorie*, 57.

4. Rigsarkiv, Danske Kancelli, Rentekammer, Rentemesterregnskaber.



The state's accounting procedures were fairly simple in concept. Its income and expenditure were divided into 'ordinary' and 'extra-ordinary' categories. The ordinary income was further divided into 'certain' and 'uncertain' incomes, depending on whether they could be accurately estimated, such as *len* revenues and town taxes, or whether they varied from year to year, such as tolls and excise duties. Extraordinary income included all taxes which were raised for special purposes such as the payment of troops in wartime or for the marriage celebrations of royal offspring, and had to be specially voted by the *rigsråd*. As the financial burdens on the state increased through Christian IV's reign these extraordinary taxes became ever more regular and could really be called extraordinary in name only. The state's expenditures were also divided into 'certain' and 'uncertain' categories.

Because of the great importance attached to the navy for the defence of the realm, expenditure on it was classified as an ordinary expense. However, only part of its budget could be considered as 'certain' and a large proportion of naval expenditure came under the heading of 'uncertain'. To further complicate matters expenditure only up to a certain level came under the 'ordinary' classification. If extensive manoeuvres or wars were planned then any additional funds had to be raised from extraordinary taxation.

There were two principal bodies responsible for state finance<sup>5</sup>, the *rentekammer*, which was supervised jointly by the king and *rigsråd*, and the *Kongens eget Kammer* (king's own chamber), which was administered by the king alone with no government control whatsoever. There were no

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5. There were in fact two other government financial institutions, the *Generalkrigszahlkommissariat*, established temporarily in 1628 and then permanently from 1637, and the *Landkommissariat*, established in 1638. Although technically a part of the central administration their organisation was purely provincial and were concerned solely with the collection of taxes and their disbursement on a local level. They had no influence over naval finances and their administration need receive little further consideration in this study.

formal boundaries or rules governing which expenses were paid by which institution and a lot depended on the circumstances prevailing at any particular time.

There was no one dedicated official whose duty it was to oversee naval finances<sup>6</sup>. The *stadtholder* or *rigshofmester*, as head of the *rentekammer*, was the one who bore the main responsibility, although as previously shown<sup>7</sup> this was by no means their only task. However, as with all matters of state administration, it was Christian IV who took ultimate control, but only as far as the *rigsråd* would allow him.

### 3.1.1. The *Rentekammer*

The *rentekammer* had two main functions, firstly to supervise all 'ordinary' state income and expenditure, and secondly to audit the accounts of all the other state offices. Although it was a key part of the central administration it did not monitor the income and expenditure of the state as a whole, but simply the transactions which went through its own books. Much of the state's income and expenditure was administered on a provincial level and therefore only a certain percentage of the country's total income ever made it as far as Copenhagen. Some extraordinary taxes were deposited in the *rentekammer*, but these were frequently kept separate by the *rigsråd* or estates who had imposed it, and therefore do not appear in the *rentekammer* accounts.

The *rentekammer*'s main account books were the *rentemester-regnskaber* which were fairly rudimentary, having changed little since their introduction in the mid 16th century. No attempt was made at double entry book-keeping and roman numerals were still used for all

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6. There was for a time in the 1620s a *renteskriver* with the title *skriver over sø- og baadsfolket*, but their precise duties are unknown and the title was short lived. (*Kancelliets Brevbøger*, 16 April 1625).

7. See Chapter 2.



figures. The accounts were simply divided into income and expenditure, and records of any transactions were entered under their appropriate subject heading, one after the other.

The *rentekammer*'s principal role in naval finance was the supervision of its two subsidiaries, the *klædekammer* and the *provianthus*, which managed the payment of wages and the allocation of victuals for most naval personnel. The provision of shipbuilding materials also came under its control. The administration of all materials received and issued to the navy was carried out by the *materialskriver*<sup>8</sup> at Bremerholm, who came under *rentekammer* control, and the *registerprisegodsskriveren* (clerk of prize goods) administered all prize goods, many of which were issued directly to Bremerholm, or were used to pay the navy's creditors<sup>9</sup>. Cash payments to private contractors were also usually made directly from the *rentekammer*.

### 3.1.2. The *Klædekammer*

In theory the simplest element of naval expenditure to determine was the payment of wages for seamen and dockyard workers. The *klædekammer* (cloth chamber) was initially the room in Copenhagen castle where cloth was received and clothing issued to court officials and, since the navy was based in Copenhagen, to naval personnel. Towards the end of the 16th century it was reorganised to become essentially the office for the state pay-roll and came under the supervision of the *rentekammer*. In 1592 its organisation was formalised and it moved from the castle to its own building beside the *Kancelli* building, where the *rentekammer* had its offices<sup>10</sup>.

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8. A full description of this post is given in Chapter 6.

9. Engberg, *Danske finanshistorie*, 85-6.

10. H.D. Lind, *Kong Kristian den Fjerde og hans Mænd paa Bremerholm*, (København, 1889), 82-7.

Although the *klædekammer* was technically a sub-department of the *rentekammer*, it held its own cash reserves and was only partly funded by the *rentekammer*. It also received funds directly from the mint and certain taxes were also sometimes paid directly to the *klædekammer*<sup>11</sup>.

It was run by the *klædekammerskriver* with the assistance of a small number of *underskrivere*. The *Holmens admiral* was responsible for informing the *klædekammer* of the wages and other payments to be made, but the *klædekammerskriver* was responsible ultimately to the *stadtholder* or *rigshofmester*.

Despite the relatively simple remit of the *klædekammer* there were, as ever, complications which serve to confuse the role of the institution. Men were not paid simply in cash but would also receive part of their wages in kind. All State employees received their wages in a strange mixture of cash, clothing and foodstuffs. The level of payment depended not only on the seniority of the post but also the nature of the work, for example a carter could expect an allowance for shoes<sup>12</sup>, while blacksmiths would receive leather for protective clothing and up to twelve barrels of beer<sup>13</sup>. The clothing was accounted for through the *klædekammer* but the foodstuffs were administered by the *provianthus*.

The confusion was also heightened by the fact that some naval personnel, such as shipwrights, were at times classified as *hoftjenere* (court servants) and their wages were paid directly from the *rentekammer* rather than the *klædekammer*, and sometimes seamen were paid through the *Kongens eget Kammer*.

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11. Engberg, *Danske finanshistoria*, 87.

12. *Kancelliets Brevbøger*, 27 Jun 1597.

13. *Kancelliets Brevbøger*, 27 April 1626.



The accounting system of the *klædekammer* was far from precise and the methods of payment chaotic. The officers, gunners, and the highest level of dockyard workers were paid yearly, some lesser ranks were paid monthly, and others were on a day rate. Sea-going personnel were accounted for twice a year while the dockyard personnel were accounted for three times a year. Sometimes, however, men would receive little or no wages one year with the shortfall being made up in later years. The means of payment also varied widely. For example, Daniel Sinclair, despite theoretically being supposed to receive 400 KDlr. in specie yearly, was one year given 336 KDlr. 36ß plus a total of 150½ alen of different types of cloth plus 24 pairs of striped stockings<sup>14</sup>. Another time he received his entire year's wages in salt to the value of 400 KDlr., provided by the *proviantskriver* but entered in the *klædekammer regnskaber*<sup>15</sup>.

### 3.1.3. The *Provianthus*

The *provianthus* (victualling store) administered the issue of all foodstuffs to the navy. It developed as an offshoot of the office of the clerk of Copenhagen Castle, who originally supervised the issue of victuals to both Court and navy. In 1597 a separate official was appointed with the title *proviantskriver paa Bremerholm* to look after the running of the *provianthus* and supervise the victualling of the navy. Some other Crown servants and employees were issued goods through this office such as military personnel, certain members of the clergy, and Crown factors, but their numbers were not large and the *proviantskriver* could really be considered as a dedicated naval official<sup>16</sup>.

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14. Rigsarkiv, Danske Kancelli, Udgift Conto I.a., Klædekammer regnskaber 1632/33.

15. Rigsarkiv, Danske Kancelli, Udgift Conto I.a., Klædekammer regnskaber 1622/23, f.42.

16. Lind, *Kong Kristian og hans mænd*, 95.

The issue of foodstuffs took two basic forms, firstly the payment in bulk of foodstuffs granted as wages, and secondly the daily provision of meals at the dockyard and aboard ship. To this end the *proviantskriver* was responsible for receiving, measuring and documenting all supplies from the royal farms and *len*, as well as supervising all the mills, bakeries, breweries, slaughterhouses and salting works which the state operated. He was responsible jointly to the *Holmens admiral* and to the *rentekammer*, which audited the accounts.

Despite the enormity of this operation the *proviantskriver* was not that well paid, at just 200 KDlr. per annum. He had just one *underskriver* and one junior clerk to help with the accounts, and a small workforce of seven or eight workmen to measure, pack and store the foodstuffs<sup>17</sup>. By 1626 it was becoming apparent that the *proviantskriver* could no longer cope with all his duties and a *rigsråd* commission was set up to investigate the wording of the terms of office<sup>18</sup>. The length of the *proviantskriver's* commission, and therefore his responsibilities, had almost doubled between 1621 and 1625, so it is hardly surprising that difficulties were experienced. The enquiry did make some changes, but these were minimal, reducing the number of individual points of instruction from 36 to 34<sup>19</sup>. In 1635, though, a further two clerks were appointed<sup>20</sup>, bringing the total staff to eleven.

It is difficult to put any clear figures to the finances of this operation, particularly as much of its business was carried out independently of any real money. The *lensmænd* delivered their produce direct to the *provianthus* which was then processed into one of the staple foods of

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17. *Kancelliets Brevbøger*, 4 June 1627.

18. *Kancelliets Brevbøger*, 13 September 1626.

19. *Kancelliets Brevbøger*, 16 April 1625; and 4 June 1627.

20. *Kancelliets Brevbøger*, 5 Dec 1635.



bread, beer, dried peas and salt meat, and then loaded aboard ships or cooked in the dockyard kitchen, without any money ever changing hands. The only genuine financial transactions occurred when additional supplies had to be procured from local merchants, and when any excess food or by-products from the food processing, such as hides and tallow, were sold.

The *rentekammer* kept a record of goods supplied to the *provianthus* from the *len* but no indication is given of what was destined for naval, Court, or other use. The only surviving accounts from the *proviantskriver* are the annual account books which were arranged under headings of ship and work-place. It was therefore theoretically possible to determine how much was issued to the *provianthus* and how much was then issued for naval use, but the nature of the accounts would have made this very difficult. No monetary value was ever placed on the goods either, so the job of auditing these accounts must have proved virtually impossible.

#### 3.1.4. *Kongens eget Kammer*

The *Kongens eget Kammer* was the second most important of the financial institutions but because it was administered almost secretively by the king himself, and its meagre accounts are obscure and incomplete, much of its workings remain a mystery. It has in fact been described as 'an institution with no real staff, no real accounts and no fixed place of office'<sup>21</sup>. It did actually have one member of staff, the *kammerskriver*, appointed for the first time in 1632. However, the only record of its income and expenditure were the king's own diaries, and his records of transactions at the Kiel money market, which are characteristically idiosyncratic.

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21. Engberg, *Dansk finanshistorie*, 345.

The primary function of the *Kongens eget Kammer* was, as its name suggests, for the king to have a certain amount of money for his own use, without the need for him to continually go to the *rentekammer*. This function was distorted greatly by the fact that its income derived principally from the vast amounts generated from the Sound and the Elbe tolls, with smaller though still significant revenues from the crown lands in the duchies and from the Kiel money market. This gave the king control over vast sums of money that could easily exceed those administered through the *rentekammer*.

Technically much of the money paid into the *Kongens eget Kammer* belonged to the state but this was mixed in with the king's own private revenues in a completely haphazard way. Although the king had traditionally been able to keep any surplus from the Sound tolls and use it freely without having to first ask approval from the *rigsråd*<sup>22</sup>, Christian IV manipulated the situation to his own advantage. Rather than keeping just the surplus, after all state expenditure had been met, he began to regard the revenues in their entirety as his own personal property, and ensured that they were paid directly into the *Kongens eget Kammer*. During his minority the *rentekammer* regularly received more than 50% of the Sound toll revenue, but after Christian IV's accession this figure rapidly dropped until by 1607 it was receiving little more than 1-2%<sup>23</sup>.

These machinations were quickly and conveniently forgotten by the king when the financial state of the country became critical. As he later stated to the *rigsråd*: 'Tollen y Sundit haffuer aldtiid y vorre forfehdris och y uorris tiid verrit worre handpenge' (the tolls in the Sound have always in our ancestors and in our time been our own money)<sup>24</sup>. Thus,

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22. Balle, *Statsfinanserne på Christian 3.s tid*, 356.

23. E. Ladewig Petersen, 'Defence, War and Finance: Christian IV and the Council of the Realm 1596-1629', *Journal of Scandinavian History*, 7 (1982), 288.

24. Letter to *rigsråd*, 9 November 1647, C.F. Bricka & J.A. Fredericia (eds.), *Kong Christian den Fjerdes egenhændige Breve*, VI, 349.



rightly or wrongly, the *Kongens eget Kammer* ceased to be simply a personal reserve and became an integral part of the state financial machinery. This gave the king a great deal of power over the *rigsråd* who basically had to rely on his goodwill to pay out money to help finance the running of the state, and thus payments from the *Kongens eget Kammer* took on a political significance that served to further complicate the already chaotic system of state finance.

From the surviving diaries of Christian IV<sup>25</sup> some idea of the role of the *Kongens eget Kammer* can be determined. Those from 1607, 1608, 1614, 1616, and 1621 contain no details of payments for naval purposes whatsoever. In 1618 1000 Dlr. was issued to M. David<sup>26</sup> presumably as payment for shipbuilding work, and the shipbuilding contractor Peter Michelsen was given 5000 Dlr. and 2000 'styck von Achten' for the building of a ship, with a further 3000 Dlr. paid in 1619. In 1620 two Flensburg merchants were paid 2000 Rdlr. for a ship they had built under contract, and Daniel Sinclair was paid 500 Rdlr. as part payment for a ship under construction. In 1635 1000 Rdlr. was paid for a cargo of ship timber.

In addition to these payments, the Sound toll collectors also came under the king's direct control, and through them large payments were also made for the purchase of naval materials, before the money ever reached the *Kongens eget Kammer*<sup>27</sup>. Along with details of other purchases contained in Christian IV's letters it can be seen that the majority

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25. J.H. Schlegel (ed.), 'Kong Christian IV Almanak for Aaret 1607, & 1608', *Samlung zur Danischen Geschichte*, 2 Bd. 3 Stk., 29-84.; Suhm (ed.), 'Kong Christian IVdes Skrivkalendar for Aarene 1614 og 16', *Nye Samlinger*, 2 Bd., 91-114.; Schlegel (ed.), 'Kong Christian IV Almanak for Aaret 1621', *Samlung zur Danischen Geschichte*, 2 Bd. 1 Stk., 43-74; Rasmus Nyerup, *Kong Christian den Fjerdes Dagbøger for Aarene 1618, 1619, 1620, 1625, 1635, udgivne efter Originalerne*, (København, 1825).

26. i.e. Mester David Balfour

27. For example 2000 Rdlr. assigned for the purchase of hemp, 23 May 1641, *egenhændige Breve*, V, 89.

of the expenditure was concerned with the payment of fairly large sums of money to contractors and the purchase of materials. This would appear to suggest that the *Kongens eget Kammer* paid primarily the navy's capital expenditure, but the details of the accounts are so fragmentary that no firm conclusions can really be drawn.

The situation became even more ambiguous during the financial crises of the 1630s and 1640s. Despite frequently making payments for all manner of supplies Christian IV could suddenly state that 'Stangiern, Blii Och kabelgarn, Daa haffuer ded altiit bleffuen betaliid aff Riigens Indkomst, Och inted aff kammeriid' (iron bars, lead, and cable yarn have always been paid for out of the state's income and not the *Kammer's*)<sup>28</sup>, even though just the previous year he had himself purchased 5000 Rdlr. worth of cable yarn<sup>29</sup>.

Payments to seamen also became a regular occurrence since the rapid increase in personnel occurred before any proper provision was made to pay for them<sup>30</sup>. The fact that large numbers of ships began to be stationed on the Elbe also played its part since the king's *kammerskriver* was frequently resident in Glückstadt<sup>31</sup>, making it much more convenient for payments to be made through him. At one stage Christian IV even seemed to operate as paymaster for one particular ship, with weekly payments to its crew noted in his diary<sup>32</sup>. However, he was at pains to stress that these payments to seamen were merely loans which ought to be repaid by the state<sup>33</sup>.

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28. Letter to *rentemester* Jørgen Vind, 7 August 1636, *egenhændige Breve*, IV, 54-5.

29. Letter to *rentemestre*, 13 February 1636, *egenhændige Breve*, III, 334.

30. Grants of interim payments from the king were made on 21 October 1634, 5 March & 3 May 1635, 9 February 1636, *egenhændige Breve*, III, 286, 244, 368-9; and IV, 9.

31. Letters to *kammerskriver* Henrik Müller, 29 October & 14 December 1637, *egenhændige Breve*, IV, 156 & 166-8.

32. Payments were made to the crew of *Fladlusen* on 12 Jan, 22 Jan, 7 Feb, 17 Feb, 23 Feb, 22 Mar, and 29 Mar 1635. (Nyerup, *Kong Christian den Fjerdtes Dagbøger*, 152-8).

33. Letter to *rentemestrene*, 9 February 1636, *egenhændige Breve*, IV, 9.



Thus it could be said that in broad terms the *rentekammer* supervised the payment of the navy's running costs while the *Kongens eget kammer* paid for its capital expenditure. This is of course a gross simplification as the *rentekammer* paid for a significant amount of ship-building materials while the *Kongens eget Kammer* at times paid for seamen's wages. Another way of viewing the break-down in responsibilities is that the *rentekammer* paid for the 'ordinary' expenditure and the 'extra-ordinary' expenditure sanctioned by the *rigsråd*, while the *Kongens eget Kammer* paid for any additional unsanctioned expenses. But again this attempt at a rigid delineation breaks down since many of the payments made from the *Kongens eget Kammer* were either initially or ultimately sanctioned by the *rigsråd* and repaid by the *rentekammer*.

Any attempt to determine a strict delineation between the two institutions, though, is meaningless. In the same way that the government can be described as dyarchic then the system of state finance was also dyarchic, with each part of the government in control of its own financial institution. Given the state of ill-feeling between the king and *rigsråd* it is not surprising that the issue of naval finance was one which caused a great deal of antagonism and hostility. With the dual system of finance the two institutions became inextricably intertwined into a confused muddle, with both parties trying to use their influence for political ends at the expense of any rational approach to solving the growing problems of how to finance an expanding navy in a declining state economy.

Before looking at these problems in greater detail it is worth just giving one small example from the *rentemesterregnskaber* to illustrate how the different financial institutions and currencies were all interlinked:

Thend 31 Januarij giffuidt Mester Daud Baldfordt Ko: Ma: Schiffsbuigmester 41½ 16ß (@ 96ß) huor med hand nu aldielis er bleffuer fornøiedt oc affbetalddt 100 dr. Current som hannom paa Ko: Ma:

weigne er beuilget for een Jagt hand Vnderdanigst haffuer biugt och forferdigedt for Ko: Ma: och aff hans Ma: eignedt Chamer effter herliggende Sten Willumsen Admirall hans der paa. offuer giffuere Vnderschreffuere Contractis formelding Och huis dee 50 Dr. Current sig belanger som hannom Rester vdj forskreffne sin befalling der om er hannom giffuer seddel och befalling till Madtz Daidßen proviantschriffuer her for Kiøbenhaffenns Slott adt hand schall fornøye och betalle hannom med Roug, huer Thønde Roug at antage for 15 Mk danske slett møndtt.<sup>34</sup>

The 31st January, given to Master David Balfour, H.M. master shipwright: 41½ Rdlr. 16ß (@96ß)<sup>35</sup>, with which he has now been fully paid and received 100 Kdlr which he has been granted by H.M.'s will for a *jagt* he has humbly built and outfitted for H.M., and from his Majesty's own Chamber, in accordance with the conditions of the contract submitted and authorised by admiral Sten Vil-lumsen, and for the remaining 50 Kdlr. promised in his contract, he shall be given a note and instructions to *proviantskriver* Mads Davidsen here in Copenhagen Castle that he shall satisfy and pay him with rye, each barrel to be reckoned at 15 Danish Sletmarks.

Thus the simple matter of the payment of the relatively small sum of 150 Kdlr. was made by three different bodies, the *rentekammer*, the *Kongens eget Kammer*, and the *provianthus*, accounted for using three different forms of currency, and paid in both specie and in kind. It is therefore

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34. Rigsarkiv, Rentemesterregnskaber, 1622/23, 78, f.195.

35. = 50 Kdlr. @ 80ß



no wonder that so much confusion surrounded financial matters at the time, and has continued to confuse historians ever since. It is with this in mind that we now turn to the actual financing of the navy.

### 3.2. The Financing of the Navy

#### 3.2.1. Naval Expenditure

The first task that must be attempted is to determine the 'ordinary' expenditure on the navy. Since no separate naval accounts were kept this is virtually impossible with any accuracy. What is possible, though, is an assessment of the payment of dockyard personnel and seamen's wages. These appear in the *rentemesterregnskaber* accounts at first under the heading:

ad giffue kon Maietts Schiffs Høffuidsmennd, Schiffs Prester, Schip-  
pere, Styrmennd, Bøsseskøtter, Baadzmend, Aars Tømmermennd,  
Saugskierer, Och ellers i andre maade till hans Maietts och Brem-  
merholmenns behouff

given to H.M.'s ship captains, ship's chaplains, skippers, masters,  
gunners, seamen, carpenters, sawyers, and others who serve H.M.  
and Bremerholm's needs

This was later changed to: 'Udbetalt til klædekammerskriveren til Bremerholms folk og skibsfolkene til besolding og kostpenge' (paid to the *klædekammerskriver* for the payment of wages to Bremerholm's and ships' personnel). These figures are shown in Figure 3.1<sup>36</sup>.

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36. Accounts for 1599/1600 and 1605/06 were undergoing conservation at the time of consultation. All payments in different units of currency have been rationalised to the value of Daler/Rigsdaler current at the time.

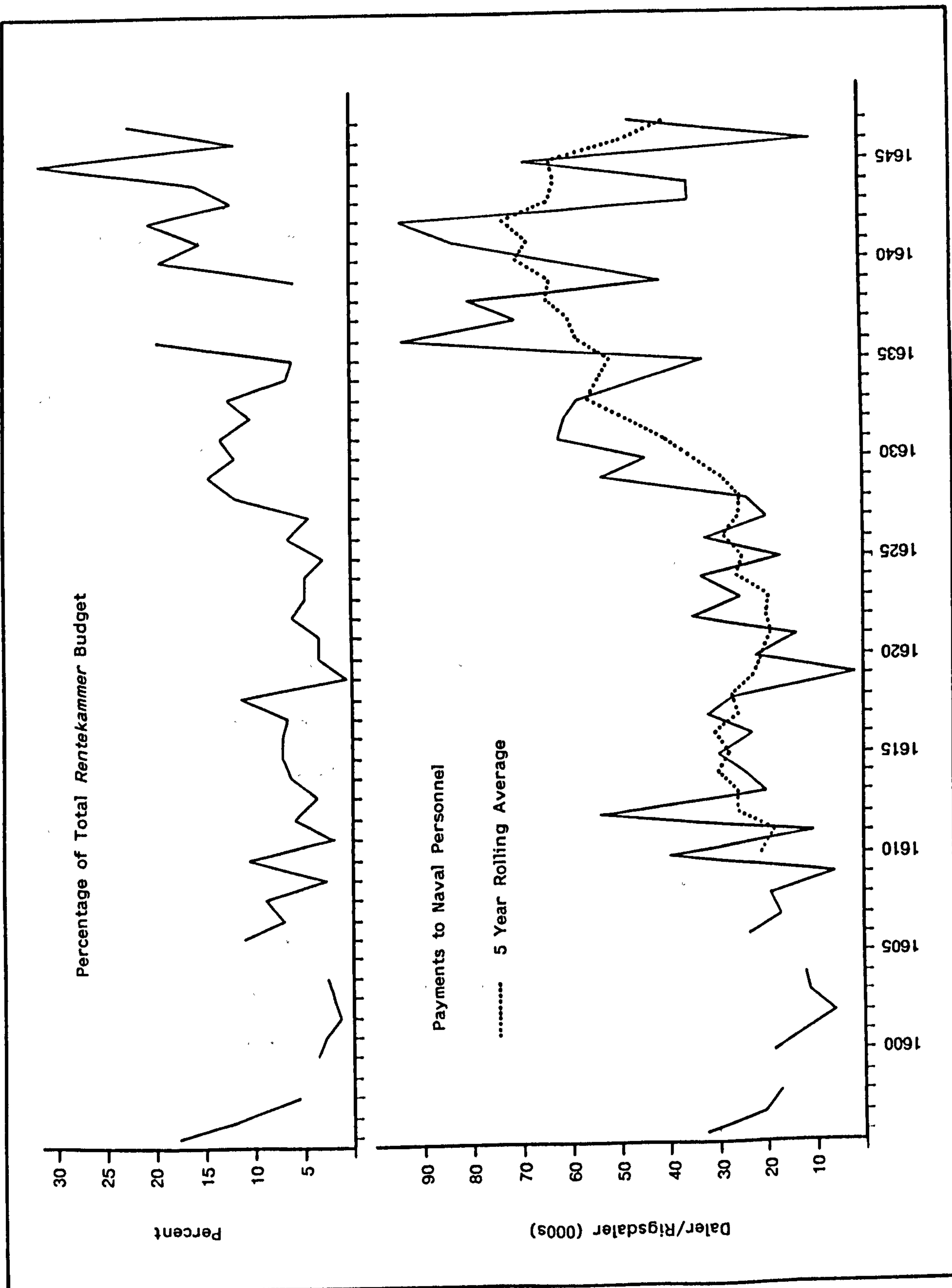


Figure 3.1. Payments of Seamens Wages



Great caution must be used in interpreting these figures. They do not represent the total expenditure on the navy by the *rentekammer*, since payments to contractors and some personnel appear under other headings in the accounts. Nor do they represent the total *klædekammer* budget since it also received other funds as well<sup>37</sup>. At best they provide only an indication of the changing rate of naval funding. The most striking evidence from the graph are the huge variations in the level of funding, with at no time a consistent rate from one year to the next. By taking a five year rolling average some of these fluctuations can be smoothed out and a clearer picture of the trends emerges. This is pretty much as expected from our knowledge of the fluctuating size of the fleet<sup>38</sup>, with a small peak at the time of the Kalmar War and a rapid increase from around 1630 to a high point in the early 1640s, followed by a sharp decrease after the *Torstenssonkrig*.

Perhaps the most surprising evidence is the dramatic drop in naval funding from the *rentekammer* immediately after Christian IV's accession. This shows that as well as funding an extensive naval building programme at this time Christian IV must also have taken on a large part of the running costs of the navy. This should be seen in the light of his political motives at the start of his reign to become the sole leader and owner of the navy and to limit any influence that the *rigsråd* might have over it<sup>39</sup>. This continued until the outbreak of the Kalmar War, when funding from the *rentekammer* again reach the levels of before the accession.

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37. The *klædekammer* regnskaber have not been used for this study as they are extant only after 1621, and they contain no easily accessible summaries of naval expenditure.

38. See Chapter 4.

39. See Chapter 2.

The percentage of the total *rentekammer* budget<sup>40</sup> that these figures represent also varies wildly, from just 0.5% in 1619/20 to nearly 32% in 1645/46. This comparison is a little misleading, for the reasons stated above, but it does show the general trend of a steadily increasing significance of naval expenditure within the overall state budget. Thus, although an accurate estimate of total naval expenditure is impossible over the entire reign, the payments of wages from the *rentekammer* do provide a useful tool in determining the basic trends.

Whilst the *rentekammer* did not as a rule make budget estimates it fortunately did so on a number of occasions, and these provide a more complete picture of naval funding than is possible from the actual accounts. Not all of these estimates have survived but those that have cover the period from 1600 to 1646, and show clearly the tremendous changes that occurred during Christian IV's reign.

These estimates were an attempt to reconcile the states ordinary income and expenditure and therefore contain only those items which were considered as 'ordinary' expenditures which, thankfully for this study, most naval expenditure was. They are particularly useful in that they give monetary values to materials and foodstuffs which did not otherwise appear in the accounts.

The first three estimates cover the period 1600-1602<sup>41</sup> and are identical in their format. The figures are given in table 3.2.

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40. These figures are based on Danish currencies only. No foreign currencies were included in the calculation and so they roughly approximate to the total domestic expenditure. Summary pages are missing in the accounts for 1637/38 and 1638/39 so the total expenditure for these years cannot be readily calculated.

41. Rigsarkiv, Danske kancelli, B202. a-c. The estimate for 1602 (B202.c.) has been published in: Schlegel (ed.), 'Kort Overslag paa alt Rigens Indtægt og Udgift, som er nu giort og tilsammen dragen den 24 Decembris Ann 1602', *Samlung zur Danischen Geschichte*, 1 Bd. 1 stk. (1773), 23-113.



	<u>1600</u>	<u>1601</u>	<u>1602</u>
Given yearly in wages to Ships' captains, chaplains and surgeons, skippers, masters, gunners, seamen, cooks, block-makers, wheel-makers, coopers and other like men who are in H.M.'s daily service:	23,279	20,131½	19,913 Dlr.
Victualling at Bremerholm and the transport ships:	27,782	26,000	23,000 Dlr.
Paid for hemp, cable, sail-canvas, pump leather, iron, resin, lead, tin, and other like wares for ship use:	17,640	17,640	17,640 Dlr.
Wages for smiths in the forge at Bremerholm:	2,015	3,120	2,800 Dlr.
Paid yearly to surgeons who are ordered aboard H.M.'s ships, as well as tailors who make seamen's clothes:	300	300	300 Dlr.
Paint, oil, varnish, and other like wares for ship use:	250	250	250 Dlr.
The Purchase of firewood for the castle, Bremerholm and the ships:	2,000	2,000	2,000 Dlr.
Coal:	950	950	800 Dlr.
Paid for the transport of victuals to Copenhagen:	2,000	2,000	2,000 Dlr.
TOTAL	<u>76,216</u>	<u>72,391½</u>	<u>68,703 Dlr.</u>

**Table 3.2. Estimates of Naval Expenditure 1600-02**

Sources: Rigsarkiv, Danske kancelli, B202.a-c.

In addition to these items there appeared at the end of these estimates a number of items which were considered too difficult to estimate as they varied so much from year to year. In this category came the building of new ships for which 'ikke for nogen visse Summa kan her indsettes, efterdi den beløber høit og ringe efter leigliheden' (no certain sum can here be allocated, since it varies high and low according to circumstances).

An estimate from 1608<sup>42</sup>, shown in Table 3.3., was very similar, apart from a slight increase in costs across the board. The most sig-

42. Rigsarkiv, Danske kancelli, B202.d. Published in: Johan Gruntvig (ed.), 'Rigens Intægt og Udgift 1608', *Meddelelser fra Rentekammerarchivet*, (København, 1872), 93-8.

nificant difference is the breaking up of wages for the different personnel, but the costs of shipbuilding are still considered too variable to estimate.

Paid to the Smith and his men in the Great Forge:	3,928 Dlr.
Victualling for Bremerholm and the transport ships:	18,509 Dlr.
Paid for hemp, cable, sail canvas, pump leather, iron, resin, lead, tin, spikes and nails, and other like wares for ship use:	18,056 Dlr. $\frac{1}{2}$ Mk.
Paint, oil, varnish and other like wares for ship use:	250 Dlr.
Paid to ships officers:	2,370 Dlr.
Coal:	450 Dlr.
The Purchase of firewood for the castle, Bremerholm and the ships:	2,000 Dlr.
Wages of ships chaplains:	239 Dlr.
Wages of ships trumpeters:	246 Dlr.
Wages of master gunners and gunners:	2,650 Dlr.
Wages of <i>styrmand</i> :	1,882 $\frac{1}{2}$ Dlr.
Wages of yearly-paid carpenters, rope makers, sail makers and block makers:	574 $\frac{1}{2}$ Dlr.
Wages of day-rate carpenters:	1,896 Dlr. 1 $\frac{1}{2}$ Mk.
Wages of pursers, seamen, ships boys, cooks, pipers and drummers:	14,372 $\frac{1}{2}$ Dlr.
Paid in cloth and victuals from the <i>klædekammer</i> :	406 Dlr.
Wages for the <i>proviantskriver</i> and his assistants:	516 Dlr.
Wages of ships surgeons:	150 Dlr.
Paid for the transport of victuals to Copenhagen:	2,000 Dlr.
TOTAL	<u>70,555<math>\frac{1}{2}</math> Dlr.</u>

Table 3.3. Estimate of Naval Expenditure 1608

Sources: Rigsarkiv, Danske kancelli, B202.d.



The next surviving estimate is for 1630<sup>43</sup>, shown in Table 3.4., and this reverts to the less detailed style of the earlier estimates in terms of the listing of wages but contains a number of additional items. The costs of shipbuilding are again still considered too difficult to estimate.

Paid in wages from the <i>klædekammer</i> for H.M.'s naval personnel and the watches at Bremerholm and the arsenal:	120,937 Rdlr. 36ß
Paid to 29 captains and 10 lieutenants:	4,933 Rdlr. 28ß
Wages for the <i>proviantskriver</i> and his assistants:	413 Rdlr.
Wages for 98 smiths in the Great Forge:	6,740 Rdlr.
Paid for hemp, cable, sail canvas, pump leather, iron, resin, lead, tin, spikes and nails, and other like wares for ship use:	42,099 Rdlr. 28ß
Paid for firewood and charcoal:	1,310½ Rdlr. 24ß
Paid for coal for the Great Forge, the Breweries, and other places:	4,604½ Rdlr. 12ß
Paid for the transport of victuals to Copenhagen:	4,504 Rdlr. 28ß
Paid for various timber, planks and deals for shipbuilding and other building work:	34,694½ Rdlr. 32ß
Paid in wages for men at the large new brewery:	2,259 Rdlr. 16ß
Paid in victuals from the <i>provianthus</i> to naval personnel at Bremerholm, the arsenal and other places:	166,150 Rdlr. 17ß
Paid to Copenhagen town council for buoys laid in Copenhagen roadstead:	400 Rdlr.
Paid for oil, paint, painters and gold and silver worker's wages used on H.M.'s ships, also for various other materials and craftsmen used by the Court and navy:	5,000 Rdlr.
TOTAL	<u>394,047 Rdlr.</u>

Table 3.4. Estimate of Naval Expenditure 1630

Source: Rigsarkiv, Danske kancelli, B202.e.

43. Rigsarkiv, Danske kancelli, B202.e. Published in 'Overslag paa hele Rigets Indtægt og Udgift 1630', *Budstikken*, 60, (Christiania, 1824), 473-82.

The next estimate comes from 1642<sup>44</sup> and there are again slight variations in the grouping of wages, victuals and materials, however, for the first time a figure is given for the costs of shipbuilding. The figures are given in Table 3.5.

Victualling, wages, and clothing for 2775 officers and men aboard 18 warships and 15 cargo ships:	159,767 Rdlr. 1 Ort 11ß
Victualling of 154 prisoners in Bremerholm's iron:	4,490½ Rdlr. 18½ß
Paid for 2 warships which each year shall be built and outfitted:	18,000 Rdlr.
Given for oil and other paint, painter's gold and silver, and for wages paid for decorating H.M.'s ships:	2,000 Rdlr.
Given for various wares for the navy and Bremerholm, including canvas, leather, hemp, pitch and tar, copper, brass, tin, lead, iron, steel, and various types of spikes and nails:	54,759 Rdlr.
Various types of timber and plank:	26,354½ Rdlr.
Paid in wages and clothing to smiths in Bremerholm's forge:	3,675 Rdlr.
Given for coal for the forges at the Bremerholm:	4,604½ Rdlr.
Wages for the miller to the <i>provianthus</i> :	773½ Rdlr.
Wages for the bakers in the <i>provianthus</i> bakery:	2,073 Rdlr.
Wages for brewers and coopers in the <i>provianthus</i> brewery:	2,259 Rdlr.
Copenhagen town council for buoys:	400 Rdlr.
Firewood and charcoal:	5,000 Rdlr.
Transport of victuals:	4,504 Rdlr.
TOTAL	<u>288,660 Rdlr.</u>

Table 3.5. Estimate of Naval Expenditure 1642

Source: Rigsarkiv, Danske kancelli, B202.f.

44. Rigsarkiv, Danske kancelli, B202.f. Published in: Chr. Bruun (ed.), 'Kort Overslag over Rigens Indtægt og Udgift 1642', *Danske Samlinger*, 6 (1870-71), 325-47.



Although shipbuilding costs are included there are other flaws. The main one being that the wages for a further 906 dockyard personnel were not included in the calculation, estimated by Engberg at around 100,000 Rdlr.<sup>45</sup> It was also noted that the actual expenditure on timber was for the third year running double the given estimate and a warning was given that the cost of shipbuilding would increase if any more than the two projected ships a year were built.

The 1642 estimate should be viewed with some caution since it was intended by Christian IV to demonstrate that the state could no longer support its ordinary expenditure from its ordinary income in an attempt to push through a reform of the *len* system. Even though some of the naval expenditures were so obviously underestimated, the *rigsråd* were not happy with some of the figures and suspected that the income was under-estimated and the expenditure over-estimated.

In 1645 Christian IV requested the *rentemestre* to re-appraise the expenditure figures and attempt to put costs to those items which were omitted in their previous estimate. This was completed in 1646 but unlike the previous estimates it has not survived as an official document. It does exist however in the notebook of the *rentemester* Oluf Daa<sup>46</sup>. It is summarised in Table 3.6.

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45. Enberg, *Dansk finanshistorie*, 120.

46. Rigsarkiv, Danske kancelli, B186, Oluf Daa's Optegnelsesbog, f.39-40 & 68-83. Published, with a number of mistakes, in: P. Holck, 'Flaadelister omkring Krigsaarene 1644-45', *Tidsskrift for Søværnen*, 114 (1943), 481-94.

Paid to Copenhagen town council for buoys:	400 Rdlr.
Paid for firewood:	8,213 Rdlr.
Paid in wages and victuals to H.M.'s ships officers, seamen and gunners:	357,136 Rdlr.
Victuals for 100 prisoners:	3,767 Rdlr.
For the construction of two warships:	18,000 Rdlr.
For oil, paint painter's gold and silver:	1,190 Rdlr.
Various materials for ships use:	69,446 Rdlr.
For timber and planks for ships:	79,572 Rdlr.
Wages for the Great Forge:	8,986 Rdlr.
Coal:	4,074 Rdlr.
Wages for the <i>provianthus</i> miller:	842 Rdlr.
Wages for the baker and his men:	2,407 Rdlr.
Paid for the large new Brewery:	3,048 Rdlr.
TOTAL	<u>557,081 Rdlr.</u>

**Table 3.6. Estimate of Naval Expenditure 1646**

Source: Rigsarkiv, Danske kancelli, B186, Oluf Daas Optegnelsesbog, f.39-40.

These revised figures must be viewed with even more caution than the 1642 estimate. The *rigsråd* was certainly very sceptical and doubted that the total state expenditure could increase by 50% in the space of just four years, as the revised estimate suggested.

The results of the different estimates are summarised in Table 3.7. Although the estimates were not all calculated on the same basis, with some items included or excluded for different years, they provide the best available picture of total naval expenditure. It can be seen that the relation between wages and victualling and materials and shipbuilding



remained fairly constant, but the actual sums involved increased dramatically and the navy's percentage of state expenditure had effectively doubled in the latter half of the reign.

	<u>1600</u>		<u>1608</u>		<u>1630</u>		<u>1642</u>		<u>1646</u>	
	<u>Dlr.</u>	<u>%</u>	<u>Dlr.</u>	<u>%</u>	<u>Rdlr.</u>	<u>%</u>	<u>Rdlr.</u>	<u>%</u>	<u>Rdlr.</u>	<u>%</u>
Wages & Victualling	55,376	73	49,800	71	305,938	78	177,542	62	376,186	68
Materials	20,840	27	20,756	29	88,109	22	93,118	32	162,895	29
Shipbuilding	-	-	-	-	-	-	18,000	6	18,000	3
Total Naval Expenditure	76,216	29	70,556	33	394,047	64	288,660	47	557,081	59
Court etc.	148,716	57	121,285	57	194,988	32	308,303	50	371,834	40
Arsenal & Garrisons	35,384	14	22,646	10	26,197	4	21,336	3	9,563	1
Total Expenditure	260,316	-	214,487	-	615,232	-	618,299	-	938,478	-

Table 3.7. Estimated Naval Expenditure 1600-1646

The huge increase in funding between 1608 and 1630 is remarkable, representing more than a five-fold increase. This can be explained largely by the fact that the size of the navy had more or less doubled in this time. In addition inflation and the change in the currency system would also have had an effect. The increase between 1642 to 1646 can partly be explained by the inclusion of the wages and victuals that were omitted in the 1642 estimate, and by the fact that the size of the navy had grown during the *Torstenssonkrig*, but whether these would account for a doubling of the estimated expenditure is debatable. It is not wholly infeasible though, as a further estimate from 1656, albeit much less detailed, gives a remarkably similar figure of 543,500 Rdlr. for the total naval expenditure<sup>47</sup>.

47. Rigsarkiv, Danske kancelli, B202.g.

The percentages are also a little misleading since the total estimated expenditure is only the 'ordinary' expenditure, and does not include so-called extraordinary expenditures, such as the new standing army from 1637. So while in the 1630 and 1640s the navy accounted for between 50-60% of the ordinary budget it represented far less in terms of the overall state budget. Unfortunately, since many of the extraordinary expenses were administered outwith the *rentekammer*, any attempt to calculate the total state budget is impossible. This also explains why the expenditure on the army decreases in percentage terms so dramatically after the establishment of the *Generalkrigszahlkommissariat* in 1628, since this administered the bulk of army expenditure on a purely provincial basis.

It should also be noted that the arsenal was considered as a completely separate entity in the administration and in these estimates. Since a large proportion of the arsenal was concerned with naval ordnance the total naval budgets have been underestimated to a certain extent. However, no distinction was made between land and naval ordnance, and it would be impossible to try and calculate the percentage of the arsenal budget that related to the navy.

In 1647 the leaders of the army and navy were requested to investigate the total expenditure on the military, including all ordinary and extraordinary expenditures, whether they were 'certain' or 'uncertain'. This was the first time that such an all-inclusive budget had been attempted, but unfortunately the work remained incomplete at the time of Christian IV's death, and was never finished<sup>48</sup>.

Having now come to some kind of estimate of naval expenditure, albeit rather flawed, it is worth now looking briefly at where the money came from which financed it.

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48. Engberg, *Dansk finanshistorie*, 128-9.



### 3.2.2 Funding for the Navy

It is often stated as a truism in works on Danish history that the navy was paid for by the Sound dues. This is indeed partly true but, as will already have been made evident, the real situation was far more complicated than that. Very little of the state's ordinary income was ever earmarked for its ultimate use, so before looking specifically at funding for the navy we must look first at the state's income as a whole. The income of the state can be divided broadly into three categories: *len* revenues; taxes; and tolls and excise.

There were basically three types of *len*<sup>49</sup>. The *tjenestelen* (service *len*) were awarded to the highest state officials in return for their services. These *len* were not required to provide the state with any revenue. The *afgiftslen* (duty *len*) were required to pay a fixed sum to the state, while the *genantlen* (remuneration *len*) paid a fixed sum to the *lensmand* and the remainder was given over to the state. Much of the *len* revenues were used locally to pay for government officials and the army and only when these expenses were met was any excess sent to the *rentekammer* or the *provianthus*. In practice by far the largest proportion of *len* revenues sent to Copenhagen were paid in kind.

Taxes comprised three main elements. The principal form of taxation were the 'extraordinary' *landeskatter* (land taxes), which were voted by the *rigsråd* on a more or less yearly basis. They were nominally raised for some particular purpose, such as royal weddings, expeditions, war, or for special building works, and depending on the perceived need, a single, double, or half tax was raised<sup>50</sup>. However, the taxes raised did not necessarily all go to their intended use and ended up as general revenue

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49. Engberg details a total of eight different types, but the fine distinctions between many of them are of little relevance here. (Engberg, *Dansk finanshistorie*, 154.)

50. A single tax raised in the order of 100,000 Rdlr.

in the state coffers. They were paid either into the *rentekammer*, if paid in cash, or to the *provianthus*, if paid in kind. However, from 1637 these taxes were reorganised and renamed *unionsskatter* (union taxes). From this date they were raised solely to pay for the new standing army and were administered on a purely provincial level by the *generalkrigszalkommissariat*, so the *rentekammer* was thereafter deprived of this form of taxation for naval use.

The second form of tax was a municipal tax raised from towns in return for their privileges as a market town. These were 'ordinary' taxes collected on a yearly basis without the need to be voted specially. The third form of taxes were the *stænderskatter* (estate taxes). From 1638 the estates were granted powers to raise their own taxes which were voted by them and paid to a provincial *landkommissær*. Like the new *unionsskatter*, these taxes never reached the *rentekammer* or the *provianthus*, and therefore did not contribute to naval funding.

Tolls and excise were divided into two main groups. The *rigets og kronens tolde* (state and crown tolls) comprised the tolls raised from exported goods, primarily cattle from Denmark and timber from Norway, harbour dues, and general excise duties. These revenues were principally paid to the *rentekammer* or *provianthus*, although some were paid to the *Kongens eget Kammer* or used directly by the toll collectors to pay for goods and services. The *strømtolde* (channel tolls) were those tolls imposed on ships using the state's channels, i.e. the Sound and the Elbe dues<sup>51</sup>. These were paid primarily into the *Kongens eget Kammer*, although large payments were often made directly by the toll collectors, and occasionally revenues were deposited in the *rentekammer*.

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51. Also the tolls paid on the Storebælt and Lillebælt, but these were of minor importance compared to the Sound and Elbe.



All these revenues could really be said to have gone into the state's general funds, whether they were paid to the *rentekammer*, *provianthus*, or the *Kongens eget Kammer*. In addition there were also certain revenues which were raised specifically for the navy's use.

The *bådsmandshvervningskat* was a tax paid by the coastal towns to exempt them from supplying seamen to the navy. The level of taxation depended on the number of men in each town engaged in fishing or ship-ping, with 1 Rdlr. to be paid for every man and  $\frac{1}{2}$  Rdlr. for every boy engaged in these trades<sup>52</sup>. The collection of this tax was administered by the *lensmænd* and the revenue was paid into the *rentekammer*.

The *bådsmandsvåningstold* was a toll imposed on all ships entering Danish harbours. It was raised initially in 1631 to pay for the building of the Nyboder seamen's accommodation but from 1640 only a certain amount was reserved for this purpose and the remainder was used for general naval expenses<sup>53</sup>.

There were also the extraordinary taxes voted by the *rigsråd* explicitly for naval use. These usually took the form of a *madskat* (food tax) or a *kornskat* (corn tax) and the foodstuffs raised by this method were delivered to the *provianthus*. An example of one such tax comes from 1635 when the *rigsråd*, following a proposal from Christian IV, agreed that 10 ships should set sail to rid the seas of pirates. To provide bread and beer for these ships each freeholder in Denmark-Norway should give a sixth of a barrel of rye and a third of a barrel of barley. Alternatively they could pay 3 Ort in cash. Copyholders were required to contribute a quarter of this amount<sup>54</sup>.

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52. Missive to *lensmænd*, *Kancelliets Brevbøger*, 15 August 1633.

53. Engberg, *Dansk finanshistorie*, 245-7. See also p. 33.

54. Raadets Betænkning, 3 December 1635, Kr. Erslev, *Aktstykker og oplysninger til rigsråd og stændermødernes historie i Kristian IV's tid*, (København, 1883-90), II, 405.

Apart from these various direct and indirect taxes and tolls there were other ways in which funds could be found for the navy. For example Daniel Sinclair was paid some of the costs of building ships at Slotø from funds of the local church<sup>55</sup>. Also merchants and contractors were increasingly used not only to supply goods on credit but also to pay sums of money other contractors and state employees, for example the merchant Marcus Radebandt paid 3000 Rdlr. to David Balfour as part payment for the construction of two ships in 1631<sup>56</sup>. However, although certain payments could be deferred in this way, they still did eventually have to be paid either by the *rentekammer* or *Kongens eget kammer*. In the 1630s some *lensmænd* were also asked to supply ships as part of their *len* revenues so that their true costs were disguised and paid for only indirectly by the *rentekammer*<sup>57</sup>.

There is no way of determining how much each of these elements contributed to the overall funding of the navy. However it was evident that by the 1630s the income of the state was failing to meet the requirements of its expenditure. The rapidly expanding navy clearly played a major part in the growing financial crisis and we should now look at how this crisis developed and the measures taken to try and resolve it.

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55. Rigsarkiv, Danske kancelli, B223, III, litra S.

56. Receipt for Marcus Radebandt, 20 October 1631, Rigsarkiv, Rentekammer, 216.221, Afregninger, VI.57.

57. See Chapter 10.



### 3.2.3. Financial Crisis

From the very beginning Christian IV was aware that expenditure on the navy was getting out of hand. In 1597 he noted that:

Der er hidtil aarlig gaaet en mærkelig stor bekostning med paa Holmen for Københavns slot baade til skibsfolkenes løn og underhold og til udrustning af skibene<sup>58</sup>

there has previously been a noticeably large yearly expenditure on Bremerholm for seamen's wages and subsistence and the upkeep of ships

The *rigshofmester* was therefore ordered to ensure that no-one was employed without his knowledge, and to prepare three ships to be sold. The ships were apparently not in the end sold, but it does show how concerned Christian IV was about the cost of the navy at this early stage, and payments to naval personnel did drop sharply in the first few years after his accession<sup>59</sup>.

However, this immediate crisis passed and the budget estimates between 1600 and 1608 show that the state's ordinary income comfortably met the requirements of its expenditure. This surplus, however, was due mainly to the inclusion of the Sound toll revenues, and with Christian IV increasingly diverting these large sums into his own coffers the ensuing crisis became inevitable. Significantly the later estimates which showed heavy deficits did not include the Sound toll revenues in the state's ordinary income.

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58. Missive to *Hofmesteren*, *Kancelliets Brevbøger*, 13 December 1597.

59. See Figure 3.1.

This enabled the king to gain a financial independence previously unknown. This independence was used to finance various projects which he later claimed to have been in the state's interest, and therefore he ought to be reimbursed by *rigsråd* by the raising of extraordinary taxes. Some of the projects, such as defence works, were undoubtedly in the national interest, but the large sums expended on pursuing his policies in northern Germany could only be so described very loosely. This policy meant that some projects were effectively paid for twice<sup>60</sup> and amounted to what Ladewig Petersen has called a 'cumulative extortion'<sup>61</sup> of the *rigsråd*. In effect Christian IV was increasing his own liquidity at the expense of the state in order to pursue his own foreign policy agenda.

With this independence he was able to finance the initial phases of the Kalmar War with ease, and although the *Kongens eget Kammer* was exhausted by the end of the campaign it was quickly replenished by the Sound dues and the Älvsborg ransom. Again in the *Kejserkrig* the initial phase of the war was financed almost entirely by the *Kongens eget Kammer*, but the outcome was less fortunate and the military defeat was followed quickly by financial crisis.

The signs of the growing crisis had been recognised in the early 1620s when Christian IV tentatively floated the idea of *len* reforms<sup>62</sup>. These came to nothing, but it was evidently becoming clear that something had to be done to balance the ordinary budget. The trouble was that the income from the *len* had stabilised while state expenditure was rapidly in-

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60. In actual fact the state only paid once, through payments from the *Kongens eget Kammer*, and the taxes raised were used solely to restore the king's capital reserves.

61. Ladewig Petersen, 'Defence, War and Finance', 301.

62. Steffen Heiberg, 'De ti tønner guld: Rigsråd, kongemagt og statsfinanser i 1630'erne', *Historisk Tidsskrift*, 76, (1976), 26.



creasing. Ladewig Petersen has analysed the collapse of the *len* system in depth<sup>63</sup> and has shown that the proportion of *len* revenues to the total state budget dropped from around 70% in 1600 to just 30% in the 1640s.

The *Kejserkrig* marks the turning point in the transition of the state economy. The *Kongens eget Kammer* quickly became exhausted after the initial phases of the war, and *len* and toll revenues were drastically affected by the overrun of Jutland. The Kiel money market, where Christian IV had previously been able to raise finance, was also suspended. Therefore the only way of raising finance to extricate Denmark from the war was to increase tax and toll revenues and to obtain credit. However, before granting any new taxes to pay for what they considered was Christian IV's folly, the *rigsråd* ensured that they would thereafter control all war finance<sup>64</sup>.

The king had clearly lost the financial independence which he had so carefully cultivated, and the *rigsråd* had gained important new fiscal powers. But, in an effort to regain his independence, Christian IV, before agreeing to sign the Treaty of Lübeck, sought assurances from the *rigsråd* that he would be granted 'ti tønner guld' (ten barrels of gold, = one million Rdlr.) in compensation for the personal expenses he had spent during the war. The *rigsråd* reluctantly agreed to this condition and the money was to be raised by taxation and paid over a number of years. This did not in fact help Christian IV much, since most of the 'ten barrels of gold' were assigned to state expenses long before they ever reached the king. At the same time revenues from the Sound tolls were

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63. Among the most important works not already cited are: E. Ladewig Petersen, *Fra standssamfund til rangssamfund 1500-1700: Dansk social historie*, 3 Bd., (København, 1980); 'From Domain State to Tax State', *Scandinavian Economic History Review*, 23 (1975), 116-48; 'War, Finance and the Growth of Absolutism: Some Aspects of the European Integration of Seventeenth Century Denmark', in G. Rystad (ed.), *Europe and Scandinavia*, (Lund, 1983), 33-49.

64. Ladewig Petersen, 'Defence, War and Finance', 308-13.

being affected by the escalating war in Europe and the prospect of Christian IV restoring his previous position of financial strength was poor<sup>65</sup>.

The growing financial crisis was therefore as much a consequence of the power struggle between the king and the *rigsråd* as the need to pay off war debts. The financial position of the state was undoubtedly poor but, rather than working towards a common solution, both sides sought to protect their own interests at the others expense and the financial crisis steadily deepened. The poor financial position at the end of the war was made even worse during the 1630s when the country entered a period of perpetual armed neutrality, with expenditure on naval hardware and personnel increasing at an alarming rate.

Despite the *rigsråd* agreeing that the navy provided the only effective means of national defence, and that it ought to be strengthened, they were unwilling to grant the funds needed to achieve this and complained of the increasing amount of money being spent on it. Christian IV in turn retorted that most of the new shipbuilding costs had been met at his own expense:

At skiibsfloden aff oss udi dy forrige tiider saledis Er forbedriid och holden ued macht, Er skeed med uorris Skouiis udi holsten derris vdhuggelse, aff huilcke de thre *Croner, Victor, Recompens* och *Iustitia* erre biigdt, dii andre alle, som tiil Itzehou biigde Erre, med reede penning tiil omslaag betaaliid, saatt dii Riigid icke En daaler kostid haffuer<sup>66</sup>.

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65. This also helps to explain why Christian IV was so keen to pursue the attack on Hamburg in 1630 and impose tolls on the Elbe.

66. Letter to *rigsråd*, 12 April 1633, *egenhændige Breve*, III, 102-3.



That the navy in recent times has been strengthened and kept in readiness by us has been achieved using our woods in Holstein, the timber from which *Tre Kroner*, *Victor*, *Recompens* and *Justitia* have been built, all the others which were built in Itzehoe were paid with money from the Kiel money market, so that they have not cost the state one Daler.

Not only were these capital expenses being met by the *Kongens eget Kammer*, but during the 1630s payments were beginning to have to be made in order to pay for seamen's wages. In fact the strain on the *Kongens eget Kammer* was becoming ever greater, with expenditure continuing to rise and the *rentekammer's* revenues at best remaining static. The situation became even more critical after 1637 when the 'ten barrels of gold' had effectively been paid off and extraordinary taxation was decentralised and put in the hands of provincial commissioners, ensuring that the burden of naval expenditure fell even more heavily on the *Kongens eget Kammer*<sup>67</sup>. As a consequence, the disputes over naval funding started to become even more bitter and acrimonious.

By 1640 things were becoming so acute that ships were prevented from sailing on voyages that would take them away from the *len's* supply of rye and barley, since there was no money to pay for any excess<sup>68</sup>. The rumoured Dutch attempt to break the Sound<sup>69</sup> shortly afterwards demonstrated the need to maintain a strong navy, and Christian IV used the opportunity to submit the following plea to the *rigsråd*<sup>70</sup>:

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67. It is significant that the penultimate *landeskatter*, raised in 1636, was used primarily to pay seamen. (Letter to *rentemester* Jørgen Vind, 7 August 1636, *egenhændige Breve*, IV, 54-5.)

68. Letter to Corfitz Ulfeldt, 17 January 1640, *egenhændige Breve*, IV, 288-9.

69. See Chapter 1.

70. Letter to *rigsråd*, 26 May 1640, *egenhændige Breve*, IV, 343-4.

Epthersom uy Nu En Rom tyd med worris store skaade haffuer  
holdt Holmen med fladen med ded, som deraff *dependerer*, ved  
macht, fordi at *Cronens* Indkomst inted kunde strecke tyl ded, som  
Tiid epther anden derpa *spenderit* Er, Som aff huosføiiede *designa-*  
*tion*, som uorris Rentemeistere pa den dageliige udgiifft och Inted  
uyder giordt haffuer Er att Erfahre,

Huoraff nocksom Erfahris, oss Inted lenger att kunde vdsta  
sligdt vden uorris *total Ruin*, Huorfor Riigens Raad sliigdt med all  
fliid skall Offuerueye och tencke pa myddel, huorued uy kunde Er-  
lange uorris store vdlagde penning ygen, Och siiden at fladen  
frandelis kunde holliis ued macht, som ded siig hør.

Since we now for a long time have with great injury kept  
Bremerholm, and the navy and that which depends on it, powerful,  
because the Crown's income cannot stretch to that, which time after  
time is spent on it, as can be seen from the attached account of  
the daily expense and no more, compiled by our *rentemestre*. From  
which it is apparent that we cannot further suffer the like of such  
experience without our total ruin, which is why the *rigsråd* with all  
expediency shall consider and think of means whereby we can  
recoup our great outlay again, so that the navy should still be  
kept powerful, as is proper.

The *rigsråd* duly considered this request and, after first giving  
excuses as to why taxes could not be raised, came up with a formula for  
increasing various tolls to raise finance<sup>71</sup>:

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71. Chr. Bruun (ed.), 'Rigens Raads Betænking til Kong Christian IV. om Tilvøiebringelsen af  
Penge til Holmen og Flaaden, 1640', *Danske Samlinger*, 6 (1870-71), 81-84.



1. Of the toll raised to build the Nyboder, only 16,000 Rdlr. should be used and the rest, which amounts to around 28,000 Rdlr. should be used for Bremerholm's needs.
2. Export tolls on large horses should be raised by 1 Rdlr. and on small horses by 3 Ort.
3. Similarly tolls for every sheep should be raised 1 Ort.
4. On a 'dyssin kort' (playing cards?) 1 Ort.
5. Those among the burger class that have large weddings should pay 100 Rdlr., and 50 Rdlr. for festive beer.
6. On those timbers which are not currently on the toll register, should be levied a toll, which should yield around 5,000 Rdlr.
7. On one pound of tobacco 1 Mk.
8. On a fat pig 1 Ort
9. On a goose 4 Sk.
10. On a hide 1 Rdlr.

Other than these rather bizarre suggestions the *rigsråd* claimed it could do no more to help. Clearly these measures would have little impact on the large sums needed and the intention was made clear that the king ought to use the revenues from the Sound tolls to meet the difference. In return for these measures the *rigsråd* asked the king to ensure that he kept on good terms with the 'neighbours' and preserve the current state of peace<sup>72</sup>.

Not surprisingly these measures did little to alleviate the problem, and shortly afterwards Christian IV was again complaining about the lack of money to man the fleet, saying that 'Gud giffue, huor man tager penge

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72. Ironically it was the raising of Sound tolls that in large part precipitated the *Torstenssonkrig*, see Chapter 1.

tiil dem' (God knows where to find the money for them)<sup>73</sup>. He was becoming increasingly more irritated and emotional about the whole subject and a few weeks later he further complained that:

Tiil dy 300 badtzmend at werbe ma mand kunde faa penge, Ellers Er der huos mig wnd Raad tiil penge. Skal ded saledis lenge ga tyl, som ded gar, Da Er ded ett slett werck at uerre konning y danemarck. Skal ieg huerdt Aar sette tiil, da bliiffuer heer Pocker løss. Skall andre haffue Profiitten Och ieg wmagen<sup>74</sup>

For the 300 seamen being recruited money must be found, otherwise it is to me the *rigsråd* comes for money. If it continues long the way it has, then it is poor work being king in Denmark. If I have to put money in every year, then we shall be in real trouble. Are others to take the profit and I the pain?

Eventually he ordered the 1642 budget estimate to be carried out, with the threat that unless improvements could be made then Sweden would provide a good example, where there were few *lensmænd* and the Crown's income proved much higher<sup>75</sup>. Christian IV had in fact long been trying to push through a reform of the *len* system and the 1642 and 1646 estimates were intended as a means of proving that a reform was necessary. Although the *rigsråd* disputed the figures in the estimates they did in the end approve a limited reform in 1646, whereby some smaller *len*

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73. Letter to Corfitz Ulfeldt, 30 December 1641, *egenhændige Breve*, V, 162.

74. Letter to Corfitz Ulfeldt, 18 January 1642, *egenhændige Breve*, V, 169.

75. Letter to Jørgen Vind, 17 February 1642, *egenhændige Breve*, V, 177-82.



would be combined and some of the *afgiftslen* converted to *genantlen*. But this did not happen without further histrionic displays by the king who at one stage threatened to sell the navy if help was not forthcoming:

Skal man Icke haffue mehre hielp til at holde den *in esse*, End som hiidindtil skeed Er, da Er ded ingen vnder, Om lysten forgar mig at see megiiit epther Den, Mens y tyde selge den, ymens den Endnu aff andre kan brugis, Tii paa den wiis kan ded ingen bestand haffue<sup>76</sup>.

If I shall get no more help than hitherto to keep it in being, then it is little wonder that I loose the desire to look after it, but rather eventually sell it, while it can still be used by others, for in the present way it cannot go on.

The reforms came too late to have any impact on the funding of the navy during the *Torstenssonkrig* which appears to have been provided by the *Kongens eget Kammer*, and by using loans and credit from merchants. However the controversy over naval funding was taken up again with vigour at the end of the campaign and the king's desire to recover his autonomy was, if anything, strengthened<sup>77</sup>.

He ordered the *rigsråd* to investigate 'Huad for *moderation* pa vdgiiffen dy gode herrer Siinis at kunde forretagis pa fladen' (what moderation in expense the good lords think can be made to the navy)<sup>78</sup>. The *rigsadmira*'s recommendations were that, since the navy had been severely reduced during the war and was now insufficient to meet the

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76. Letter to Christen Thomesen Sehested, 20 November 1642, *egenhændige Breve*, V, 265.

77. Letter to *rigsråd*, 11 September 1645, *egenhændige Breve*, VI, 73-4.

78. Letter to *rigsråd*, 11 April 1647, *egenhændige Breve*, VI, 266.

increased threat from Sweden, and since naval ships would take a long time to build and be ready, that privileges should be extended to Danish merchants to build and maintain good warships, as in Norway<sup>79</sup>. In other words the size of the state navy ought to be reduced to come into line with the available funding and more reliance placed on armed merchantmen.

They considered that the navy should now only cost 300,000 Rdlr. annually<sup>80</sup>, which should be paid for by the king. Christian IV in turn declared that the anticipated revenue of 300,00 Rdlr. from the Sound tolls was only just sufficient for his own needs and that the navy ought to be funded by other means<sup>81</sup>. The *rigsråd* replied in characteristic manner saying that if they could determine the size and number of ships (i.e. essentially take over control of the navy), then they would be willing to grant an increase in the following tolls for the navy's use: 16 Sk. per barrel of rye, malt and wheat; 25 Sk. per barrel of ordinary flour; 3 Mk. per barrel of sifted flour;  $\frac{1}{2}$  Mk. per barrel of oats; and 1 Rdlr. per barrel of butter<sup>82</sup>.

This proposal did not go down well with Christian IV and the argument was taken up again in more emotional vein several months later when he declared that other monarchs in the world were allowed to keep their own money and that while he was paying for everything the *lensmænd*, with their freedom from taxation, were paying for nothing. He also reiterated that he felt that the state's resources ought to be used to pay for the navy as a matter of course<sup>83</sup>. However, the death that year

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79. Ove Giedde and Niels Trolle to Rigsråd, 10 May 1647, Erslev, *Aktstykker*, III, 361-2.

80. Letter to Christen Thomesen Sehested, Ove Giedde, Hannibal Sehested and Niels Trolle, 1 June 1647, *egenhændige Breve*, VI, 283-5.

81. Letter to *rigsråd*, 5 June 1647, *egenhændige Breve*, VI, 286.

82. Raadets Betænkning, 17 Juli 1647, Erslev, *Aktstykker*, III, 398.

83. Letter to *rigsråd*, 9 November 1647, *egenhændige Breve*, VI, 349.



of his elected successor, Prince Christian (V), meant that he was in a weakened position if the election of his younger son Frederik was to be secured. A number of the *len* reforms were withdrawn, and it is likely that he was forced to meekly accept whatever the *rigsråd* offered in terms of naval funding. In any case Christian IV was dead within a few months and in Frederik III's *håndfæstning* the *len* reforms were reversed and specific new powers were granted to the *rigsråd* over the navy so that the dispute could not continue as it had done.

In many ways this crisis in naval funding was artificial, since the main focus of the debate was whether the king or the state should foot the bill, and as we have seen much of the king's wealth was in fact technically state revenue. The real crux of the matter was that Christian IV had engineered his financial independence in the early years of his reign at the expense of the state, but when the state was in desperate need for financial assistance he was unwilling to lose this independence or to concede any further powers to the *rigsråd*. The situation was not helped by the fact that without any formal accounting procedures to give an exact and objective overview of naval finance the arguments became highly subjective and emotional, with each side desperately fighting its own corner. There can be no doubt, though, that Christian IV genuinely came to believe that the Sound dues were his own income, and the argument essentially came about as a result of his own delusions.

It would be wrong, however, to suggest that there would have been no crisis if king and *rigsråd* had co-operated. The internal state economy could no longer cope with the burdens being placed upon it since the *len* revenues could not easily be improved and the tax burden on the population was reaching saturation point. There was a desperate need for a sweeping reform of the *len* system, made even more critical after

revenues from Halland were lost after its cession to Sweden in 1645, but this was not possible while the high nobility still held power under the dyarchic system of joint sovereignty.

As a result an ever increasing reliance was placed on private contractors for the supply of naval materials, especially on those that could supply goods or services on credit. Although a certain amount of goods had always been procured from private merchants the *Kejserkrig* saw a rapid increase in this means of supply. This trend escalated dramatically in the 1630s<sup>84</sup>, and by the 1640s naval supplies were just as likely to come from private merchants as from the *len*. With it, this new policy brought about increased opportunities for fraud and embezzlement, which further deepened the crisis in naval finance. It is therefore to this growing corruption in the naval administration that we must now turn our attention.

### 3.2.4. Corruption

The state officials who could most easily indulge in embezzlement were those that handled large amounts of money or materials with a certain degree of independence. In terms of the naval administration this situation was found in the *klædekammer* and the *provianthus* and, although their accounts were audited by the *rentekammer*, it comes as no surprise to find that the two officials who most regularly came under suspicion were the *klædekammerskriver* and the *proviantskriver*.

In terms of outright theft the *klædekammer* provided the best opportunity but only two of the six men who held this position actually aroused suspicion. Anders Olufsen (*klædekammerskriver* 1612-1625) was

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84. Payments to contractors in the first four years after the war more than trebled. (Heiberg, 'De ti tønner guld', 43).



found to have stolen 5245 Rdlr., although his corruption was discovered only after he had left office and it was not until after his death that his widow was ordered to repay the money<sup>85</sup>. Knud Christensen (*klædekammerskriver* 1625-1647) came under suspicion in 1634 after a theft from the *klædekammer* was discovered. He was temporarily removed from office while his accounts were audited and a total of 11,544 Rdlr. was found to be missing for the years 1630-35. The thief was caught but was found not to have had money or goods to this value, and Christensen was obliged to repay the difference. This of course does not prove that he was dishonest but would suggest that he may have taken advantage of the situation. In any case he was allowed to continue in office after this incident was resolved, which would imply that he was not considered overly corrupt<sup>86</sup>.

In the *provianthus* the opportunities for corruption were much greater. Although little cash passed through its books the sheer amount of goods processed, and the poor accounting procedures employed, made it relatively easy for the *proviantskriver* to conspire with suppliers and falsify measures to siphon off goods for his own profit.

The first ever *proviantskriver*, Niels Paaske, was removed from office in 1598 after only a year, in which time his accounts had amassed a shortfall of 68,757 Dlr. It seems, though, that this was more through ineptitude than malice since he was absolved of the debt in 1601<sup>87</sup>.

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85. Lind, *Kong Kristian og hans mænd*, 89-90.

86. Lind, *Kong Kristian og hans mænd*, 90-2; Letters to *rentemestre*, 10 December 1637, and to Jørgen Vind, 2 January 1638, *egenhændige Breve*, IV, 165-6 & 169-70.

87. Lind, *Kong Kristian og hans mænd*, 105-6; *Kancelliets Brevbøger*, 22 May 1601.

Mads Davidsen (*proviantskriver* 1621-24) was suspected of embezzlement but, although he got into trouble for not preparing his accounts in time, he was not formally charged with any offence. Jon Olafsson does relate, though, that he was twice imprisoned in Copenhagen Castle and threatened with his life<sup>88</sup>.

His successor Kurt von Busk lasted only about a year before his death, and again suspicions were raised over his administration<sup>89</sup>. Similarly Bartolomæus Haagensen (*proviantskriver* 1625-26) came under suspicion and was removed from office after the *provianthus* went up in flames in 1626, and was ordered to pay 2000 Rdlr. in compensation<sup>90</sup>. His accounts were also thoroughly scrutinised for misdealings but no firm evidence was ever found before his death in 1643<sup>91</sup>.

Laurits Eskildsen (*proviantskriver* 1631-40) was found guilty of false accounting in 1637 but was allowed to continue in office after swearing an additional oath of allegiance to the king<sup>92</sup>. He was eventually forced to resign though after further trouble with his accounts but no formal charges of fraud were ever brought<sup>93</sup>. His successor, Morten Mikkelsen (*proviantskriver* 1640-54), was also accused of maladministration but in his case the king's investigations found little to complain of in his running of the *provianthus*<sup>94</sup>.

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88. *Memorier og Breve, I, Islænderen Jon Olafssons oplevelser som bøssekytte under Christian IV*, (København, 1966), 79.

89. Lind, *Kong Kristian og hans mænd*, 107-8.

90. *Kancelliets Brevbøger*, 14 September 1626.

91. Lind, *Kong Kristian og hans mænd*, 108-10.

92. *Kancelliets Brevbøger*, 17 & 18 February 1637.

93. Lind, *Kong Kristian og hans mænd*, 112-4.

94. Lind, *Kong Kristian og hans mænd*, 114-5.



Thus virtually all of the men appointed to the post of *proviantskriver* during Christian IV's reign came under suspicion at one time or another of either incompetent maladministration or downright embezzlement. However, given the nature of the accounting procedures it was virtually impossible to prove anything. Although so many men came under suspicion and were removed from office, very few were actually charged for their suspected crimes. Corruption was made even more difficult to detect since many of the officials had private business interests that included supplying materials to the Crown, and their books would have inevitably included a degree of false accounting that would have been impossible to detect.

The various dockyard clerks were also able to take advantage of their positions, such as Jakob Jensen, of whom it was accused that 'deeskriiffueren med En anden haffuer uillid *contrahere* om 1000 Riix daler mig at *Defrudere*' (the *deleskriver*, with another, has deliberately made a contract which defrauds me of 1000 Rdlr.)<sup>95</sup>.

It was less easy for corruption to occur in the *rentekammer* but many of its officials also had private business interests, or were family members of Crown suppliers, and inevitably there was a degree of favouritism and bribery involved in many of the contracts. However, despite its prevalence, corruption at this level was of relatively minor consequence when compared to the deeds of Corfitz Ulfeldt, whose financial chicanery dominates any discussion of corruption in the naval administration.

Ulfeldt's position as leader of both the *rentekammer* and the civil administration of Bremerholm put him in a position that was ideal for indulging in large-scale embezzlement. Before taking up office he had been a struggling nobleman with large debts but within just a few years he

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95. Letter to *rentemestrene*, 6 November 1634, *egenhændige Breve*, III, 289.

had become one of the wealthiest men in Copenhagen. This sudden rise in his fortunes was impossible to explain simply just from his wages of 1200 Rdlr. per annum, and it became an open secret that he was earning the majority of his wealth from his illegal dealings.

Suspicious over his dishonesty were aroused in Christian IV as early as 1641 when he stated that he and Hannibal Sehested were largely responsible for the poor state of the state's finances since they had 'En tønde guld y blød' (soaked up a barrel of gold)<sup>96</sup>. It was not until he became *rigshofmester* in 1643, though, that his financial misdealings took on an unprecedented scale. Previously all *rentekammer* contracts had had to be signed by the two *rentemestre* as well as Ulfeldt as *stadtholder*. Now, however, Ulfeldt could authorise any contract with just his own signature as *rigshofmester*.

When Ulfeldt became *rigshofmester* Christian IV no longer became involved in the placing of contracts: 'Jeg haver, siden Ulfeldt haver været Hofmester, intet bekymret mig om nogen Købmandshandel' (I have, since Ulfeldt has been *rigshofmester*, not concerned myself with any business with merchants)<sup>97</sup>. A select few merchants began to be favoured by Ulfeldt as Crown suppliers and prices were set artificially high and the difference allegedly split between Ulfeldt and the contractors. By 1644 Christian IV had begun to realise what was going on and was complaining:

At Nogle faa her y Byen haffuer all leffuerandtzen, derpa Er Indted att thuiffle. Om dy nu *contribuerer* mehre End dii andre, som Ingen fordell haffuer hafft aff leuerandtzen, ded staar tiil at Erfahre. I

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96. Letter to Christen Thomesen Sehested, 8 December 1641, *egenhændige Breve*, V, 152.

97. H.D. Lind, 'Underslæb paa Bremerholm under Korfits Ulfeldts Finansstyrelse', *Historisk tidsskrift*, 6 Rk. V bd. (1895), 39.



min vngdom da fiick dy leffuerandtzen, som uylle giiffue best køb,  
Och motte dog biie Epther Penge, Indtil man kunde komme dem  
affsted.<sup>98</sup>

That only a few here in the town get all the contracts no-one is in  
doubt. Now, whether they contribute more than the others, who  
have had no advantage from the contract is yet to be ascertained.  
In my youth whoever would give the best deal got the contract,  
and they even had to wait for the money until it was available.

Ulfeldt responded to this by saying that because the quantities of  
materials now required for the navy were so great only the largest sup-  
pliers would be able to meet the demand<sup>99</sup>, which was to a large degree  
true. However, the scale of contracts awarded to a small handful of mer-  
chants was quite exceptional and it was generally accepted that Ulfeldt  
was taking a large cut in the contract price for himself.

Strangely no direct allegations were ever brought against Ulfeldt  
during Christian IV's reign and the king even signed a document that ex-  
onerated him of any wrong-doing during his period of office, stating  
rather unbelievably that he had:

fra første tid indtil denne dag i alle din ombemeldte bestillinger  
ærligen, troligen, flitteligen og vel har forholdet, altid søgt mit og  
rigernes gavn og bedste<sup>100</sup>

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98. Letter to Christen Thomsen Sehested, November 1644, *egenhændige Breve*, V, 530-1.

99. Chr. Molbech, 'Om Corfits Ulfedt som Landsforræder og om hans politiske Charakteer og  
Handlinger', *Historisk tidsskrift*, 1 rk. III bd., 453.

100. Rigens hofmesters kvittans, 18 November 1647, published in Engberg, *Dansk finanshistorie*,  
140.

from the first until this day in all your honourable positions, behaved well, honourably, faithfully, diligently and always sought mine and the states benefit

This was obviously completely contrary to his previous beliefs and this turnaround was probably connected with attempts to ensure the election of Frederik after the death of Prince Christian (V). It certainly does not represent the truth, or indeed Christian IV's true feelings.

It was not until after Christian IV's death that the true extent of Ulfeldt's embezzlement became known. At first his administration of toll collection came under scrutiny. Then, when it was then discovered that he had authorised a contract with Albert Baltser Berns worth 95,000 Rdlr. for the supply of a ship which was later valued at only 63,000 Rdlr., an investigation was immediately ordered into his administration of the *rentekammer* and Bremerholm<sup>101</sup>.

During his period in office Ulfeldt had not made many friends among his fellow noblemen. He acted in a vain and pompous manner that fuelled resentment at his growing affluence, whilst everyone else around him was feeling the harsh effects of the years of financial crisis. When a *rigsråd* commission was set up in 1650 to carry out the investigation into his affairs it was little wonder that its members proved so hostile to him, and were so thorough in their efforts to find fault in his administration.

When the commission's findings were made known in 1653 they adjudged that goods had been regularly purchased at too high a price, accounts and receipts had been falsified, and Ulfeldt had had his own clerk at Bremerholm, working without a royal appointment. The question of timber supply proved of particular interest to them and they found that:

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101. Steffen Heiberg, *Enhjørningen: Corfitz Ulfeldt*, (København, 1993), 104.



af Tømmer alene paa 6 Aars Tid fra Ao. 1642 indtil Ao. 1648 opskrives at være leveret næsten for 13 tønder Guld, uanset ikke et Skib deraf er bygt, ikke heller nogen stor Landbygning gjort; mens vel beregnes til et Skib at reparere at være medgangen Tømmer for 36,000 Rdlr. og til et andet for 35,000 Rdlr.<sup>102</sup>

of timber alone in a 6 year period from 1642 to 1648 it is noted that nearly 1,300,000 Rdlr. was supplied, despite not one ship being built with it, nor any large land building being built; while it is estimated that to repair one ship would need 36,000 Rdlr. of timber and for another 35,000 Rdlr.

The timber supplied regularly lay in the timber yard for over a year without being checked, which meant that most of it could not be traced back to any one supplier, making it easy to falsify the accounts by making double or triple payments for the same material. The prices paid for timber were often ridiculously high, averaging more than twice the market value, but for the select band of suppliers in Ulfeldt's pocket the contract price could be as high as eleven times the market price. As Frederik III succinctly stated: 'Aff tømmer har hand ladet giøre store liurantzer paa Holmen for ganske wmaadelig och excessif priis' (He has issued large contracts for timber at Bremerholm for really enormous and excessive prices)<sup>103</sup>.

The circumstantial evidence was overwhelming and the fact that Ulfeldt fled the country in 1651 further pointed to his guilt, but surprisingly the commission did not find any direct evidence that he had been

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102. Lind, 'Underslæb paa Bremerholm', 372-3.

103. Frederik III to *rigsråd*, 13 July 1651; C. Rise Hansen, *Aktstykker og oplysninger til rigsrådets og stændermødernes historie i Frederik III's tid*, (København, 1973), 2(1), 194.

guilty of fraud. H.D. Lind<sup>104</sup> suggests that the scale of embezzlement was not actually quite as large as the hostile commission had made out, and Engberg<sup>105</sup> further points out that the level of Ulfeldt's embezzlement, probably totalling in the region of one million Rdlr., was in fact fairly small compared to some European government officials. The whole Ulfeldt story, though, is highly charged and many of the later allegations levelled against him were influenced by his subsequent defection to Sweden and his traitorous behaviour leading to the Peace of Roskilde in 1658. He was undeniably corrupt, but whether he was as corrupt as he is sometimes made out to be is a matter of contention.

With this level of corruption going on there must have been a certain complicity with some of the other officials. Certainly Ulfeldt had his own clerk, Hans Numesen, operating at Bremerholm and other men were also suspected of being in Ulfeldt's pay. In particular the *Holmens admiraler* Erik Ottesen and Kristoffer Lidenov, and the *materialsriver* Gotfried Mikkelsen, must have been at least aware, if not actual participants, of the fraud. However, not everyone was involved in the conspiracy, and the complaints levelled against the *proviantsriver* Morten Mikkelsen by Ulfeldt are thought to have been an attempt to punish him for refusing to participate in his schemes.

In comparison to other countries though Denmark was surprisingly free from corruption. England and Spain were notorious for the scale of corruption in their naval administration at all levels. This was due mainly to their dependence on contractors for virtually all supplies. In Denmark the *len* system by-passed many of the opportunities for corruption but obviously did not eliminate them altogether. Apart from petty pilfering, only officials in the higher offices had any opportunity to practice theft

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104. Lind, 'Undersl b p   Bremerholm', 367-410.

105. Engberg, *Dansk finanshistorie*, 148-50.



or fraud on any significant level, and with an administration that had so few high-level officials the possibilities for corruption were minimised. However, it did mean that for those few who did hold high office, such as Ulfeldt, the opportunities were very great indeed. It is also notable that the majority of the corruption stems from the time when private contractors were being used on a much greater scale than ever before.

So, in conclusion, it can be said that the financial administration of the Danish navy was chaotic and to some extent corrupt. The financial institutions of government were inefficient and inadequate for their tasks, and their accounting procedures were confused and difficult to understand. No-one in government had any idea of the true state of naval finances, which meant that when problems arose there was no easy way of resolving them. The lack of any clear accounting practices and the dual financial leadership also led to a situation where naval finance became a highly contentious political issue, with the king and *rigsråd* acting against each other rather than working together to find a common solution.

There really is little positive that can be said of the navy's financial administration. The *len* system did provide a means of supplying the navy to some degree without the need for large sums of money, but this system was of limited value and far too rigid to cope with a rapidly expanding navy. When private contractors began to be used to compensate, corruption became a significant factor, but the small size of the administration meant that at least this corruption was not quite as bad as it might have been. Having said this, however, Danish naval finance was no worse than that of many other states at this time and corruption and inefficiency seemed to be the norm in early modern financial administration.

In terms of keeping the navy running, the financial administration was muddled, inefficient and wasteful, and came very close to breaking down altogether. However, it must be said that the navy had been expanded to a much higher level than the administration was designed for, and probably far higher than the state was actually able to afford. It is therefore little wonder that so many problems were encountered in the attempts to keep the navy financed.



**PART B**

**THE NAVY AND ITS  
ADMINISTRATION**

## 4. The Ships of The Navy

### 4.1. The Total Strength of the Navy

The various roles that Christian IV's navy undertook required a number of different types of vessel. Large capital ships of around 50-80 cannon were designed to increase the navy's prestige and were used mainly as royal flagships and for diplomatic duties. Smaller battleships of between 20-50 cannon were much more suited to the type of operational duties that were most frequently encountered, such as blockading ports and in-shore coastal bombardment. Small swift and highly manoeuvrable vessels were needed to combat toll evasion and piracy, and were also well suited for expeditionary purposes. A fleet of oared galleys was also maintained for their usefulness in coastal protection and for riverine operations.

It is difficult to obtain accurate information on the number and size of ships in the navy. There was as yet no formal navy list and the best source of information comes from the *proviantskriver regnskaber*<sup>1</sup> (victualling accounts), the *materialskriver regnskaber*<sup>2</sup> (materials accounts), the *tøjhusregnskaber*<sup>3</sup> (arsenal accounts) and from the *klædekammer regnskaber*<sup>4</sup> (state pay-roll). However, these are of limited use since ships are only listed in these accounts if they receive either victuals, spares or ordnance, or are manned in any given year. Unfor-

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1. Rigsarkiv, Marinearkivet for 1655, Bremerholms Proviantskriver Regnskaber; 13. 1627/28; 14. 1642/3, 1644/45, 1645/46, 1646/47?, 1647/48.

2. Rigsarkiv, Marinearkivet for 1655, Bremerholms Materialskriver Regnskaber; 17. 1598/99; 18. 1626/27, 1627/28; 20. 1628/29; 21. 1629/30, 1630/31, 1631/32; 22. 1633/34; 23. 1634/45; 24. 1635/36; 25. 1638/39, 1639/40.

3. Rigsarkiv, Fæstningsregnskaber, IV, c.1-2., Københavns tøjhusregnskaber, 1592/93; 1602-04; 1607/08; and 1609/10.

4. Rigsarkiv, Rentekammer Udgift Conto I.a., Klædekammer Regnskaber, 1607/08; 1621/22; 1622/23; 1624/25; 1625/26; 1626/27; 1628/29; 1629/30; 1630/31; 1631/32; 1632/33; 1633/34; 1634/35. After 1635 the men were no longer listed under the ships they served in.



Unfortunately many of these account books have not survived and definitive information therefore exists only for certain years. If a ship was laid up, or if, for example, it happened to be in the East Indies and no victuals or stores were issued to it, then it may not necessarily appear in these accounts.

These accounts provide valuable information on the number of ships in the navy but unfortunately have limited use in determining the size of them. The victualling lists give the number of crew on individual ships, but this can sometimes be misleading if a large number of seamen are billeted aboard a ship over the winter. The materials accounts provide no easy means of assessing the size or type of ships, other than the quantity of material issued, which again can be misleading, and only one of the arsenal accounts (1609/10) details the number of cannon issued to individual ships. In all these accounts the ships appear in random order, although from 1644/45 the victualling lists separate the galleys and *jagts*, and the cargo ships from the other ships.

Fortunately contemporary lists of ships for individual years can be found in a number of sources which help to fill the gaps left by the lack of dockyard accounts. A list of ships in operation in 1610 has been published<sup>5</sup> and the reports of the Swedish agent in the Sound give useful details for 1621 and 1624<sup>6</sup>, and another Swedish list survives from 1647<sup>7</sup>. There is also a list from 1630 in the Rigsarkiv<sup>8</sup> which gives the number of both cannon and crew. The letters of Christian IV also give lists of ships for certain years, between 1628-1645, with varying degrees of com-

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5. 'Mogens Ulfelds Tog udi Østersøen med Kongelig Majestets Skibs-flode 1611(I)', *Danske Magazin*, Rk. 1, Bd. 1, (1745), 114-118.

6. Leo Tandrup, *Svensk agent ved Sundet*, (Aarhus, 1971), 118-21, 451-3, & 517-8.

7. 'Fortegnelse paa Danmarks Flaade 1647', published in Christian Bruun, *Curt Sivertsen Adelaer*, (København, 1871), 420-22.

8. Rigsarkiv, Danske Kancelli B164, IX, Pk. 07, læg 30.

pleteness. Two extremely useful lists also exist for 1653, which were drawn up in connection with the Danish-Dutch alliance treaty of that year. The first is an official Danish document<sup>9</sup> and the second was made by the Swedish resident Magnus Durell<sup>10</sup>. Both give the age and place of building for many ships as well as principal dimensions, the number of cannon ports, cannon, and crew numbers. Occasional snippets of information on individual ships can also be found in Christian IV's letters and in many other contemporary sources too diverse to enumerate.

Despite its reputation, there has been surprisingly little published on the ships of Christian IV's navy. H.D. Lind published a list of ships in 1890<sup>11</sup> which contained a total of 276 vessels. Unfortunately this is not as comprehensive or as accurate as it might have been since he did not consult the victualling, materials, or arsenal accounts, which include many more ships and contain details that contradict some of his assumptions. In the 1940s Victor Jensen also published a list of Christian IV's ships<sup>12</sup>, but this was based primarily on Lind's work and added little new information. Preben Holck published details of the fleet during the *Torstenssonkrig*<sup>13</sup>, which was far more comprehensive than Lind, but otherwise there has been very little research carried out on the total strength of Christian IV's navy.

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9. Published in Holck, 'Flaadelister omkring Krigsaarene 1644-45', *Tidskrift for Søværnen*, 114, (1943), 483-504 & 545-65.

10. Suhm (ed.), 'Magni Durells relation om Danmark', *Samlinger til den danske historie*, (København, 1784), 2 bd., III hæfte, 78-82; also published in Bruun, *Curt Sivertsen adelaer*, 422-9.

11. H.D. Lind, 'Om Kong Christian den Fjerdes Orlogsflaade, III. Flaadeliste', *Tidskrift for Søværnen*, (1890), 409-52.

12. Victor Jensen, 'Om Kong Christian IV's Orlogsflaade', *Under Dannebrog*, (1940), 84, 90-92, 99-102; (1941), 59, 74-6, 109-110.

13. Holck, 'Flaadelister omkring Krigsaarene 1644-45', 483-504 & 545-65.



As a result of the present research a total of 378 named ships have now been identified, but this fleet list is still far from perfect. Confusion arises with the language and spelling of some of the ships, for example *Raabukken* (the Roebuck) may or may not be identical with *Hjorten* (the Hind), but *Hirschjagt* can definitely be taken as simply a germanic version of *Flyvende Hjort*. Some ships also appear to have had a descriptive name as well as a proper name, such as *Prindsens spil Jagt* (the Prince's pleasure yacht) which seems also to have been known as *Gule Æble* (Yellow Apple). To complicate matters even further some ships had their names changed, like *Patentia* which was originally named *Charitas Patriæ*, and *Papegoien* which was renamed *Stormarn* before it was even completed. Further confusion also arises when two ships of the same name appear in the fleet, such as the two ships named *Markatten* in the list for 1610. It then becomes almost impossible to determine with any accuracy when the newer ship entered service or when the older one went out of service, or if indeed there was a third ship which came between the two known vessels.

Although it is common practice to classify ships by their number of cannon there is a great deal of confusion inherent in this method for the early modern period. The earlier ships of Frederik II's navy may have carried a large number of cannon but these were probably of a much smaller calibre than the later ships. There is also the confusion that although a ship may have been designed to carry a certain number of cannon the number actually issued to it may have varied from year to year. It was highly unusual for the number of cannon carried to equal the number of cannon ports built into the ship's structure. In Magnus Durell's account the first twenty ships listed had a total of 1047 ports, but the number of cannon carried totalled only 882, so on average a ship carried roughly only 85% of its capacity, although two of the ships did actually carry two cannon more than the number of ports. In wartime the

total number of cannon available were distributed among the whole fleet, as well as to merchantmen, so ships would carry very much less than their full capacity. Certain ships were also rebuilt and their cannon carrying capacity increased or decreased. There is also the added complication that for many of the ships identified there are no details of how many cannon they carried. In such cases the number of crew or the ships measurements are used to classify the ships, but where these details are also missing the classification falls on pure guesswork, although if little is known of a ship it can reasonably be assumed that it was probably a small and fairly insignificant vessel. In the following analysis the maximum figures given at any time in a ship's life are used to classify the ship<sup>14</sup>.

Figure 4.1. gives as good a picture as possible of the size of the navy during Christian IV's reign. This is distorted to some extent by the availability of information. If a ship appears in the accounts, which tend to run from May to May, just once then it is counted in the two calendar years that the account straddles. If however a ship appears at one stage, disappears for a number of years, and then reappears again it is counted in all the intervening years as well. Ships which appear only once in other sources are counted only for the particular year in which they are mentioned. The most difficult data to determine are the dates of decommissioning, and where precise details are not known the date at which the ship is last mentioned is taken as its last year of service. To some extent therefore these figures represent an underestimate. The period where the greatest error is likely is from 1600-1620 since there are very few dockyard accounts from this period. The sudden drop in 1600 probably reflects that absence of accounts after 1599 rather than a true drop

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14. The maximum number of cannon actually carried rather than the number of ports available has been used since stability or sea-keeping requirements may have prevented the full load from being carried. This is especially true in the brackish waters of the Baltic where buoyancy is reduced.



in the size of the fleet, and it would be reasonable to assume that the number of ships from 1600-1620 would be slightly higher than shown, although the accounts from 1621-1626 would suggest that the figures from the earlier period cannot be too far wrong.

The sudden increase in the number of galleys from 1627 reflects the fact that when the threat of a sea-borne invasion arose many of those previously stationed in local harbours were brought into the main fleet at Copenhagen and therefore begin to appear in the Bremerholm account books. In effect the figures given here show the main fleet based in Copenhagen, with the majority of small coastal protection vessels dotted around the realm not accounted for.

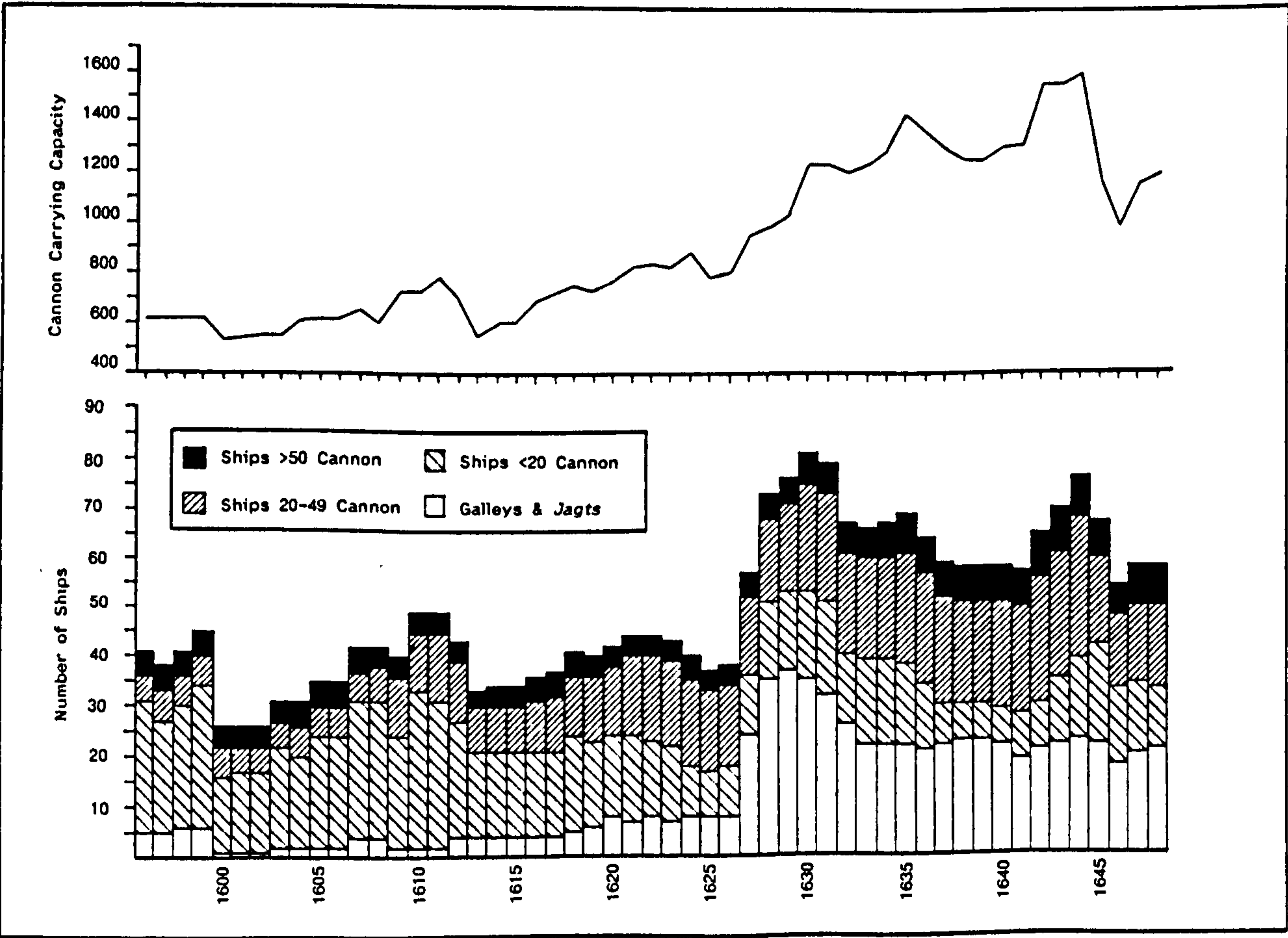


Figure 4.1. Danish Naval Strength

Taking these points into consideration the number of ships, excluding galleys, remains remarkably steady at between 30-40, apart from during the periods of conflict when the number could rise as high as 50. However, the size of ships can be seen to steadily increase, with the proportion of ships between 20-50 cannon increasing at the expense of the smaller ships with under 20 cannon. The graph showing the total cannon carrying capacity of the fleet is again rather inaccurate since the figure is unknown for so many of the smaller ships, but the general trend is unmistakable with the number of cannon effectively doubling by the 1630s.

This quantitative analysis contradicts many assumptions which have previously been made about the navy. First of all the navy was not nearly as weak after the minority as was formerly thought<sup>15</sup> and therefore the new-building programme instituted by Christian IV, although still very impressive, was certainly not as dramatic as some have assumed. The lack of serious scholarly research on the early modern Danish navy has meant that many conclusions have been drawn from the works of Garde and Lind which simply do not stand up to scrutiny. For example a well respected historian such as Leo Tandrup can make the assertion that the navy doubled in size between Christian IV's accession and the Kalmar War<sup>16</sup>, but the present research shows that this simply did not happen. As far as the available sources allow us to make any firm conclusions about the period before the *Kejserkrig*, the navy seems to have been a fairly stable force in terms of numbers of ships, and the impact of Christian IV can therefore be seen to have been over-estimated to a certain

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15. H.G. Garde, *Den dansk-norske sømagts historie*, (København, 1861), 107.

16. Leo Tandrup, *Mod triumf eller tragedie*, (Aarhus, 1979), I, 74.



extent. Perhaps the fact has been overlooked that, even though many ships may have been built, an equally large number of ships were regularly decommissioned.

The situation in the 1630s is also very interesting. Many historians have again taken as an accepted truth that there was a massive naval expansion in this decade, but no direct documentary evidence has yet been found to corroborate this. There was indeed a significant increase in the size of the navy after the Kejserkrig, but this was created largely by the now centralised galley fleet. There was also certainly a very active new-building programme in the 1630s, but this was probably much more influenced by practical rather than political motives. Baltic oak was actually not that good for the building of ships, especially large hulls<sup>17</sup>, and so the maximum expected life of a ship in the Baltic at the time was only around 30 years<sup>18</sup>. It was therefore necessary to start replacing the ships built at the start of the reign around this time. In fact after 1635 the total number of ships actually began to decline. The replacement ships, however, were generally larger than their predecessors and so the strength of the navy can be said to have increased, but certainly not to the massive degree that some historians have previously assumed.

What does not show up on the graph is the number of ships actually in commission, since a large number of the ships listed could be laid up over a long period. Older ships which had been converted into harbour blockships also continue to appear in the lists after they are no longer fit to put to sea. The letters of Christian IV indicate that the main sailing fleet consisted on average of about 20 ships in peace-time. The

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17. R.G. Albion, *Forests and Sea Power*, (Hamden, Conn., 1965), 17-23.

18. Fynes Moryson noted in 1593 that Danish ships were similar to English, 'saue that they last not so long by tenne years at the least' and that 'their Shipps built of the Oaks in Norway last not aboue twenty yeares'. Fynes Moryson, *The fourth Part of an Itinerary*, Library of Corpus Christi College, Oxford, MS. C.C.C.94, f.242-3.

victualling accounts also show that a large number of the ships listed took on board no stores or else only took on salt<sup>18a</sup> to keep the pumps working and candles for the shipkeepers. The accounts for 1642/43<sup>19</sup> show that of the 77 ships listed 23 were laid up for the whole year, and many of the others were mobilised for only a few weeks. This does not quite equate with Christian IV's assertion that only 18 warships were needed that year<sup>20</sup> but it does highlight the difficulty in assessing the Navy's true strength at any one time. Thus the graph really shows the *potential* number of ships able to be mobilised rather than the actual operational strength of the navy.

## 4.2. Ship Types

### 4.2.1. Prestige Ships

Prestige ships were the largest in the navy and were designed more as a symbol of sea power than as useful fighting warships. For the purposes of definition a prestige ship has been taken as one of over 50 cannon. Clearly some ships were much larger than others and those which could be considered as true prestige ships are not easy to determine.

In the following lists of ships crew numbers represent the maximum combined total of seamen, gunners and soldiers allocated at some stage in its life, although this figure constantly varied from year to year. In some cases the figure also includes officers. Two lengths are given, the keel length ( $L_K$ ), which was a design dimension, and the length between stem and stern posts ( $L_{BP}$ ), which was measured when the ship was complete. Where known the design breadth is given, otherwise an 'as built' measurement is given. All dimensions are given in Sjællandske alen (Sjælland ells; i.e. 0.627 metres)<sup>21</sup>.

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18.a. Salt was needed to prevent the water from freezing in winter.

19. Rigsarkiv, Marinearkivet for 1655, 14. Bremerholms Proviantskrivers Regnskab 1642/43.

20. Letter to Corfitz Ulfeldt, 17 May 1642, C.F. Bricka & J.A. Fredericia (eds.), *Kong Christian den Fjerdes egehændige Breve*, VIII, 173-4.



<u>Name</u>	<u>Entered Service</u>	<u>Guns</u>	<u>Crew</u>	<u>Lp</u>	<u>Lx</u>	<u>Breadth</u>	<u>Left Service</u>
<i>Fortuna</i>	1567	68	-	94.7	58.8	21.9	1607
<i>St. Olaf</i>	1573	-	-	-	61.4	-	1600
<i>Prindse Barken</i>	1583	64	-	-	-	-	1599
<i>Samson</i>	1589	62	-	-	-	-	1618
<i>Josaphat</i>	1589	52	-	-	-	-	1612
<i>Argo</i>	1601	54	214	76.5	54.5	17.5	1635
<i>Tre kroner</i>	1604	80	-	-	56	22	1624
<i>Recompens</i>	1614	54	214	65.75	-	16.25	1643
<i>Patentia</i>	1616	54	300	-	-	-	1644
<i>Spes</i>	1624	54	260	52	-	16	1674
<i>Store Sophia</i>	1627	54	265	-	58.5	18.5	1645
<i>Tre kroner</i>	1630	60	260	60.5	-	16	1658
<i>Morske Løve</i>	1634	52	260	60.75	50.5	15	1666
<i>Sorte Rytter</i>	1635	52	195	56.5	42	14.5	1685
<i>Trefoldighed</i>	1642	60	265	71	-	18	1676
<i>Pelikanen</i>	1642	50	150	59	-	14.75	1658
<i>Hannibal</i>	1647	60	280	70.5	-	17.5	1659
<i>Victoria</i>	1647	56	280	70.5	50	17.25	1653

**Table 4.1. Prestige Ships**

It is uncertain whether some of the earlier ships on this list were really prestige ships since the large number of cannon were probably of a much smaller calibre than the others. This appears to be confirmed by the fact that some were down-graded in later years and even served as cargo ships. There were certainly some prestige ships prior to Christian IV's accession as Herman von Zesterflet noted in 1600<sup>22</sup>:

Et skib saae vi som var meget større end alle de andre. Alle forsik-  
krede eenstemmig, at det var 1500 læster drægtig. Det var bygt af K.  
Friderich II, og hans forgylde Vaaben glimrede paa Forstavnen.

21. Before around 1615 the Wasser-alen (0.55m) was also used, but to give a true comparison all dimensions have been converted to Sjællandske alen. Niels Probst, 'Wasser-alen: et hidtil overset længdemål fra Christian IV's tid', *Historisk Tidsskrift*, 92 (1992), 288-300.

22. Suhm (ed.), 'Udtog af en Reise til Danmark Aar 1600', *Nye samlinger til den danske historie*, 3 bd., (København, 1794), 99.

One ship which we saw was much bigger than all the rest. All were in agreement that its tonnage was 1500 lasts. It was built by king Frederik II, and his gilded arms glimmered on the bows.

Unfortunately he does not give the name of this ship and its identity cannot be ascribed with any certainty, but it is likely to be either the *St. Olaf* or *Fortuna*, which was rebuilt in 1592. Fynes Moryson<sup>23</sup> described *Fortuna* as one of the best ships of the navy:

The burthen whereof was 1400 tonns (the very ballast being 700 tonns), and to man and furnish the same, were required 400 Marines, 300 Gunners, and 700 Soldiers, ... and the breadth was 25 Ells the length of the Keele 67 and above the hatches 108 Ells, the depth of the hold was Eleuen Ells and a halfe, and it bore in the lower orlob 22 Cannons, in the middle 22 Culverines, and in the upper orlob 24 Sakers, the mast was 37 fadoms long, and 36 Palmes Girth and it cast out seuen Ankers lying in the harbor.

Some of these figures are no doubt exaggerated but it must still have been a very impressive ship. The most notable prestige ship built for Christian IV in the early years of his reign was the *Tre kroner*, completed in 1604. This was a very large ship of 1500 tons. It certainly did its job as far as its role as a symbol was concerned, and during Christian IV's visit to England in 1606 it drew great praise from observers, as the following extracts demonstrate:

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23. Fynes Moryson, *The fourth Part of an Itinerary*, published in: Martin Bellamy, 'En englænders beretning om den danske flåde, 1593', *Marinehistorisk Tidsskrift*, 4/1995, 106-10.



the Admirall, wherein his owne person came, being a most huge ship, is esteemed of 1500 tunnes; which ship is so adorned with rich gold and very excellent workemanship, as many thousands, upon report thereof, of purpose have gone to Gravesend, where she doth ryde, to view her. Besides the beautie and riches of this great ship, she is appointed with most huge ordinance, men, and victualls, fit for so Kingly a presence<sup>24</sup>.

The Ship wherin the King of *Denmarke* went, was a moste goodly and famous Vessell, and as some Ship-men reported, about the burthen of ten or twelve hundred tunne, shee boare in her, three tyer of Ordinance, all brasse, both great and large: her poope, her forecastle and Beake-head, were all fayre carued and ritchly guilt, so were the port-holes for her peeces, her tops, top-masts & other places<sup>25</sup>.

the King of Denmarke's greatest shippe, commonly called the Admirall, .... was a gallant shippe of a very hie and narrow building, the beakhead, the stearne, and her three galleries, were fairly gilded, the wast and halfe deck adorned with arras and other rich ornaments<sup>26</sup>.

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24. Henry Roberts, *The most royall and honourable Entertainment of the most famous and renowned King Christiern the Fourth, King of Denmarke*, 1606. Reprinted in Nichols, *Progresses of James I*, (London, 1828), II, 56-57.

25. *The King of Denmarkes Welcome*, Printed by Edward Allde, 1606, British Museum, 1093. b. 71.

26. Howes account, Reprinted in Nichols, *Progresses of James I*, II, 89.

However, in practice both the *Fortuna* and the *Tre kroner* proved to be poor sailers, with deep draughts which limited their usefulness in the Baltic. It was noted of the *Fortuna* that 'the best Seamen judged (it) more fitt to serue as a ffort in a Riuer than to fight at Sea where lesse and swifter Shipps would haue great advantage of it'<sup>27</sup>. In fact both ships seem to have spent most of their lives laid up in Copenhagen doing nothing, apparently not even participating in the Kalmar War. The smaller prestige ships of between 50-60 cannon, if not quite so imposing, were far more effective and were able to sail with the main battle fleet in times of war.

The 1640s brought an upsurge in the building of larger ships. This may have been in response to the building of other capital ships in Europe in the late 1630s, such as *The Sovereign of the Seas* in England and *La Couronne* in France. It may also have been the result of a review of sea fighting tactics after a squadron of smaller Danish warships was easily overcome by heavier armed Swedish and Dutch vessels in the battle of Femern Bælt in 1644<sup>28</sup>. The remaining ships in the navy were steadily rebuilt after this incident, increasing their cannon carrying capacity by as much as 50%<sup>29</sup>. There was probably also an element of restoring lost pride after the *Torstenssonkrig*, although the growing number of large ships was also in part simply a reflection of the technical developments in shipbuilding and sail design which enabled larger ships to sail more effectively.

After the completion of the two large ships, *Hannibal* and *Victoria*, in 1647, another three were ordered. These ships, *Sophie Amalie*, *Frederik*, and *Prinds Christian* were truly massive and were among the

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27. Fynes Moryson, *The fourth Part of an Itinerary*, f.242-3.

28. Niels Probst, 'Slaget i Femern Bælt 13. oktober 1644', *Marinehistorisk Tidsskrift*, 2/1986, 17-8.

29. Niels Probst, 'Snarensvend, et orlogskib fra Christian IV's tid', *Marinehistorisk Tidsskrift*, 1/1987, 11-15.



largest in the world at the time, with 100, 96 and 91 cannon respectively. However, although ordered by Christian IV, they did not appear in the navy until after his death.

#### 4.2.2. Battleships

The ships that made up the majority of the main battle fleet were those between 20 and 50 cannon, of the type generally termed galleons<sup>30</sup>. These were large enough to provide sufficient firepower in an all-out battle in the open sea, but not so large as to make them unmanoeuvrable. Since battle tactics had yet to reach their full evolution at this time it is prudent to classify these ships simply as battleships, rather than as true ships of the line, which the larger ships were to develop into in the next generation of warship.

There is in fact a case for subdividing this classification even further as a considerable number of shallow draught ships were constructed to a similar design around the 20-30 cannon range, which were well suited to coastal duties in the shallow waters of the Baltic.

<u>Name</u>	<u>Entered Service</u>	<u>Guns</u>	<u>Crew</u>	<u>Lap</u>	<u>Lr</u>	<u>Breadth</u>	<u>Left Service</u>
<i>(Norske) Dragen</i>	1580	42	-	-	-	-	1611
<i>Josua</i>	1580	48	-	-	-	-	1600
<i>Raphael</i>	1582	22	-	-	-	-	1612
<i>Gideon</i>	1585	38	154	-	-	-	1612
<i>Hercules</i>	1594	42	-	-	-	-	1603
<i>Victor</i>	1597	44	-	-	-	-	1636
<i>Archa Rosa</i>	1604	-	-	-	-	-	1623
<i>Leoparden</i>	1604	22	-	-	-	-	1631
<i>Stjernen</i>	1607	22	-	-	-	-	1611
<i>St. Anna</i>	1608	31	280	-	40?	-	1645
<i>Enhjørningen</i>	1609	21	40	-	-	-	1620
<i>Krokodillen</i>	1609	24	-	-	-	-	1611
<i>Markatten</i>	1609	28	80	-	-	-	1653

Table 4.2. Battleships, continued...

30. The term *galleon* was never apparently used in the Baltic but the Danish warships were in many respects similar to those described as galleons in the English and Dutch navies. See Chapter 11 for a detailed comparison of ship design.

<u>Name</u>	<u>Entered Service</u>	<u>Guns</u>	<u>Crew</u>	<u>Ln</u>	<u>Lr</u>	<u>Breadth</u>	<u>Left Service</u>
Justitia	1609	44	226	55	-	15	1658
Malkepigen	1611	24	-	-	-	-	1612
Spes	1611	30	-	62	-	16	1623
Svenske Hector	1612	26	-	-	-	-	1624
Fides	1616	30	135	65.75	45	15	1644
Raphael	1617	32	135	-	-	-	1645
Havhesten	1618	20	82	-	-	-	1644
Sorte Rytter	1619	40	150	-	50	15.5	1627
Nettebladet	1620	36	134	53.75	45	15	1644
Flensborg	1621	20	80	-	-	-	1632
Trost	1621	24	80	-	-	-	1653
Hvide Løve	1621	34	110	-	-	-	1624
Røde Løve	1622	36	300	-	-	-	1645
Hummeren	1624	22	135	-	40	13	1639
Gabriel	1624	26	80	-	-	-	1645
Svanen	1625	40	150	-	50?	16?	1653
Lindormen	1627	40	290	-	50	16	1644
Oldenborg	1628	42	290	-	51	15	1644
Store Lykkepot	1629	36	140	50	-	12.75	1660
Lammet	1630	32	160	67	40	13	1658
To Løver	1630	32	135	52.5	42	13	1644
Tre Løver	1630	32	135	-	42	13	1637
Kronet Fisk	1630	32	135	-	40	13	1644
Delmenhorst	1633	44	134	62.5	42	14	1644
Gak Med	1635	34	160	-	-	-	1664
Hvide Bjørn	1635	42	154	57.5	-	13.5	1661
Hollands Fregat	1640	26	36	-	-	-	1653
Tre Løver	1640	46	200	-	47.5	15	1644
Forlørne Søn	1642	20	94	-	-	-	1651
Fenix	1642	34	150	57.5	42	14.75	1653
Graa Ulv	1642	36	160	58.75	-	14.75	1659
Sorte Bjørn	1642	38	120	59	-	15	1674
Neptuna	1644	28	80	-	-	-	1644
Stormarn	1644	32	112	-	-	-	1644
Ørnen	1644	40	-	-	-	-	1644
Forgylte Bjørn	1645	38	94	55	-	12.25	1657
Norske Fregat	1646	26	-	-	-	-	1658
Røde Ulv	1647	36	-	-	-	-	1650
Røde Ræv	1648	40	-	-	-	-	1652

Table 4.2. Battleships (continued)

#### 4.2.3. Small Warships

The largest proportion of the fleet in the early period of the reign was made up of small warships of up to 20 cannon. These varied from small pleasure yachts which could be fitted with a cannon or two in wartime, to quite large vessels almost on a par with the battleships. Although the many different small ship types cannot be identified with any degree of



accuracy some ships' names give a clue as to their type, which were usually a corruption of Dutch or English merchant shipping terms. Table 4.3. shows the more common types of small warship.

<u>Ship Type</u>	<u>Deck</u>	<u>Masts</u>	<u>Rig</u>
Pinas	Full	3	Square
Fløite	Half	3	Square
Pink	Full	2-3	Square
Galiot	Open	1-2	Fore & Aft

**Table 4.3. Small Warship Types in the Danish Navy**

Source: Ole Mortensen, *Renæssancens Fartøjer: sejlads og søfart i Danmark 1550-1650*, (Rudkøbing, 1995).

These definitions were far from rigid, however, and the differences between the types could often be minimal. There is also a great laxity in terminology with some vessels being indiscriminately classified from year to year. Another small ship type was the *pram*, which was essentially a dockyard barge which could be mounted with a number of cannon to act as a temporary block-ship. Cargo ships were also frequently converted into warships by fitting them with a small number of cannon. The list of small warships given in Table 4.4. includes all vessels which at some stage in their career carried cannon. Although some were intermittently classified as cargo ships they obviously had the potential to be fitted out as a warship if need be.

Small ships tended to drift in and out of the navy far more frequently than larger vessels. Many were acquired as prizes or were purchased, allowing the naval shipwrights to concentrate on building larger vessels. The smaller ships were therefore of less intrinsic value and, since they could be acquired relatively easily, less care was taken of them. Their average lifetime was therefore much less than for larger vessels.

<u>Name</u>	<u>Entered Service</u>	<u>Guns</u>	<u>Crew</u>	<u>LBP</u>	<u>Lx</u>	<u>Breadth</u>	<u>Left Service</u>
Falk von Bergen	1559	-	-	-	-	-	1599
Pelikanen	1572	-	-	-	-	-	1608
Dansk Vildman	1572	-	-	-	-	-	1596
Forgylte Løven	1572	16	-	-	-	-	1596
Gabriel	1580	12	80	-	-	-	1623
St. Michael	1582	12	-	-	-	-	1623
Lille Fortun	1586	-	-	-	-	-	1605
Blaa Due	1586	18	-	-	-	-	1596
Nattergalen	1587	-	-	-	-	-	1610
Hvide Due	1590	-	-	-	-	-	1608
Graa Falk	1590	-	-	-	-	-	1608
Musen Pinke	1590	-	-	-	-	-	1597
Blaa Løve	1590	-	-	-	-	-	1608
Unge Hjort	1590	-	-	-	-	-	1599
Papegoien	1592	-	-	-	-	-	1599
Hollands Jomfru	1592	-	-	-	-	-	1599
Hanen	1593	-	-	-	-	-	1608
Lybske Vildman	1593	-	-	-	-	-	1620
Gammel Hjort	1593	-	-	-	-	-	1599
Rolands Esping	1593	-	-	-	-	-	1599
Engelske Christoffer	1594	6	-	-	-	-	1596
Hector	1594	14	150	-	-	-	1635
Engelske Jonas	1594	18	-	-	-	-	1623
Gotlandske Grif	1596	6	-	-	-	-	1599
Røde Løve	1596	14	48	-	-	-	1621
Barken	1596	18	-	-	-	-	1637
Svanen	1598	-	-	-	-	-	1599
Halv Maane	1598	-	-	-	-	-	1599
Volgers Esping	1598	-	-	-	-	-	1599
Angelica	1599	-	-	-	-	-	1599
Lilium Pertit	1599	-	-	-	-	-	1599
Neptunus	1599	-	-	-	-	-	1603
Raabukken	1599	-	-	-	-	-	1599
Charitas	1601	-	-	-	-	-	1611
Trost	1602	12	48	-	-	-	1621
Penitens	1603	-	10	-	-	-	1631
St. Peter	1603	-	-	-	-	-	1623
Argo Danica	1603	-	-	-	-	-	1603
(Grønlands) Katten	1605	-	12	-	-	-	1611
Markatten	1605	-	8	-	-	-	1623
Turtleduen	1605	-	-	-	-	-	1619
Angelibrandt	1605	10	16	-	-	-	1610
Ørnen	1606	-	50	-	-	-	1618
Lindormen	1607	-	-	-	-	-	1612
Linden	1607	-	-	-	-	-	1608
Engelske Kittze	1607	2	-	-	-	-	1610
Dynkerker Skib	1607	6	-	-	-	-	1610
Makarel	1607	6	-	-	-	-	1612
Store Katte	1609	4	-	-	-	-	1611
Store Lybske David	1610	-	-	-	-	-	1618
Fransk Skib	1610	-	-	-	-	-	1610
Herringnæs	1610	-	-	-	-	-	1625
Sorte Hund	1610	-	-	-	-	-	1612
Juppiter	1610	-	-	-	-	-	1623

Table 4.4. Small Warships, continued...



<u>Name</u>	<u>Entered Service</u>	<u>Guns</u>	<u>Crew</u>	<u>Lsp</u>	<u>Lr</u>	<u>Breadth</u>	<u>Left Service</u>
Svenske Løve	1610	-	-	-	-	-	1611
Spurven	1610	-	-	-	-	-	1610
Forlorne Søn	1610	-	-	-	-	-	1626
Sorte Rytter	1610	-	-	-	-	-	1610
Tre Kroner	1611	-	-	-	-	-	1611
St. Peter	1611	-	-	-	-	-	1612
Concordia	1611	-	-	-	-	-	1611
Summa Summarum	1611	6	-	-	-	-	1612
Røde Løve	1611	16	-	-	-	-	1611
Jonas	1612	-	-	-	-	-	1612
Elephanten	1618	-	-	-	-	-	1624
Griben	1618	16	80	-	-	-	1646
Nassau	1621	-	60	-	-	-	1631
Store Pram	1621	-	11	-	-	-	1636
Postillionen	1624	16	80	-	33	9	1654
Sælhunden	1626	-	28	-	33	9	1635
Flyvende Fisk	1626	16	60	-	33	9	1657
Gabriel Fløte	1627	-	60	-	-	-	1628
Haren	1627	17	50	-	33	9	1636
Mynden	1627	18	50	-	33	9	1636
Skieltusen	1628	-	-	-	-	-	1636
Bredal Pris	1628	-	-	-	-	-	1631
Elephanten Pris	1628	-	-	-	-	-	1629
Mandhunden	1628	-	-	-	-	-	1631
Danziger Pris	1629	-	-	-	-	-	1629
Gule Løve	1630	-	7	-	-	-	1645
Nordlandske Løve	1630	-	70	-	-	-	1646
Ligreb	1630	-	-	-	-	-	1631
Lille Lykkepot	1630	8	80	-	-	-	1636
Stingsotten	1631	-	-	-	-	-	1632
Store Esping	1633	-	-	-	-	-	1634
Sellsøe Pram	1633	-	-	-	-	-	1634
Fenix	1633	-	-	-	-	-	1635
Christians Ark	1633	12	40	-	-	-	1653
Rosen Bomb	1635	-	-	-	-	-	1636
Snarensvend	1637	16	90	52.25	-	12.5	1653
Første Pram	1641	-	80	-	-	-	1648
Anden Pram	1641	-	90	-	-	-	1648
Lybske Fortuna	1643	-	8	-	-	-	1648
Rebekka	1643	-	12	-	-	-	1648
Paradis Fugle	1643	-	-	-	-	-	1645
Pillekammen	1643	-	-	-	-	-	1644
K Maj Galiot	1644	-	14	-	-	-	1645
Svenske Strudse	1644	-	7	-	-	-	1648
Norske Sophia	1644	-	-	-	-	-	1645
Engelskmanden	1645	-	-	-	-	-	1645
Norske Galiot	1645	-	1	-	-	-	1646
Norske Catrina	1645	-	70	-	-	-	1646
Post Rytteren	1645	-	36	-	-	-	1647
Blaa Due	1645	10	-	-	-	-	1653
Gallenten	1647	-	-	-	-	-	1647
Adleren	1647	4	-	-	-	-	1653
Griben	1647	8	-	-	-	-	1658

Table 4.4. Small Warships (continued)

#### 4.2.4. Galleys & Jagts

Galleys were introduced into the Danish navy in the mid 16th century and were used principally for coastal protection work and for action against pirates. They were stationed in harbours all over the realm, particularly in Norway. Technically most of them were either Mediterranean style galleasses or a form of square-rigged oar/sail hybrid which were built 'after the English mould and fashion'<sup>31</sup>. They had as many as three masts as well as oars, and had a gun deck over the oarsmen with transverse mounted cannon. Typically they were around 40-50 alen (25-31m) long, had 30-50 oars, and were also able to sail in squadron along with other sailing ships<sup>32</sup>. There must also have been a number of more traditional galleys since the only surviving plan of an oared vessel from the period shows a classic Mediterranean style galley section<sup>33</sup>.

As with Mediterranean practice, the galley's oars were manned mainly by prisoners, while the sails were operated by seamen. There was a ready made captive workforce in Copenhagen with the prisoners 'in Bremerholm's iron'<sup>34</sup>, but free men may well have been used for the regionally based galleys.

Towards the end of the *Kejserkrig* most of the regional galleys were called in to Copenhagen, presumably to assist in preventing the threatened sea-borne invasion. However, they were of poor quality and Christian IV stated that they were 'ganske briistfellig' (absolutely dilapidated) and provided 'meere forhindring end lettelse'<sup>35</sup> (more

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31. Thomas North, mariner, to Walsingham, 24 April 1582, *Calendar of State Papers (Foreign)*, 1581-82, 649.

32. Thomas Hauge, 'Galeier i den dansk-norske marine', (*Norsk*) *Tidskrift for Søvæsen*, 89, 1954, 351-8.

33. Rigsarkiv, Sætatens Kort og Tegning Samling, Des. E.3. See also Chapter 11.

34. See chapter 6.

35. Letter to *rigsråd*, 18 August 1629, C.F. Bricka & J.A. Fredericia (eds.), *Kong Christian den Fjerdes egenhændige Breve*, II, 222.



hindrance than help), which no doubt influenced his decision to sell off all the galleys at Bremerholm in 1631 'til hvam der begerer dem' (to whoever desires them)<sup>36</sup>. This was probably just an over-reaction on Christian IV's part, and it can be seen from the fleet list that many of the galleys remained in the navy. The usefulness of galleys as a class was certainly not questioned and many more were constructed after this date.

There was also a smaller class of galleys called *roersiachter* (row-yachts) which were 'bygd paa den Norske maaner'<sup>37</sup> (built in the Norwegian manner). This would suggest that they were clinker built and may, in contrast to the larger galleys, have been derived from the viking ship tradition<sup>38</sup>. They carried around six small cannon and were propelled by 12 oars. Some were also converted by cutting down larger galleys:

den galeii, som Rasmus Samsyng uylle haffue tiil en Roer-siacht at bruge ued holmen, brugis dertiil, naar den bliiffuer leet fortømmerid och giordt saledis, at man derpa kan bruge 4 Regiimendstøcker.<sup>39</sup>

the galley, which Rasmus Samsing will have for a row-yacht for use at Bremerholm can be used there, when its timbers are slightly altered and made such that four regiment pieces can be used upon it.

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36. *Kancelliets Brevbøger*, 16 March 1631.

37. Ship list, 6 December 1635, *egenhændige Breve*, III, 451-2.

38. Claus Daa complained in 1619 that no shipbuilders could be found in Trondheim len who could built carvel ships. (Olav Bergersen, *Fra Henrik Bielke til Iver Huitfeldt*, (Oslo, 1953), I, 32.)

39. Letter to Christian Friis & Klavs Daa, 3 June 1635, *egenhændige Breve*, III, 393.

From 1644 *jagts* were classified together with the oared galleys, although many of these were undoubtedly the small one-masted sailing ships that are more normally associated with the term yacht. However, it is impossible to differentiate which ships were row-yachts and which were sailing yachts and so all *jagts* have been included in the following list. The laxity in terminology further complicates matters as included in the classification were some ships, such as *Dynkerker Bojert* and *Hollands Fregat*, which were clearly neither galleys nor *jagts*.

There was also a still smaller type of oared vessel called a *skærbåd* (skerry-boat) or a *skyttebåd* (cannon-boat). Some were built around 20-24 alen (12.5-15m) long which carried a few small cannon<sup>40</sup>, though many of them were so small that they did not even merit names and were probably little more than armed rowing dinghys. When the fleet sailed in 1643 behind each of the 13 ships was to be towed a 'Roerss bade' (Row boat), each manned with five men<sup>41</sup>. It is likely that these were some kind of *skærbåde*.

Table 4.5. includes only those galleys and *jagts* which have been identified with names. There were actually very many more, and the reason that so few appear between 1600-1625 is probably more to do with the fact that so few dockyard accounts exist for these years than anything else<sup>42</sup>. Contracts exist for the building of galleys in these years but their identification is uncertain. An indication of their number can be gained by the fact that in 1618 21 galleys were ordered to be built in Norway<sup>43</sup>, and in 1624 a total of 38 were said to have been mustered<sup>44</sup>.

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40. Hauge, 'Galeier i den dansk-norske marine', 353.

41. Letter to Corfitz Ulfeldt, 25 January 1643, *egenhændige Breve*, V, 292.

42. Although most regionally based galleys did not appear in the accounts there would undoubtedly have been a number stationed in Copenhagen.

43. Bergersen, *Fra Henrik Bielke til Iver Huitfeldt*, I, 31-2.

44. Hauge, 'Galeier i den dansk-norske marine', 355.



<u>Name</u>	<u>Entered Service</u>	<u>Guns</u>	<u>Crew</u>	<u>Left Service</u>
David Galej	1580	10	-	1599
Salomon Galej	1580	10	-	1622
Jacob Galej	1591	10	-	1599
Dronningens Jagt	1593	-	-	1599
Aarhus Jagt	1593	-	-	1599
Blekinge Galej	1598	-	-	1599
Norske Jagt	1602	-	-	1608
Leopardens Jagt	1607	-	-	1608
St. Mikkel's Jagt	1607	-	-	1608
Little Katte Jagt	1609	4	-	1611
Kolding Skibet	1612	-	14	1628
Lamprenen	1612	-	16	1625
Blaa Orm	1612	-	-	1630
Haabet Galej	1618	-	16	1648
Liden Jagt	1619	-	12	1640
Frederikstad Galej	1620	-	-	1629
Hans Østerlings Jagt	1620	-	-	1620
Dragen	1622	-	-	1632
Sorte Ravn af Bergen	1624	16	80	1634
K Maj Liden Jagt	1626	-	21	1656
Charitas Galej	1627	-	70	1631
Marstrands Plage Galej	1627	-	80	1645
St. Olaf Galej	1627	-	24	1639
Søndervigs Galej	1627	-	24	1631
Vildsvinet	1627	-	30	1634
Blaa Mynde Galej	1627	-	24	1631
Affdesidens Galej	1627	-	26	1628
Røde Løve Galej	1627	-	30	1634
St. Hans Galej	1627	-	30	1635
Smaa Jagt	1627	-	12	1628
St. Per Galej	1627	-	-	1628
Lybske Jagt	1627	-	-	1628
Flyvende Hjort	1627	6	18	1640
Tre Kroner Galej	1627	6	25	1645
Prindsens Jagt	1627	6	4	1644
St. Peter Galej	1627	8	24	1648
Bergens Galej	1628	-	-	1629
St. Johan Galej	1628	-	-	1632
Gunde Langes Jagt	1628	-	6	1648
Nordlandske Galej	1628	-	-	1631
Skien Galej	1628	-	-	1640
Sorte Ravn, Stavanger	1628	-	-	1632
Galej Stjernen	1628	-	-	1631
M Gyldenstjernes Jagt	1628	-	-	1629
Kronet Galej	1628	6	19	1645
Samson Galej	1628	8	34	1645
Rosen Galej	1628	11	34	1645
Ekers Galej	1629	-	-	1629
Trondheim Galej	1629	-	-	1629
Varberg Jagt	1629	-	-	1640
Marbjerg Jagt	1629	-	-	1643
Liden Ny Jagt	1629	-	-	1632

Table 4.5. Galleys and Jagts, continued...

<u>Name</u>	<u>Entered Service</u>	<u>Guns</u>	<u>Crew</u>	<u>Left Service</u>
<i>Roerlands Galej</i>	1629	-	-	1630
<i>Krokodillen Galej</i>	1629	12	21	1634
<i>Tunsberg Galej</i>	1630	-	-	1630
<i>Flensborg Galej</i>	1630	-	-	1631
<i>Flyvende Weder</i>	1630	6	23	1630
<i>Ny Løchsted Jagt</i>	1631	-	-	1634
<i>Jomfru Svenden</i>	1635	6	22	1653
<i>Linden Galej</i>	1635	6	16	1653
<i>Dybendal</i>	1635	9	24	1653
<i>Højenhald</i>	1635	12	28	1658
<i>Ørnen</i>	1635	12	17	1653
<i>Ny Kolding Galej Ørn</i>	1637	-	15	1648
<i>St. Jørgen Jagt</i>	1638	6	10	1658
<i>Flyvende Hjort</i>	1641	14	24	1653
<i>Hollands Galej</i>	1642	-	15	1648
<i>Prindsens Ny Jagt</i>	1642	10	20	1657
<i>Emden</i>	1643	-	-	1644
<i>Spil Jagt</i>	1644	-	7	1660
<i>Prindsens Skærbaad</i>	1644	-	5	1648
<i>Bernt Ornings Jagt</i>	1645	-	7	1648
<i>Prindsens Spil Jagt</i>	1646	-	3	1648
<i>Flyvende Pil</i>	1647	6	-	1653
<i>Solbladet Jagt</i>	1647	12	23	1658
<i>Hannibal Jagt</i>	1648	-	-	1658

**Table 4.5. Galleys and *Jagts* (continued)**

#### **4.2.5. Transport Ships**

To ensure that the transport of the vast amounts of materials and victuals needed to man and maintain the navy could be guaranteed the navy kept a certain number of its own cargo ships. These ships could also be enlisted as troop transporters if the need arose. Their number increased steadily from only around four or five in the early years to more than 20 in the 1630s and 1640s, which gives an indication of the ever growing need for supplies as the size of the navy grew during the reign.

Very few cargo ships were specifically built for the navy and so the types of ship used were diverse, depending on what could be bought or captured. The majority were probably of Dutch or English design, but there were two indigenous Danish cargo ship types. The *skude*, which



grew out of the viking tradition, was a small open-decked clinker-built vessel capable of carrying up to around 40 tons, while the *krejer* was a slightly larger carvel-built vessel carrying up to around 60 tons<sup>45</sup>. Table 4.6. shows the characteristics of the principal cargo ship types to sail in the Danish navy, and Table 4.7. shows the transport ships that have been identified.

<u>Type</u>	<u>Deck</u>	<u>Masts</u>	<u>Rig</u>
<i>Bysse</i>	Full	3	Square
<i>Fløite</i>	Half	3	Square
<i>Krejer</i>	Half	3	Square
<i>Kat</i>	Open	2	Square
<i>Galiot</i>	Open	1-2	Fore & Aft
<i>Bojert</i>	Open	1-2	Fore & Aft
<i>Jagt</i>	Open	1-2	Fore & Aft
<i>Skude</i>	Open	1-2	Square

Table 4.6. Principal Cargo Ship Types in the Danish Navy

Sources: Ole Mortensøn, *Renæssancens Fartøjer: sejlads og søfart i Danmark 1550-1650*, (Rudkøbing, 1995);  
 Jørgen H. Barfod, *Danmark-norges handelsflåde 1650-1700*, (Kronborg, 1967), 90-117.

<u>Name</u>	<u>Entered Service</u>	<u>Crew</u>	<u>Left Service</u>
<i>Hvide Rose</i>	1572	-	1599
<i>Den Lille Engel</i>	1591	-	1610
<i>Hvide Falk</i>	1592	-	1623
<i>Hinden</i>	1593	-	1611
<i>Uglen</i>	1593	-	1599
<i>Hojeren</i>	1593	-	1599
<i>Karudsen</i>	1595	-	1599
<i>Brandt Jagt</i>	1598	-	1599
<i>Charitas</i>	1599	-	1606
<i>Grindfisker</i>	1607	-	1608
<i>Løllandske Baad</i>	1607	-	1611
<i>Løllands Skude</i>	1607	-	1611
<i>Rødby Skude</i>	1607	-	1611
<i>Saxkjøbing Skude</i>	1607	-	1631
<i>Løllands Bunde</i>	1607	-	1608
<i>Høllands Bysse</i>	1610	11	1648
<i>Lybske Fortuna</i>	1611	-	1611

Table 4.7. Transport Ships, continued...

45. Ole Mortensøn, *Renæssancens Fartøjer: sejlads og søfart i Danmark 1550-1650*, (Rudkøbing, 1995), 95-110.

<u>Name</u>	<u>Entered Service</u>	<u>Crew</u>	<u>Left Service</u>
Helig Trefoldigheden	1611	-	1611
Forgylte Hane	1611	-	1623
Hollands Turtleduen	1611	-	1611
Wismar Skude	1611	-	1611
Nordlands Bysse	1611	-	1611
Grøn Fisk	1611	-	1611
Lille Bysse	1611	-	1611
Jægeren	1611	-	1639
Lybske Krejer	1611	-	1623
Paafuglen	1611	-	1611
Haabet	1611	-	1611
Krabben	1612	-	1620
Samson	1618	14	1624
Norske Bojert	1618	-	1632
Engel Gabriel	1618	-	1623
Gammel Haderslev Skude	1618	-	1627
Ny Haderslev Skude	1618	12	1650
Forbrudte Hollander	1618	-	1618
Ploven	1618	-	1618
Ribe Pris	1618	-	1623
Alexander	1618	-	1618
Hollands Fløjte	1619	-	1628
Præsten	1619	-	1619
Hollands Jæger	1620	-	1623
Køge Krejer	1620	-	1622
Lybske Skude	1620	5	1628
Skotske Pris	1620	-	1623
Stavanger Pris Bojert	1620	7	1648
Ystad Skibet	1620	15	1631
Harling Pris	1621	-	1622
Korsør Skude	1621	8	1631
Perlen	1621	-	1626
Hvide Bjørn	1622	-	1623
Heringer Bysse	1622	-	1623
Hvide Lamb	1622	-	1624
Enhjorning Skude	1626	10	1631
Bentis Liden Ny Skib	1626	-	1627
Hvide Svan Skude	1627	6	1631
Ekelfjord Skude	1627	6	1628
Halmsted Skude	1627	30	1628
Rostocker Pris Skude	1627	10	1629
Lille Svan Pris	1627	7	1628
K Maj Bojert	1627	10	1628
Jægeren Skude	1627	8	1628
Oldborrig Skude	1627	6	1628
K Maj Rostock Pris	1627	8	1628
Den Lille Buck	1628	-	1629
Hulemmer Skib	1628	-	1629
Jernbucker	1628	-	1629
Fortuna Bojert	1628	12	1648
Steen Skude	1628	-	1629
Blaa Due	1628	-	1629
Ny Kolberg Pris	1628	-	1629

Table 4.7. Transport Ships, continued...



<u>Name</u>	<u>Entered Service</u>	<u>Crew</u>	<u>Left Service</u>
Oranjeboom	1629	-	1630
Peder Brons Smakke	1629	-	1630
Daniel Troies Bojert	1629	-	1630
Forgylte Løve Bojert	1629	-	1639
Hollands Pris Bojert	1629	9	1648
Peder Boringholms Krejer	1629	-	1631
Jørgen Switzens Krejer	1630	-	1631
Fladlusen	1630	40	1648
Røde Løve Pris	1630	-	1631
Lille Ny Bojert	1630	-	1631
St. Maria Bojert	1630	-	1638
Hamburger Fortuna	1631	12	1648
Hamburger Pris Bojert	1631	-	1635
Krigsmanden	1631	-	1635
Skænd Bojert	1632	-	1634
Blod Hunden	1632	-	1634
Hollands Pris Krejer	1632	-	1647
Graa Hest	1632	-	1640
St. Peder	1633	-	1639
Samsings Pris	1633	-	1636
Samson Pris	1634	-	1635
Følgesvenden	1634	-	1639
Stumpet Dorette	1635	38	1657
Hollands Pris	1635	-	1639
Haabet Pris	1635	-	1646
Hollands Pris Skude	1635	-	1648
St. Jørgen Pris Skude	1635	-	1639
Hamborg Christoffer	1638	-	1640
Robert	1638	-	1639
Solen	1638	-	1639
St. Maria Bojert	1639	11	1657
Vildkatten	1639	-	1641
Alexander	1639	-	1640
Dynkerker Bojert	1642	20	1658
Hvide Løve	1642	14	1675
Makarel	1642	9	1644
Nyborg Skude	1642	-	1645
Laurids Christensens Skib	1642	-	1643
Nattergalen	1642	9	1644
Dugbaaden	1642	7	1645
Falken	1642	7	1645
Svensk Pris Bojert	1643	8	1648
Galioten Den Sorte Hund	1644	12	1674
Norske Hophill	1644	-	1645
Svensk Fortun Pris	1644	8	1645
Kieler Fjord	1644	-	1645
Amager	1645	23	1646
Svensk Skude St. Jacob	1645	10	1652
Norske St. Anna	1645	40	1646
Haabet Bojert	1646	9	1664
St. Michael	1646	-	1648
Jokum Becks Jagt	1647	-	1648
Fransk Skib	1647	-	1647

Table 4.7. Transport Ships, (continued)

### 4.3. A Short Note on Ships' Names

The names of Danish warships give an interesting insight into how Christian IV regarded the role of his navy: many of the names were apparently chosen to reflect aspects of royal prestige, power and piety.

The navy's role in protecting Christian IV's northern empire is reflected in the large number of names associated with heraldic representations of various parts of the empire. Denmark is represented by *2 Løver* (2 Lions) and *3 Løver* (3 Lions); Iceland by *Kronet Fisk* (the Crowned Fish) and *Falken* (the Falcon); Greenland by *Hvide Bjorn* (White Bear); the Faroes by *Lammet* (the Lamb) and *Flyvende Vædder* (Flying Ram); Holstein by *Nelledladet* (the Nettle Leaf); the Ditmarshes by *Sorte Rytter* (Black Knight); Stormarn by *Svanen* (the Swan); Øsel by *Ørnen* (the Eagle); Bornholm by *Dragen* (the Dragon); and the Wendish lands by *Lindormen* (the Wyvern). The *Tre kroner* (Three Crowns) was also the symbol of the Kalmar union of the three Scandinavian kingdoms which Christian IV hoped to re-create<sup>46</sup>.

Greek and Roman gods and warriors such as *Neptune*, *Hercules* and *Hector* were used to reinforce the image of Christian IV as a powerful monarch in the classical tradition, but figures from Nordic mythology are strangely absent<sup>47</sup>.

Religious names also appear perhaps less frequently than might be expected from a monarch who set himself up as the leader of the Evangelical League, but the *Trefoldighed* (Trinity), *Penitens*, *Gabriel*, and various other angels, saints, and figures from the bible helped to project an image of piety.

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46. R. Steen Steensen, 'Det danske Rigsvaaben og Flaadens gamle Skibsnavne', *Tidsskrift for Søvæsen*, (1949), 169-86.

47. Scenes from Nordic mythology formed an important part of the festivities at the large royal double wedding in 1634 and featured in the decoration of Kronborg Castle after it was rebuilt in the 1630s. H.D. Schepelen and Ulla Houkjær, *The Kronborg Series: King Christian IV and his Pictures of Early Danish History*, (København, 1988).



Animal names, apart from those associated with Denmark's empire, were also very popular. The mythical *Pelican*, which pecked its breast to feed its young, was used frequently as a symbol of Christian IV's sacrifices to his people, and appeared regularly as a ship name.

Other less symbolic animals were either sea creatures such as *Hummeren* (the Lobster), *Krabben* (the Crab) or *Havhesten* (the Seahorse), or else they were animals which were powerful, fast or skilful. In this category come *Hanen* (the Cock), *Leoparden* (the Leopard), *Mynden* (the Greyhound), and the *Røde Ræv* (Red Fox). There were also some surprising names for warships such as *Paradis Fugl* (Bird of Paradise), *Spurven* (the Sparrow) and *Hvide Due* (White Dove).

Names of those in the royal court also appear on Christian IV's warships. *Store Sophia* was named in honour of his mother, *Hannibal* after his son-in-law Hannibal Sehested, and *Trost* after his favourite dog. Not all the names were complimentary, though, as *Stumpet Dorette* was named after Kirsten Munk's daughter by another man, Dorothea Elisabeth, whom Christian IV referred to as 'Din stumpede Dorothea' (your squat Dorothea)<sup>48</sup>.

Ships sometimes also had their names changed as the following entry in Christian IV's diary for 29 April 1617<sup>49</sup> shows:

Om natten ymellom Mandag och tysday uar ted saadan En storm, att mange aff Skiiben dreff paa grunden, och Ett Skib ved Naff Charitas faldt om paa syden. Epther den samme dag bleff samme skiib kallit Patentia.

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48. P. Holck, 'Gamle Skibsnavne', *Tidsskrift for Søværnen*, (1941), 378-80.

49. C.F. Bricka (ed.), 'Kong Christian IV's kalenderoptegnelser fra Aarene 1617, 1629 og 1639', *Danske Samlinger*, V (1869-70), 49-88.

During the night between Monday and Tuesday there was such a storm that many of the ships were driven aground, and one ship by the name of *Charitas* fell on its side. Since that day the ship has been called *Patentia*.

In a similar vein, a ship that was saved after being sunk during building was called *Forloren Søn* (the Prodigal Son).

Perhaps the most touching name, though, was the *Svende forglemmer Jomfruen aldrig* (Swain who never forgets his maiden)<sup>50</sup> which, not surprisingly, was usually shortened to just *Jomfru Svenden*.

#### 4.4. The Danish Navy in a European Context

The Danish navy in the early modern period differed from the rest of Europe in one major respect, arising from the unique circumstances surrounding the possession of the Sound. With so many ships passing through Danish waters there was little reason for a strong domestic merchant fleet to be established since merchants could import or export goods so easily in Dutch, English or Hanse ships. The Danish state was therefore unable to utilise armed merchant ships as an auxiliary naval force in the same way that other nations could. As a consequence the Danish state navy was far more powerful than it would otherwise have been, and the comparison with other nations must take this situation into account.

The country whose naval needs most resembled Denmark's was Spain. Their roles were broadly similar in that the Mediterranean was Spain's Baltic and the Atlantic her Northern seas. The main difference was one of scale, reflecting the much larger area of sea that was control-

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50. Rigsarkiv, Marinearkivet for 1655, 24. Materialskriver Regnskaber 1635/36.

Without context the translation is a bit tricky and it may mean 'the maiden who never forgets her swain', although the shortened version of the name would tend to suggest the former translation.



led and the fact that Spain was on a war footing for virtually the whole period. The term Spanish Navy, however, is a misnomer at this time since the various different fleets such as the Atlantic armada, the Flanders armada, and the Mediterranean galley fleet all existed as separate entities and each operated within a different administrative set-up. The contracting out system was also embraced to varying degrees within each fleet at different times, so any attempt to calculate the total number of ships which made up the permanent Spanish state navy would be virtually impossible. As a rough estimate, the Atlantic armada fluctuated around the 20-30 ship mark, and the galley fleet around 60-70. Combined with the numerous other fleets the total number of ships sailing under the Spanish flag was well in excess of a hundred, although the number actually owned by the state could on occasion number no more than a handful<sup>51</sup>.

Likewise the provincial nature of the Dutch fleet makes any attempt to enumerate a Dutch state navy impossible before around 1650, and in any case their heavy reliance on armed merchantmen would mean that any figures would greatly underestimate the Dutch naval strength.

Therefore any meaningful quantitative comparison of the Danish navy can only realistically be made with England, Sweden, and from the 1620s, France. Figure 4.2. shows the relative sizes of these navies. The data has been taken from Glete<sup>52</sup>, so the figures for Sweden can be taken as near perfect as possible; the English and French navies have also been the subject of exhaustive research<sup>53</sup> and their figures are likewise

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51. I.A.A. Thompson, *War and Government in Habsburg Spain 1560-1620*, (London, 1976).

52. Jan Glete, *Navies and Nations: Warships, Navies and State Building in Europe and America, 1500-1860*, (Stockholm, 1993), Appendix 2.

53. Glete cites numerous sources but the main ones for this period are: R.C. Anderson, *List of English Men-of-War, 1509-1649*, (London, 1959); and Jacques Vichot (ed.), *Répertoire des Navires de Guerre Français*, (Paris, 1967).

very accurate. In the case of Denmark Glete's figures were based mainly on Lind's fleet list which, as demonstrated above, is far from perfect or complete<sup>54</sup>. The current research has therefore been used in the graph for a more accurate assessment.

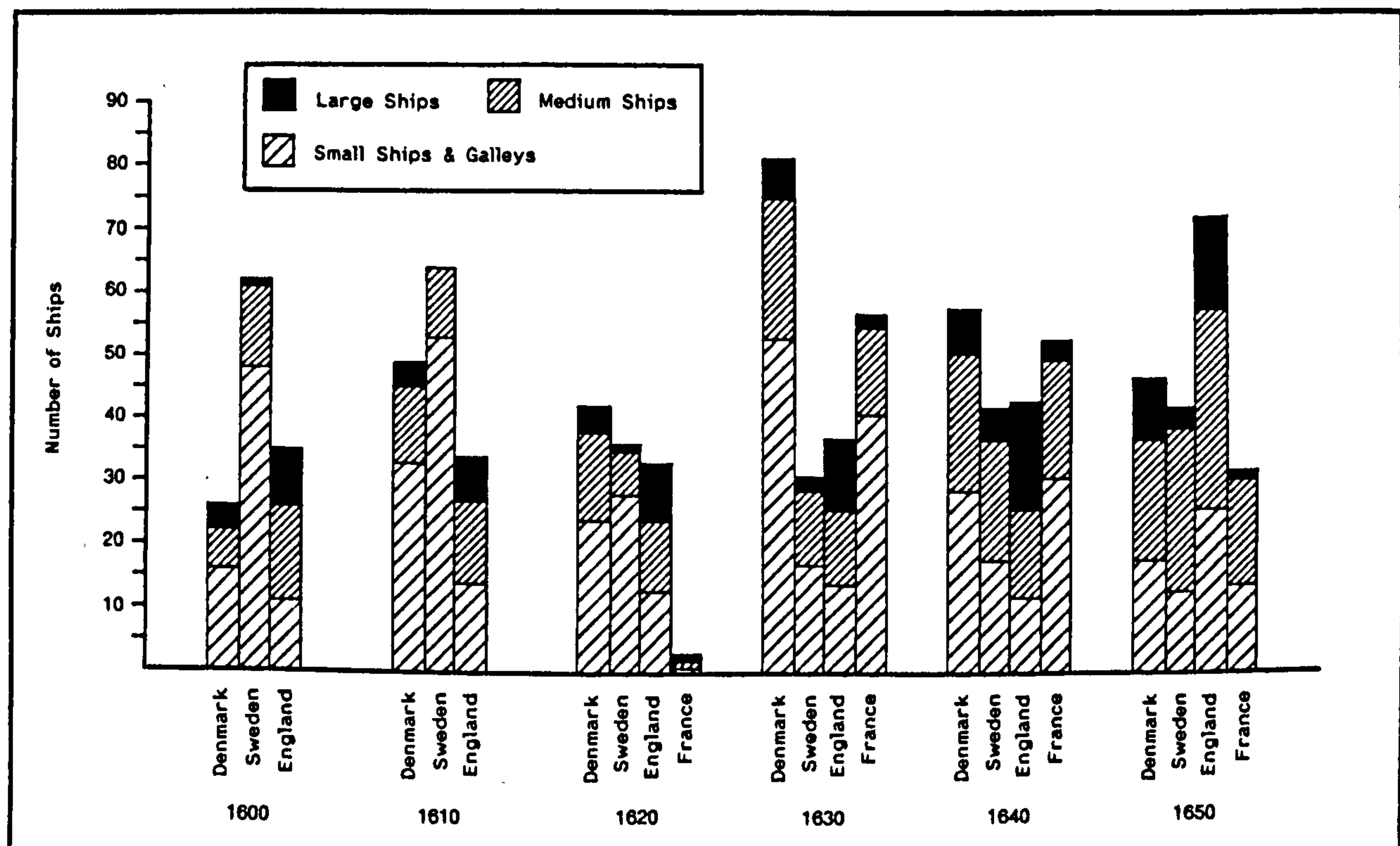


Figure 4.2. Comparative Strength of European Navies

There are certain flaws in this approach since there is the danger of not comparing like with like. Glete excluded all vessels with a displacement lower than 100 tonnes, but since data on the smaller Danish vessels is so scant it has not been possible to make this distinction accurately. Some of the more obviously small vessels have been edited out but the figures probably still represent a certain overestimate on this count. However, since the methodology of assessing the number of ships produces a slight underestimate the two errors will cancel each other out

54. Barfod has already shown that Glete's Danish figures from an earlier period are underestimated. Jørgen H. Barfod, 'Den danske orlogsflåde før 1560', *Historisk Tidsskrift*, (1994), 261-70.



to some extent. Since Glete also uses displacement as the means of classification rather than number of cannon, the boundaries between classes of ships must be taken as a rough guide only. This approach though is felt justified as Glete has consistently underestimated the strength of the Danish navy, most notably with respect to the galleys, which he has disregarded almost completely for the entire period, when as we have seen there was a substantial increase in these vessels from the 1620s on.

By taking this approach though, we are denied using Glete's greatest achievement, that of using displacement as the basis of comparison between fleets. Not knowing which Danish ships he has already counted, or the precise coefficients used to calculate their displacement, and not having accurate data for so many of the new ships now identified it is totally impractical to even attempt to update his displacement figures. Danish ships are therefore classified simply by their cannon carrying capacity.

The immediate surprise from the graph is the relative strengths of the Danish and Swedish navies up to 1610. The large Swedish navy in 1600 was a result of the Russian campaigns and the civil war, where both sides had a considerable fleet, and this naval strength was maintained over succeeding years. Judging by these figures Danish naval superiority in the Kalmar War was not therefore a foregone conclusion, but the significant factor was that the majority of Swedish ships were small inshore craft while Denmark, in contrast, had a greater number of larger ships<sup>55</sup>.

England's proportion of large ships was always the greatest, reflecting the English defence strategy of meeting the enemy in force on the high seas. Although some small vessels were maintained, the strong reliance placed on privateers meant that there was little need to keep any significant force of small ships or galleys. The French navy which

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55. Roberts states that the majority of the Swedish fleet was also in a poor state of repair. Michael Roberts, *Gustavus Adolphus: A History of Sweden 1611-1632*, II, (London, 1958), 285-6.

burst onto the scene in the 1620s in contrast was at first based mainly on these small ships, with just a few larger ships, although their number increased rapidly in the 1630s.

No navy had a stable size. This represents the powerful opposing influences of war and finance on state navies. Wars obviously brought about an increase in the number of ships, but financial strictures ensured that in times of peace the number was reduced again, and so there is an inevitable fluctuation in relative naval strengths between countries as they drift in to and out of war.

In terms of numbers of ships Denmark had the largest state-owned navy in Europe from the 1620s through to the 1640s, but was probably not as large as England's in terms of tonnage or firepower. The high figures for 1630 represent the aftermath of the Kejserkrig, and although the number of ships did steadily reduce, for Denmark to retain such a strong naval force through a period of nominal peace in the 1630s is exceptional compared to other countries. Therefore, even though the concept of a massive naval expansion in this decade has been shown to have been inaccurate, it is still nevertheless remarkable that such a strong fleet was maintained and renewed.

The reasons why the Danish state navy was maintained at such a high level throughout the period were a direct consequence of the possession of the Sound. Danish policies here were largely at variance with the wishes of all other maritime nations and had the combined effect that the threat of a direct foreign attack was made a distinct possibility, and at the same time the chance of an alliance with any of these powers was made virtually impossible. If Denmark were to become involved in any maritime engagement then she would have to be able to meet that threat entirely with her own forces.



In conclusion then Denmark can be seen to have had a consistently large state-owned navy throughout the entire period with a relatively high proportion of large sized vessels. Sweden's navy on the other hand went through a significant transformation after the accession of Gustav Adolf, when the large number of coastal ships were replaced by a smaller number of larger ships. Sweden's naval strength apparently approached, though apparently never quite equalled Denmark's strength<sup>56</sup>. The French navy grew from nothing into a major player in the space of just a few years. The figures are clouded a little by the fact that two separate navies were established on the Atlantic and the Mediterranean, but the Atlantic fleet included a fairly high proportion of medium and large sized ships<sup>57</sup>. Although on paper France had for a time more ships than England, the situation was a little more complicated than that and in many ways Richelieu's fleet represented a false dawn for the French navy and it was already on the decline by the 1640s. England, with her much larger ships, must therefore be regarded as the most powerful of the state-owned navies in northern Europe. This is borne out by Glete's data on total displacements which consistently places England as the largest navy, beaten only by Sweden in 1605 when the English navy was in the doldrums after the accession of James I/VI. In relative terms though the English navy's influence steadily waned before the civil war, while French naval strength came to almost equal England's. The two Baltic navies were maintained at a slightly lower level than these powers essentially because geography provided an effective barrier from outside intervention, and their main threats therefore came chiefly from each other.

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56. Glete actually puts the Swedish navy ahead of Denmark's, but given the errors inherent in calculating these figures it should probably be said that both the Baltic navies were more or less equal in strength. Certainly neither had a significant numerical superiority over the other.

57. E.H. Jenkins, *A History of the French Navy*, (London, 1973), 15-31.

If we look wider, though, at state-controlled navies then the situation is slightly different and the question of armed merchantmen becomes of major importance. The general trend of the 17th century was for navies to become ever more centralised, with less reliance placed on privately owned forces, but this was a slow process before the 1650s, and in the first half of the century merchant ships still made up a large proportion of a fighting navy's strength.

Before the *defensionskibe* programme came into force in the 1630s this simply was not a real option for Denmark, and even afterwards the available number of large privately-owned ships remained negligible. Although around 30 *defensionskibe* and other merchant ships were mobilised by Denmark in the *Torstenssonkrig* they were mainly involved in convoy duty and coastal defence, with only a handful actually involved in the naval battles. Thus the number of ships in the Danish navy gives a fairly accurate representation of true naval strength. The same must also be said of Sweden, who likewise had a very small merchant marine. This was in stark contrast to England and the Netherlands who could call upon significant numbers of armed merchantmen to bolster the ranks of the official navy. This is demonstrated by the first Anglo-Dutch War (1652-54) when the proportion of state-owned fighting ships in the two fleets was roughly only about two thirds for the English and just one third for the Dutch<sup>58</sup>.

The situation with Spain was slightly different due to the contracting out system employed, where contracts were placed with entrepreneurs to build, victual and man warships for the state. These were neither armed merchantmen nor state-owned ships but privately owned warships serving under contract to the state. The strength of the Spanish merchant service also ensured that considerable numbers of armed mer-

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58. *The First Anglo Dutch War*, Vols. 1-6, (Navy Records Society, Vols. XII, XVII, XXX, XXXVII, XLI, LXVI, London, 1899-1930).



chantmen were also available in times of conflict, although reliance on them can be seen to have diminished significantly between the armadas of 1588 and 1639<sup>59</sup>.

Thus, although precise figures are unknown, the navies sailing under the flags of Spain and the Netherlands, each with more than a hundred ships readily available, outweighed all others and must be regarded as the largest naval forces of the period. After their defeat of the Spanish armada in the Battle of the Downs in 1639 the Dutch navy became the single largest force. However, this still leaves Christian IV's navy as one of the leading forces on the early modern sea-ways, with a significant role to play in the balance of northern European naval power.

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59. Glete, *Navies and Nations*, 152.

## 5. The Development of the Naval Dockyards

In parallel with the growth of Denmark's naval strength Christian IV recognised the need to have an adequate infrastructure which could build and maintain his ships. As his navy grew he made sure that shore facilities were also developed which could cope with the ever increasing workload of many more, larger and more complex ships than had hitherto been known in Denmark. Copenhagen was naturally the main base for the navy, but significant developments were also made near Nakskov to exploit local resources, and at Glückstadt to service the permanent squadron on the Elbe. There were also a number of much smaller bases dotted around the country which kept a number of vessels for coastal defence.

A naval dockyard is defined as a permanent base where naval ships could be built, repaired and stationed all year round. This excludes the small temporary shipyards which sprang up all over the realm to exploit specific areas of woodland, and all the numerous seasonal operational bases, stretching from Øsel and Bornholm in the Baltic up to the north of Norway, where there were little if any shore facilities.

### 5.1. Copenhagen

#### 5.1.1. The Development of a Fortified Port City

Ever since Erik of Pomerania created the foundations of the Danish national fleet in the early 15th century<sup>1</sup> Copenhagen had been an important naval base. In its early form the navy was essentially a royal possession, and it was natural for it to be based at the centre of royal power, and at the heart of the then Danish realm. Its location made it equally easy

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1. Jørgen H. Barfod, *Flådens fødsel*, (København, 1990), 21-33.



for ships to reach the Baltic and the North Sea, and it was ideally placed for policing the Sound. The geography of Copenhagen and Amager also created a natural harbour which could be easily defended, and its latitude ensured that, compared to Swedish ports, it remained relatively ice free for much of the year.

King Hans was apparently the first to create a naval shipbuilding yard in Copenhagen, in the early 16th century, but this could only have been an area of rough ground which was set aside for the purpose, and certainly had no great infrastructure associated with it<sup>2</sup>. It was not until the 16th century that any attempt was made to create what could be termed a proper naval dockyard. Christian III more than ever built his navy's ships in Copenhagen<sup>3</sup> and built a small arsenal and a few other small buildings associated with the navy, but it was Frederik II who really began the process of creating a formal naval dockyard on the former island of Bremerholm.

The term *Holmen* had been in use since 1460 but it was most likely Slotsholmen which was being referred to, where ships were built at the back of Copenhagen Castle<sup>4</sup>. Bremerholm was also used to some extent in the 16th century, but the only physical structures that were present appear to have been a small smithy where the workers tools were fabricated and repaired, and possibly a few other small buildings<sup>5</sup>. Off the coast of Bremerholm, in the area known as Krabbøløkke, an anchorage had also been created where ships could be laid up over the winter, or when not in service<sup>6</sup>.

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2. Barfod, *Flådens fødsel*, 122-5.

3. Sven Cedergreen Bech, *Danmarks historie*, (København, 1963), 6, 265-6.

4. Barfod, *Flådens fødsel*, 42-3.

5. H.D. Lind, *Fra Kong Frederik den andens tid: Bidrag til den dansk-norske sømagts historie 1559-1588*, (København, 1902), 185.

6. H.D. Lind, 'Om Kong Christian den Fjerdes Orlogsflaade, I. Flaadens leie', *Tidskrift for Søvæsen*, (1890), 321-2.

When Frederik II first took office he immediately demonstrated his strong interests in maritime commerce and naval warfare. One of the first things accomplished after he assumed the throne in 1559 was to mark all the harbours of the realm with lights and buoys, and publish a chart which marked all the areas to which he claimed sovereignty. He also established the *Søret* which created for the first time a maritime law for Danish waters.

At the same time he began to establish the physical structures which would create a formal dockyard at Bremerholm. He first constructed a building in 1560 for naval stores and for the accommodation of shipcarpenters. A new forge was built in 1563, and there then followed a ropewalk, a sail-making workshop, kitchens, and a defensive blockhouse<sup>7</sup>. The boundaries of Bremerholm were also defined and gates were erected to restrict access. Outside of Bremerholm he created a victualling store and powder mills. There was also an area set aside known as the Admiralgaard, where the *rigsadmiral* had his residence, but also, more importantly, acted as a small farm for the supply of fresh produce to the navy's personnel. Although these developments were all fairly small scale they were a major improvement on anything which had previously existed, and laid the foundations of the future developments which Christian IV was to institute.

Figure 5.1. shows Copenhagen and the naval infrastructure inherited by Christian IV in 1596. This is largely based on a hand-drawn map from the 1590s<sup>8</sup> and a 19th century estimation<sup>9</sup>, but due to the lack of accurate source material much of this plan is conjectural.

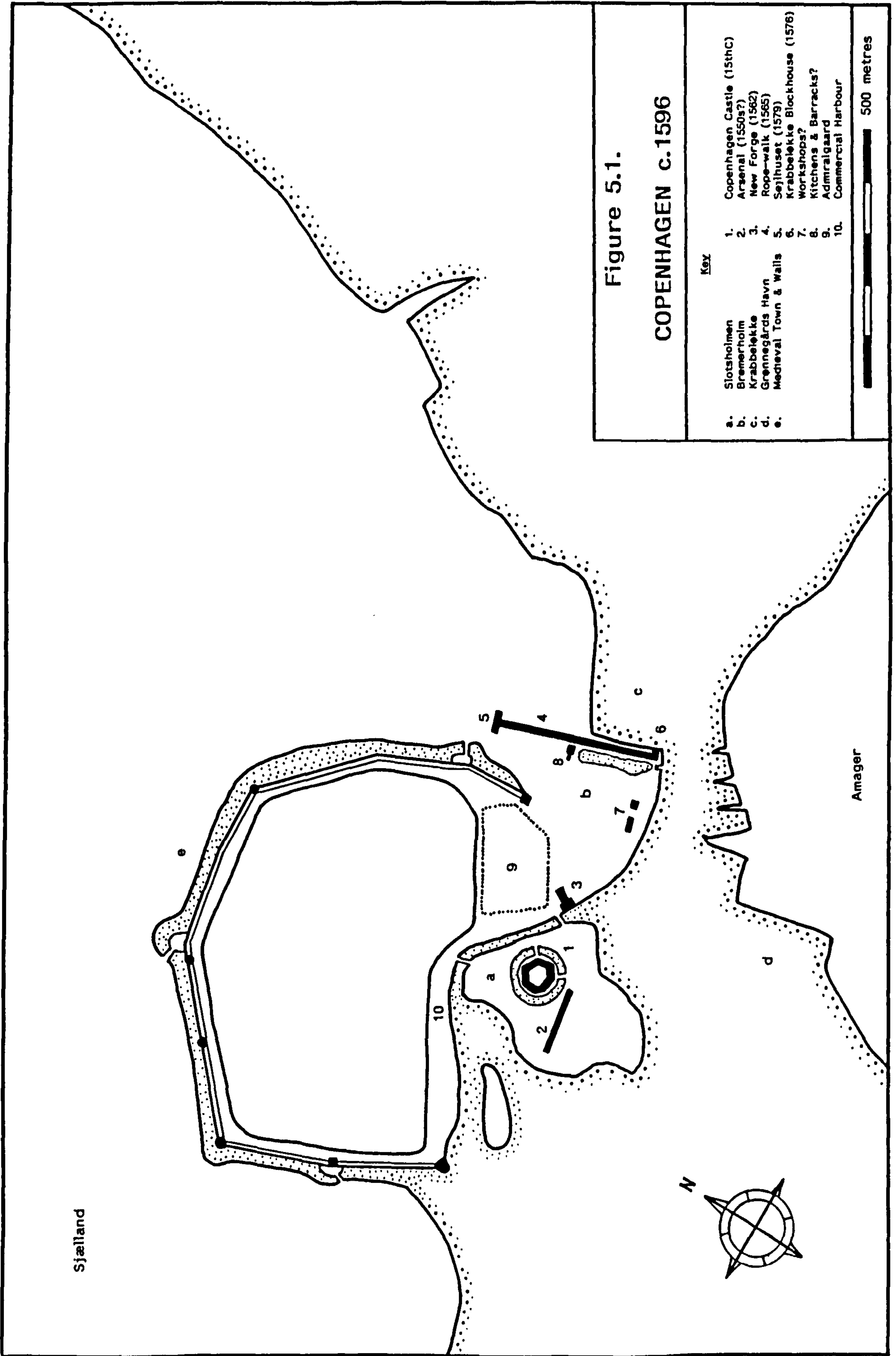
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7. Jørgen H. Barfod, *Christian 3.s flåde*, (København, 1995), 265.

8. Vilhelm Lorenzen, *Haandtegnede kort over København 1600-1660*, (København, 1930), plan I.

9. G.F. Lassen, *Documenter og Actstykker til Kjøbenhavns Befæstnings historie*, (København, 1855), Plan V.





Almost immediately after Christian IV assumed power he set about redeveloping the town and harbour of Copenhagen. His first major project was an impressive new fortified harbour on Slotsholmen. This incorporated a massive new arsenal, known as the *Tøjhus*, measuring 163 metres long by 23 metres wide<sup>10</sup>, a *provianthus* (victualling store) laying parallel to it of the same length but slightly narrower, and a *svovlhus* (powder store) to one side. The layout created a virtually sealed harbour where ships could take on ordnance and victuals in safety, and also with a certain degree of secrecy. The buildings were begun in 1598 and completed around 1606. The harbour itself was begun in 1603 but not finally completed until 1614. It was excavated to a depth of 14 feet and allowed access to vessels of up to 1000 tons<sup>11</sup>. Inside the harbour complex there were bays set aside for boat-building, but it is not known to what extent these were ever used. The architect of the harbour development is unknown but it is considered more than likely that Christian IV himself had a hand in its design<sup>12</sup>. Shortly after it was built, in 1608, he had a fanciful statue erected outside its entrance in the form of Leda and the Swan sitting on a tall pillar, which acted as a sea mark.

In parallel with this development he set about replacing the existing town walls, which had changed little since medieval times. The work was begun in 1606 to a design which was heavily influenced by Dutch models. By 1608 the new harbour complex was also provided with a defensive wall along its western flank.

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10. Joakim Skovgaard, *A King's Architecture, Christian IV and his buildings*, (London, 1973), 39.

11. Lind, 'Christian den Fjerdes Orlogsflaade', 317.

12. Skovgaard, *A King's Architecture*, 39.



New accommodation was provided in 1614 for the naval personnel, on what had previously been the Admiralgaard. These houses became known as the *Skipperboder*, although it was far from only skippers who lived there<sup>13</sup>. This provided the men with good housing, but also enabled their superiors to keep a watchful eye on them. This is borne out by the fact that the district came under the direct jurisdiction of the naval, rather than the civic authorities, and strict naval discipline was expected to be kept there. At the same time a new and much larger Admiralgaard was laid out to the north of Bremerholm.

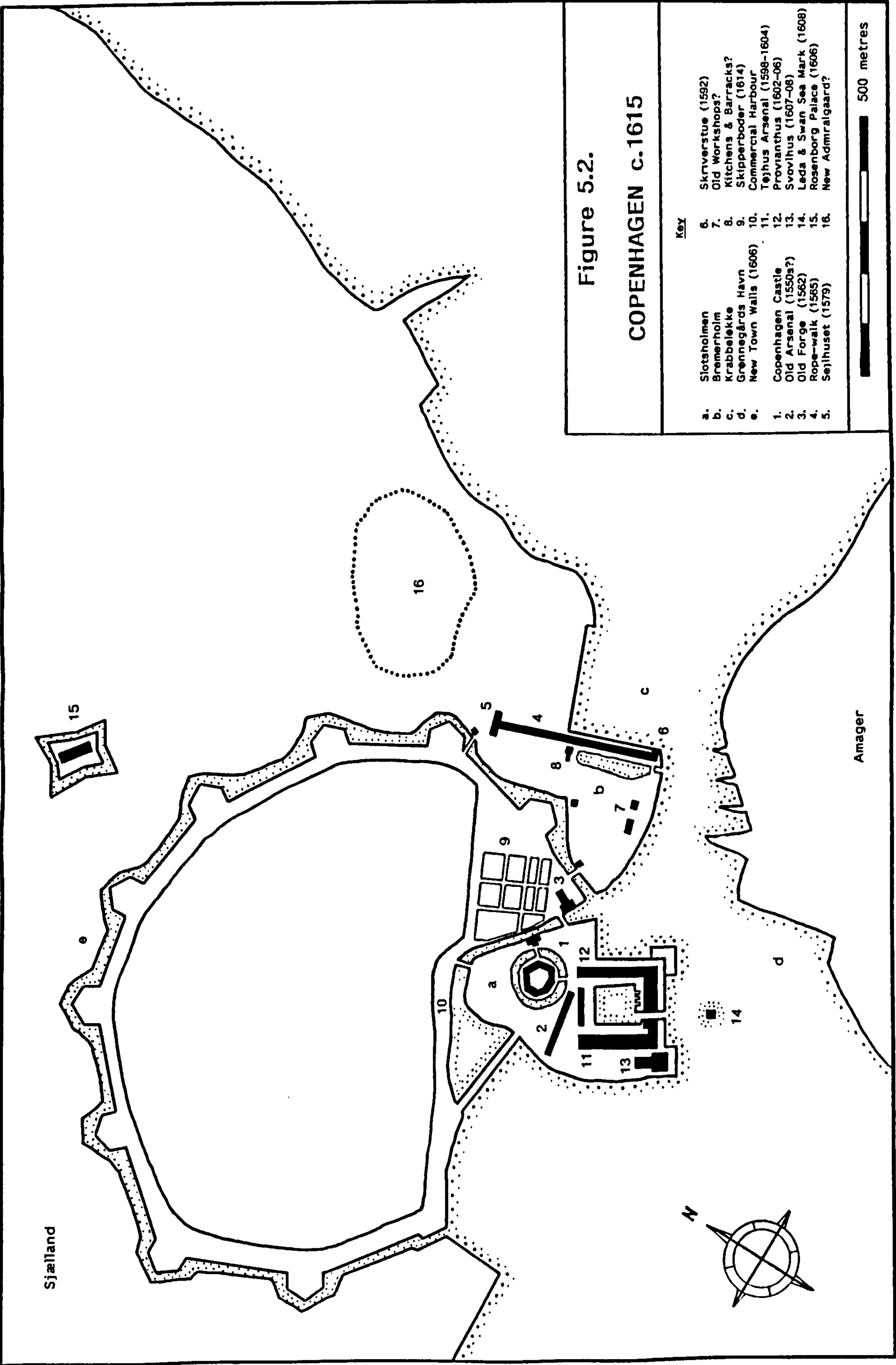
Figure 5.2. shows the first stage of Christian IV's redevelopment of Copenhagen and its dockyard, around 1615. Much of the information for this plan has been taken from Jan van Wijck's prospect of 1611 (Figure 5.3.), Rombout van den Hoeyen's prospect from a slightly later date (Figure 5.4.), and from an anonymous oil painting<sup>14</sup>, as well as by extrapolation back from later maps<sup>15</sup>.

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13. A register from 1620 shows that a total of 120 were given housing here, divided among 1 captain, 36 skippers, 13 *Styrmænd*, 28 *højbaadsmænd*, 34 *bådsmand*, 4 widows and 4 other miscellaneous naval personnel. Rigsarkiv, Danske Kancelli, B164, IX, 06, læg 26.

14. Steffen Heiberg, *Christian 4, Monarken, mennesket og myten*, (København, 1988), 170.

15. See later.





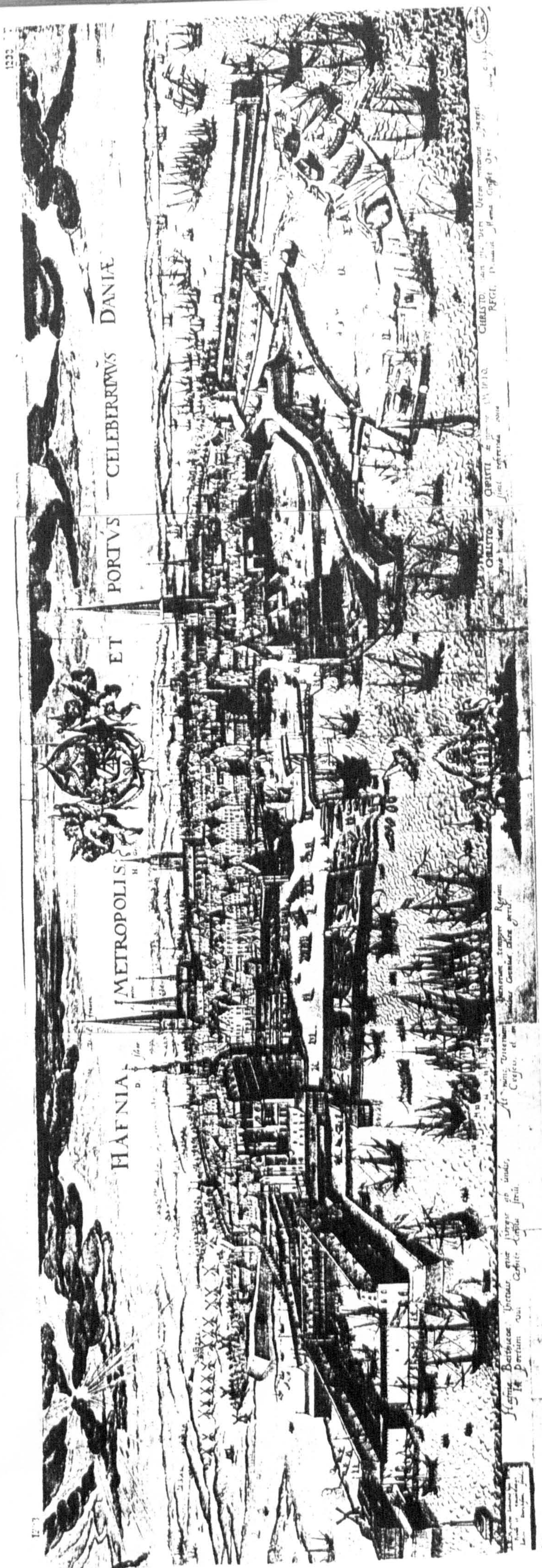


Figure 5.3. Jan van Wijck's prospect of Copenhagen, 1611.



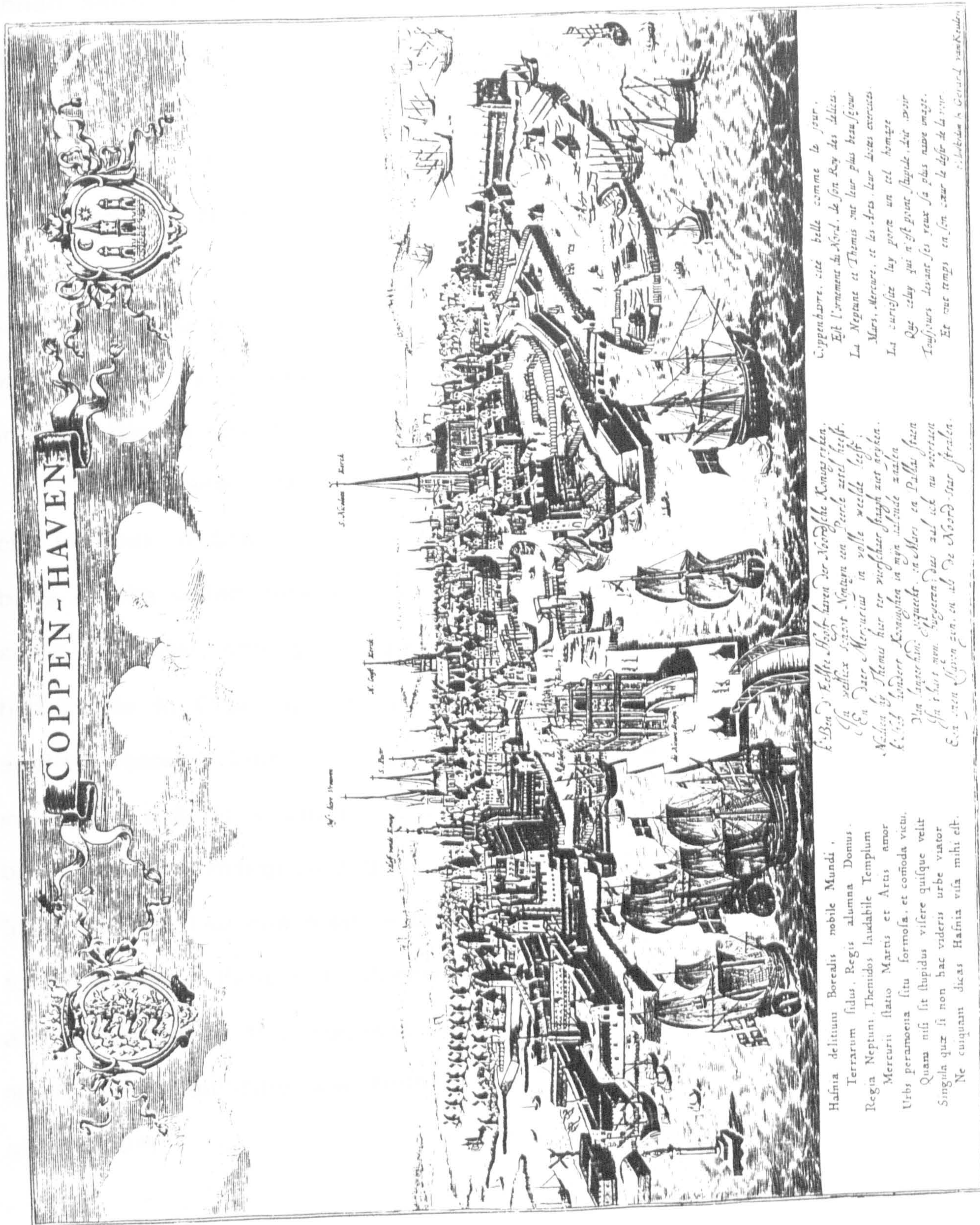


Figure 5.4. Rombout van den Hoeyen's prospect of Copenhagen, c.1615.



The next phase in the development of Copenhagen was the construction of the fortified town of Christianshavn on reclaimed land on the island of Amager. It may have originally been intended as a fully manned garrison town<sup>16</sup>, and indeed the first plan drawn up by the Dutchman Johan Semp was similar to that for an ideal military camp<sup>17</sup>. However these plans were quickly modified and a contract was placed with Semp in December 1617 to create a high class merchant town, which was to be completed within two years. Christianshavn was to be an autonomous town, separate from Copenhagen, with its own rights and privileges, and with its own civic administration. It proved a highly popular area for the well to do dignitaries and state officials in Copenhagen and became in effect a wealthy suburb. To link Christianshavn to Copenhagen a bridge incorporating a customs house was built.

At the same time Christian IV also set about improving the commercial harbour of Copenhagen. The existing harbour facilities, on the north bank of the water between Slotsholmen and the town, had changed little since the 15th century. Larger ships could not enter this harbour and had to lie in Grønnegårds Havn and have their goods trans-shipped to smaller vessels. This was clearly no longer adequate for Christian IV's mercantile ambitions and plans were drawn up for a new commercial harbour, with an integrated bourse, by the Dutch architect Laurens van Steenwinckel. Laurens died before work began and the contract was given to his brother, Hans van Steenwinckel the Elder, in 1619. Work was slow and hampered by the frequent intervention of Christian IV and, although much of the building was finished by 1625, it was not finally completed until 1640<sup>18</sup>.

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16. Mogens Lebech, *Gamle skibe - gamle huse*, (København, 1959), 12.

17. Josef W. Konvitz, *Cities and the Sea*, (Baltimore, 1978), 38.

18. Skovgaard, *A King's Architecture*, 87-91.

Other developments at this time included the conversion of the powder house beside the new harbour into a brewery<sup>19</sup> around 1619. This brewery was burnt down in 1632<sup>20</sup> and rebuilt on a massive scale the following year<sup>21</sup>.

The final phase of Christian IV's development of the town of Copenhagen was begun in 1629. A plan was drawn up in 1627 to more than double the size of the existing town. This plan consisted of extending the new city fortifications further to the north and east, culminating in a massive citadel on the coast. Within these new walls the city was to be developed in a radial fan plan<sup>22</sup>.

The fortifications were more or less completed by the time of his death in 1648, but of the planned new town only one small section was completed. This was the new accommodation for seamen and artisans known as *Nyboder*, which served as an extension to the *Skipperboder*. Christian IV first presented his ideas on the subject to the *rigsråd* in January 1631<sup>23</sup>, but had to battle hard to ensure that the necessary finance was forthcoming<sup>24</sup>. He took an almost obsessive interest in their construction and regularly went there to check on their progress<sup>25</sup>. In total 616 new homes were provided here. A church was also begun close to these houses in 1640, but was never completed due to lack of finance<sup>26</sup>. The rest of the area within the new fortifications remained

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19. C.F. Bricka & J.A. Fredericia (eds.), *Kong Christian den Fjerdes egenhændige Breve*, I, Note, 170.

20. Letter to *rigsråd*, 12 April 1633, *egenhændige Breve*, Vol. III, 103.

21. Skovgaard, *A King's Architecture*, 39.

22. Konvitz, *Cities and the Sea*, 38-44.

23. Letter to *rigsråd*, 7 January 1631, *egenhændige Breve*, II, 319.

24. Letters to *rigsadmiraal* Klaus Daa, 27 June 1631, and *rigsråd*, 28 July 1631, *egenhændige Breve*, II, 344 & 348.

25. Letter to *rentemestrene*, 26 June 1636, *egenhændige Breve*, IV, 48.

26. Skovgaard, *A King's Architecture*, 83.



largely redundant since there was neither the commercial nor demographic need for its development. What developments there were largely took the form of pleasure or market gardens.

Figure 5.5. shows the extent of Christian IV's new city by the time of his death in 1648. This plan is much more accurate than the previous ones and is based principally on maps drawn to depict the Swedish siege in 1658<sup>27</sup>.

### 5.1.2. The Bremerholm Dockyard

During the initial phase of the rebuilding of Copenhagen little attention was paid to the development of the Bremerholm dockyard itself. It was even left outside of the new town defences of 1606, despite the Krabbøløkke defensive blockhouse having been replaced in 1592 with just an office building. Only minor improvements were made such as the rebuilding of the weigh-house in 1607-8 and of the Holmens Port in 1614.

The first major new development was the Great Forge which was begun in 1615 and built over a 12-year period. It was much larger than the previous forge, measuring about 200 metres in length. It housed 18 forges, as opposed to the seven in the old building, and had a large oxen-powered hammer<sup>28</sup>. This building can be seen clearly in Allard's prospect (Figure 5.6.). The chimneys are concentrated in the centre and the arrangement of windows show that the rest of the building was used for other workshops, offices and perhaps also barrack accommodation. One contemporary plan<sup>29</sup> confirms this referring to the building as 'der schmide mit andern Werkhauser' (the forge with other workshops).

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27. Pufendorff's engraving of 1658, and an anonymous map of 1659. Also a hand-drawn map of c.1670. Published in Lebech, *Gamle skibe - gamle huse*, 29 & 49; and Skovgaard, *A King's Architecture*, 110.

28. H.D. Lind, *Kong Kristian den Fjerde og hans Mænd paa Bremerholm*, (København, 1889), 358.

29. Lorenzen, *Haandtegnede kort, plan V*.

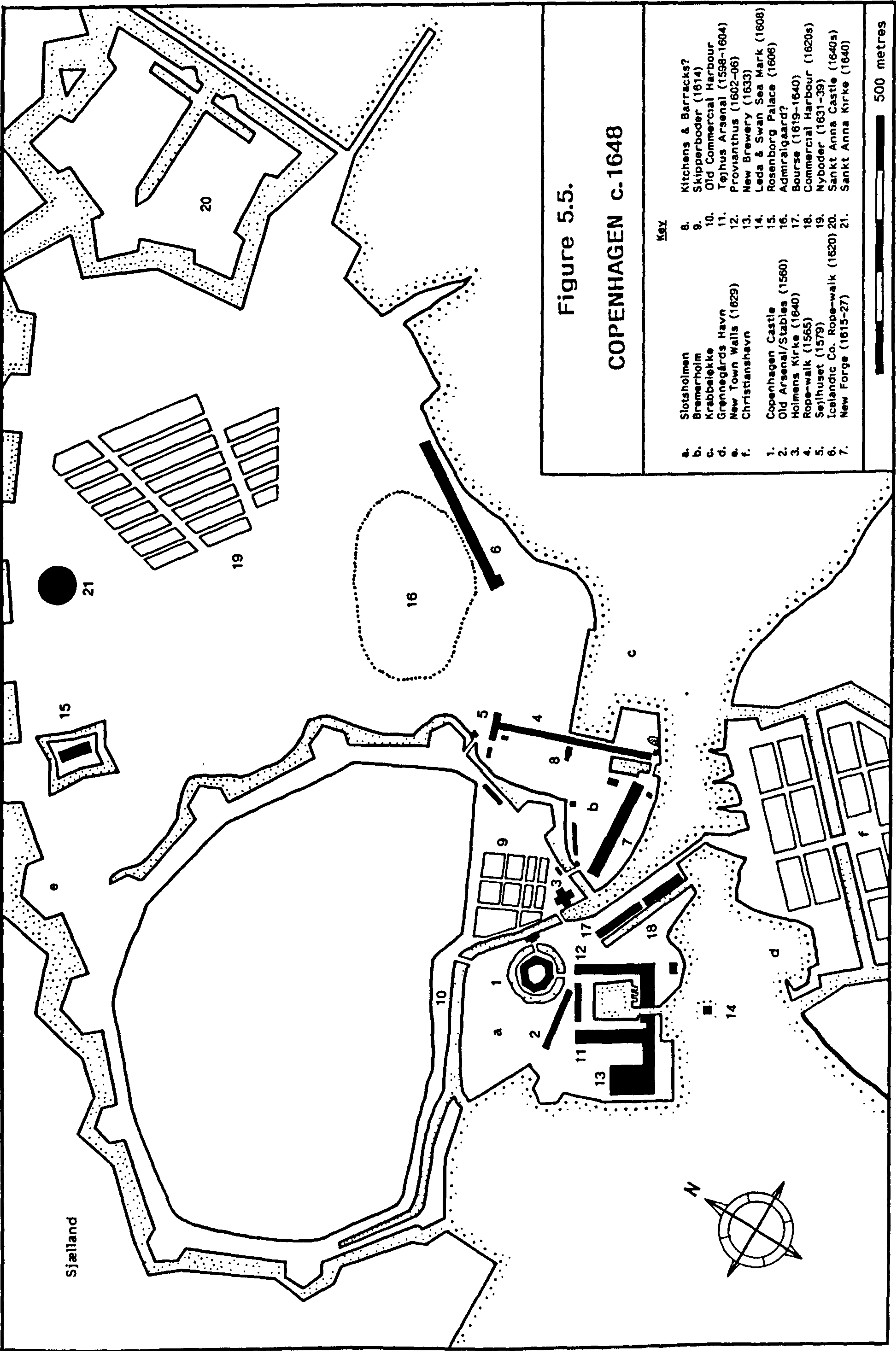






Figure 5.6. Hugo Allard's prospect of Copenhagen, c.1635



There may have been a separate smithy for the manufacture of spikes and nails. A new *naglebod* (nail house) was built in 1607-8 and in 1623 a *sømsmedje* (nail smithy) is mentioned<sup>30</sup>, although by this time it may well have been incorporated into the larger forge complex.

After the new forge came into operation the old forge was converted into a church for the seamen and dockyard personnel. A temporary church had been established at Bremerholm in 1617 in 'det Hus, som Maaltid holdtes udi' (the house in which meals are taken)<sup>31</sup>, but by 1619 the old forge was converted. The original exterior was at first retained but in 1641 Christian IV ordered that it should be enlarged and reconstructed in the shape of a cross<sup>32</sup>. There was also a dockyard hospital which was located beside the Holmens Port, near to the new church, but this was removed from Bremerholm to a site on the old fortifications around 1628<sup>33</sup> and the old building was then used as a school<sup>34</sup>.

Other workshops and stores were also constructed in the 1620s. In 1623 a payment was made to a carpenter to erect 'en mølle at stampe Hamp med paa Bremerholm' (a mill to prepare hemp with on Bremerholm)<sup>35</sup>, which was located somewhere near the rope-walk. Another building, 43 bindinger (40m approx.) long, was constructed in 1626 for the storage of oars and yards and other stores<sup>36</sup>, but its precise location is unknown.

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30. E. Madsen, 'Bidrag til Københavns historie, særlig i Kristian IV.s tid', *Historisk Meddelelser om København*, 1 Række, 6 Bd. (1917), 606.

31. H.D. Lind, 'En liden Bremerholms-Krønike 1576-1648', *Museum*, (1892), 57.

32. Letter to Corfitz Ulfedt, 27 Feb 1641, *egenhændige Breve*, V, 26.

33. Lind, *Kong Kristian og hans Mænd*, 395.

34. Lind, *Kong Kristian og hans Mænd*, 428.

35. Payment to Abraham Krug, 1 December 1623, *Rentemesterregnskaber*, quoted in note, *egenhændige Breve*, I, 326.

36. Madsen, 'Bidrag til Københavns historie', 607.



Around 1620 a prison was also constructed to house the convicts who were sentenced to hard labour at the dockyard<sup>37</sup>. The wooden building, described as a *trunk*, must have been situated somewhere near the moat as prisoners are reported to have escaped by crawling down the drains and swimming away<sup>38</sup>. A second wooden prison house was built in 1635-6<sup>39</sup>, but by 1640 Christian IV ordered the building of yet another, more secure new building<sup>40</sup>:

Epthersom fangerne Endnu dagliigen Briider udaff trunchen, daa Er ded best, att der bigges En anden trunch til dem pa dy steeder, som man kan bedre see tiil, huylcken vyl muriis, ty aff tømmer kan den inted lenge waahre Och uyl koste mehre End aff Steen, y sønderlighed om den skall gørres aff gaadt fast tømmer.

Since prisoners still daily escape from the trunk, it will be best to build another trunk for them in those places where it can be better supervised, which will be brick built, as it will not last long in timber and would cost more than if built of stone, especially if it is to be made from good strong timber.

Apart from the construction of new buildings the other major step in the modernisation of the dockyard in the 1620s was to create a proper wet dock where supplies could be delivered and ships repaired away from the shipbuilding slipways. There had long been an area of water beside the rope-walk where timber was laid to be seasoned, as shown in Figure

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37. See Chapter 6.

38. Bertha S. Phillpotts (Ed.), *The Life of Jón Olafsson*, Vol. I, (Hakluyt Society, Series II, Vol. LIII, 1923), 42-3.

39. Madsen, 'Bidrag til Københavns historie', 607.

40. Letter to Corfitz Ulfeldt, 29 March 1640, *egenhændige Breve*, IV, 319.

5.3., but it is unlikely that vessels were able to enter it, and it looks as if it were little more than a marshy area of waste ground. Christian IV wanted to turn this to better use and in 1621 stated that:

Den store laade, som huggis paa holmen, skall verre y aaldt 140 al-  
len lang, och skall *Abraham Ingeniør* derepther forkorthe *transien*.

The large dock, which is being excavated on Bremerholm, shall be 140 ells (85 m) long in total, and Abraham (de la Haye) Engineer shall thereafter shorten the entrance.<sup>41</sup>

An indication of the impressive nature of these developments made to Bremerholm during this period comes from the reports of the Baron de Cormenin<sup>42</sup> who visited Copenhagen in 1629:

De l'autre costé de cét Havre, en entrant à main droite hors la ville est le Holme; le long du quay (avec un grüe), c'est là où les Vaisseaux les plus grands touchant du flanc au quay & se viennent master il y a trois grands couverts, longs comme un mail, où se filent les cables & cordages, les forges des Artisans sont pour fair cheviliers, traversiers de grand & de petits ancrs, & tous les autres ustanciles qui sont necessaires aux Vaisseaux, dans la 3. couverte, est le bois, les acquis & calfender, les mats, les voiles, les antennes, les pavillions & les tonnes; il y a toûjours grand nombre d'ouvriers (Envir 5 à 6 cens qui ont 10.R par an à gagner & un habit & nourris) qui travaillent, sont a réparer ou calfauder, soit aux instructions des Vaisseaux neufs.

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41. Letter to Christian Friis, 12 February 1621, *egenhændige Breve*, I, 191.

42. Des Hayes, *Les voyages de Monsieur Des Hayes, Baron de Covrmesvin, en Dannemarc*, (1684), 226-231.



On the other coast of this harbour, on entering on the right hand side outside the town is the Holm: along the quay (with a crane), is where the large vessels berth alongside the quay and are rigged. There are three large buildings, long as a mall, where cable and cordage is spun, the forge of the workmen where spikes, cross pieces for large and small anchors, and all the other equipment which is necessary for ships is made, in the third building is the wood, the stores(?) and caulking, the masts, the sails, the yards, the flags, and the barrels; there are always a large number of workers (around 5 or 6 hundred who earn 10 rigsdaler a year in wages and a set of clothing and victuals) who work repairing and caulking, or by instruction on the new ships.

Cormenin further noted that before the *Kejserkrig* there had been plans to build a castle at the end of the rope-walk, and so bring the dockyard within the town defences:

Proche le lieu où sont les Navires, il y a un endroit dans la mer, marqué de pilottis de quarante toises en quarré, où le dessein du Roy estoit auparavant la guerre d'y bastir un Chateau à l'embouchure du Havre, & enfermer le Holme dans la ville, il n'est pas mal-aisé de bastir-là, car la mer y est douce & n'y a point a reflux.

Near the place where the ships are (Krabbeløkke), there is an area in the sea marked by piles that is 40 tois (79 metres) square, where the king planned before the war to build a castle at the

mouth of the harbour, and enclose the Holm in the town. It is not awkward to build there because the sea there is very gentle and there is no ebb.

This plan appears never to have got beyond the initial ground work stage<sup>43</sup> and was superseded by the grandiose new fortifications begun shortly after the war. In 1608-9 rubble is noted as being cast into the deep at Krabbeløkke and shortly after a 'vagthus' (watch house) was built on the site using a sunken ship<sup>44</sup>. A blockhouse was also created on the Amager side of the harbour entrance in 1624 which was again formed by sinking a number of ships in the shallows<sup>45</sup>.

The Scots soldier Robert Monro<sup>46</sup> was also highly impressed by the facilities he saw when he visited Copenhagen at around the same time as Cormenin:

And for the better maintaining of warre, no kingdome or king I know, is better provided of a *Magazin*, then this magnanimous king, for Armes, brasse ordnance (whereof every yeere his Majesty doth cast above a hundred peeces) being sufficiently provided of Amunition and of all sorts of fiery *Engines*, to be used by Sea or Land, together with Armour sufficient for to arme a great Armie of Horse. His Majestie is also sufficiently well provided of shipping, and yearely doth adde to the number, which ships are built by two worthy Scottish-men, called Mr. *Balfoure*, and Mr. *Sinclair*, being

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43. The skriverstue office building at the end of the rope-walk was removed in 1615, probably in connection with this development.

44. Madsen, 'Bidrag til Københavns historie', 599.

45. Lind, 'En liden Bremerholms-Krønike', 58.

46. Robert Monro, *Monro His Expedition with the worthy Scots Regiment (called Mac-Keyes Regiment) levied in August 1626*, (London, 1637), I, 87.



both well accounted off by his Majestie, who in like manner hath a Reprobane at *Copmanhagen*, for making of Cords and Cables for his shipping and Kingdome, where I was informed, that in twenty foure houres time, they were able to furnish the greatest ship the King had, of Cables and of all other tackling and cordage, necessary to set out the Ship.

Several minor changes were made in the early 1630s. Two boat houses were built at the seaward end of the rope-walk, one in 1632 and another larger one in 1634<sup>47</sup>. The *sejlhus* sail-making workshop at the other end of the rope-walk was altered at this time and a *drøgestue* (drying room) added, which was further enlarged in 1641<sup>48</sup>. A *takkelhus* (tackle store) is also mentioned around 1634, where finished new cordage was stored<sup>49</sup>, but its size and location are unknown, and may have been part of the converted *sejlhus*.

It is possible that the sail-making workshop was relocated at this time, but there are few indications of this other than a title deed<sup>50</sup> which details a site in Silkegade 'op til kongens sejlhus', which would suggest that it had been moved outside the confines of Bremerholm altogether. However a new dockyard gate was built 'ved Sejlhuset udenfor Østerport' (by the *sejlhus* outside Østerport)<sup>51</sup> which fairly accurately describes its original position. A later deed<sup>52</sup> also outlines a plot 'mellem sejlhuset og reberbanen paa Bremerholm' (between the *sejlhus* and the rope-walk on

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47. Letter to *rentemestrene*, 30 August 1634, *egenhændige Breve*, III, 280.

48. Letter to Sten Beck, 17 July 1641, *egenhændige Breve*, V, 103.

49. Lind, *Kong Kristian og hans Mænd*, 385.

50. *Kancelliets Brevbøger*, 29 October 1632.

51. *Kancelliets Brevbøger*, 23 September 1635.

52. *Kancelliets Brevbøger*, 10 December 1644.

Bremerholm). The answer may perhaps be that a separate sejlhus was built within the town which acted as the warehouse for incoming materials<sup>53</sup>, while the actual sail-making workshops continued to occupy the upper stories of the original building. The weigh-house was now also located on the ground floor of this building.

A new road was also built into Bremerholm in 1634 from the Nyboder and a new Port, known as Vandporten, built beside the Sejlhus as an entrance for men coming in from this area<sup>54</sup>. The draw-bridge across the now redundant moat between the Holmens Kirke and the new forge was also removed and infilled<sup>55</sup>.

The next significant addition to the dockyard facilities was to attempt the construction of a dry dock. The larger ships were exceedingly difficult to careen and at one state an application was even made to the East India Company in London to use their dry-dock<sup>56</sup> to get around the problem. It would be far easier if a dry-dock could be constructed at Bremerholm and the first evidence of Christian IV's plans for such a dock comes in September 1635 when timber was sent for which could be used for the repair of ships or for 'den Dok, som i Fremtiden muligt bliver anlagt paa Holmen' (the dock which might be established in the future at Bremerholm)<sup>57</sup>. Christian IV presented his ideas to the *rigsråd* a couple of months later<sup>58</sup>:

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53. *Forordning om Segelhusit vdi Københaffn*, 17 March 1623, British Library, D.A. 6/2 (33).

54. Lind, 'En liden Bremerholms-Krønike', 60.

55. *Kancelliets Brevbøger*, 23 February 1634 and 5 November 1634.

56. Draft contract with Theophilo Eaton, 1624?, *egenhændige Breve*, I, 398-9; Court Minutes of the East India Co., 22 September 1624, Calendar of State Papers, Colonial, East Indies 1622-24, 411.

57. Instruks for Daniel Sinclair, *Kancelliets Brevbøger*, 22 September 1635.

58. Letter to *rigsråd*, 1 December 1635, *egenhændige Breve*, III, 449.



Epthersom ded er Riigens *Admirall* med alle dem, som oss tiil Siiø's  
tiener, bekendt, Att den *Reall* flode med tiiden ganske foregaar,  
Saframdt den icke udi tyde faar hielp, Huilckid ued ingen anden  
middell skee kan, vdenad man laader gørrre En dücke, huorudi man  
kan sette dy skiib, som man uiil hielppe fraa køllen op.

Since it is the knowledge of the *rigsadmiraal* and of all those who  
serve us at sea, that the royal navy over time altogether perishes,  
unless it is maintained in good time, which can be done by no  
other means apart from the establishment of a dock in which ships  
can be sat, so that they can be repaired from the keel up.

The *rigsråd* granted the necessary money<sup>59</sup> and work was begun that  
winter. The site for this new dry-dock was on the site of the proposed  
castle at the end of the rope-walk, out towards the Krabbeløkke  
anchorage:

Daa skall der Buckiis Peele langs dybid, der som Ankerne pleier at  
ligge. Saat man der kan faa En braabenck.<sup>60</sup>

Then there shall be driven piles along the deep, where the anchors  
usually lie. So that a repair dock can be made there.

I skall uerre derom, at man kan faa Nogiid førretømmer ued handen  
tiil att slaa En dam for Enden aff Reeberbaanen ind y dybiid, der-  
som den dücke tiil at *Reparere* Skiiben udi skall gørris.<sup>61</sup>

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59. Kr. Erslev, *Aktstykker og oplysninger til rigsråd og stændermødernes historie i Kristian IV's  
tid*, (København, 1883-90), II, 404.

60. Letter to *rigsadmiraal*, 6 December 1635, *egenhændige Breve*, III, 453-4.

61. Letter to *rentemestrene*, 27 March 1636, *egenhændige Breve*, IV, 24.

You shall see to it, that you can get some fir timber handy to build a dam from the end of the rope-walk into the deep, where the dock to repair ships in shall be.

This pile-work was then infilled with earth over the next few years<sup>62</sup>. Progress was slow, hampered no doubt to a large extent by the lack of a tide in the Baltic, but by 1642 Christian IV could order<sup>63</sup>:

Der uyl settis En Stor och En liiden kraan ued ded Nii Peluerck wdenfor Reberbanen, huorued man kan kølhale bade store och sma skiib, paded man Icke Er trengdt tyl Braa steder, som man Nu Er.

There will be erected a large and a small crane by the new pile-work out by the rope-walk, with which both large and small ships can be careened, so that they are not forced to the slipways, as they now are.

Dry docks at this time were fairly rudimentary and basically consisted of an area of land where ships could be hauled up out of the water, with a gate or dam which could be built across the entrance to prevent flooding<sup>64</sup>. In Allard's prospect an area of rough ground can be seen at the end of the rope-walk, and although it hardly looks impressive it is more than likely that this was the new dry dock. The picture can be

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62. Letter to *rentemestrene*, 16 June 1636, and to Jørgen Vind, 17 October 1640, *egenhændige Breve*, IV, 41 & 414.

63. Letter to Jørgen Vind, 31 October 1642, *egenhændige Breve*, V, 260.

64. The only proper dry-docks in Europe at this time were in England. France did not have a dry dock until the latter half of the 17th century, and Spain and Sweden, like Denmark, did not have one until well into the 18th century. (Jan Glete, *Navies and Nations: Warships, Navies and State Building in Europe and America, 1500-1860*, (Stockholm, 1993), 65.)



dated to between 1633 and 1640 and it may be that the dock is depicted whilst still under construction. In 1681 another unsuccessful attempt was made to build a much more advanced dry dock on this site<sup>65</sup>, which would suggest that the facility built in Christian IV's time was indeed very primitive.

There were plans to convert the rope-walk in 1644, which would have divided it into four separate bays<sup>66</sup>. Again the king was insistent on the way this should be carried out and drew up his own plans for its conversion<sup>67</sup> so that his proposals were made perfectly clear. The building had already been converted in 1616-7 with the addition of an attic storey<sup>68</sup> which may have been used in connection with materials storage. Certainly in the early 1640s reference is made to the storage of timber in the rope-walk<sup>69</sup> and the subdivision referred to in 1644 may have been intended for just the attic storey. In 1640 there had been complaints about the noise of the machinery and a bell now had to be used to signal that the carriage had reached the far end of the building. Knud Klem<sup>70</sup> suggests that the subdivision of the rope-walk was an attempt to reduce the noise and to provide fire protection. He also suggests that four separate rope-walks were now installed although this is unlikely.

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65. Ole Lisberg Jensen, 'Bremerholm eller Gammelholm', *Marinehistorisk Tidsskrift*, 3/1988, 19.

66. Letter to Corfitz Ulfeldt, 28 January 1644, *egenhændige Breve*, V, 439.

67. Letter to Corfitz Ulfeldt, 16 February 1644, *egenhændige Breve*, V, 448.

68. Madsen, 'Bidrag til Københavns historie', 596-7.

69. Letter to Corfitz Ulfeldt, 22 Nov 1640, *egenhændige Breve*, IV, 421, and un-addressed letter, 19 May 1642, *egenhændige Breve*, V, 213

70. Knud Klem, 'Christian IV og Bremerholm', *Handels- og Søfarts Museets Årbog*, (1977), 95-6.

Whatever the modification, a new rope spinner was appointed in December 1644<sup>71</sup>, but operations must have ceased not long afterwards since in 1653 a commission investigating Bremerholm recommended that the now disused rope-walk should be put back into operation<sup>72</sup>. Where the navy obtained its cordage from in the meantime is unknown, but it is likely that the Icelandic company's rope-walk provided some of the supplies, and in 1646 a merchant was granted permission to build another rope-walk on the road to Amager<sup>73</sup>.

The last dockyard building completed in Christian IV's lifetime was the new navigation school which was erected near the entrance to Bremerholm<sup>74</sup>. Figure 5.7. shows with a fair degree of accuracy how the Bremerholm dockyard would have looked in 1648. Again the lack of accurate source material has meant that a certain amount of guess work is involved in regard to the precise size and location of some of the buildings.

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71. *Kancelliets Brevbøger*, 2 December 1644.

72. H.D. Lind, *Kong Frederik den Tredjes Sømagt: Det dansk-norske søværns historie 1648-1670*, (København, 1896), 68.

73. Letter to Anders Thim, *Kancelliets Brevbøger*, 27 November 1646.

74. Lind, *Kong Kristian og hans Mænd*, 429.



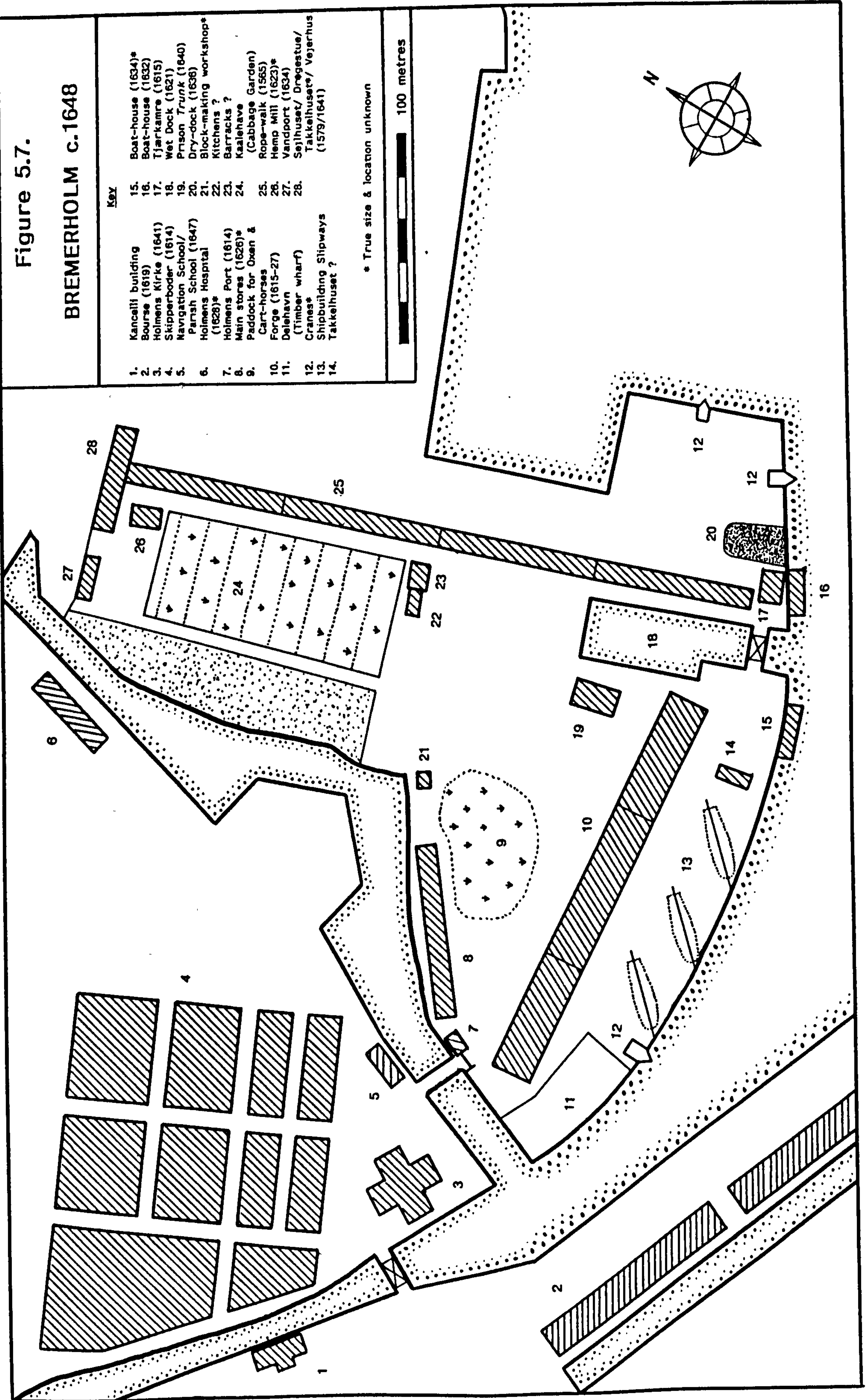
Figure 5.7.

BREMERHOLM c.1648

Key	
1.	Kancelli building
2.	Bourse (1619)
3.	Holmens Kirke (1641)
4.	Skipperboder (1614)
5.	Navigation School/Parish School (1647)
6.	Holmens Hospital (1628)*
7.	Holmens Port (1614)
8.	Main stores (1626)*
9.	Paddock for Oxen & Cart-horses
10.	Forge (1615-27)
11.	Delehavn (Timber wharf)
12.	Cranes*
13.	Shipbuilding Slipways
14.	Takkelhuset ?
15.	Boat-house (1634)*
16.	Boat-house (1632)
17.	Tjarkamre (1615)
18.	Wet Dock (1621)
19.	Prison Trunk (1640)
20.	Dry-dock (1638)
21.	Block-making workshop*
22.	Kitchens ?
23.	Barracks ?
24.	Kaalehave (Cabbage Garden)
25.	Rope-walk (1565)
26.	Hemp Mill (1623)*
27.	Vandport (1634)
28.	Sejluhuset/ Dregehuset/ Takkelhuset*/ Vejerhus (1579/1641)

\* True size & location unknown

100 metres





## 5.2. Slotø

The first purpose built naval dockyard in Denmark was not in Copenhagen but on a small island in Nakskov Fjord which became known as Slotø. It was created by king Hans in 1509 who ordered a castle, by the name of Engelsborg, and a fortified dockyard to be built there. The construction had a unique design, incorporating a round tower and two walls which ran down to the shore forming a V shape. Within these walls were a slipway and various associated buildings and at their end was a wooden quay<sup>75</sup>. This was a natural place for Hans to have a naval dockyard since his primary sea borne enemies were Lübeck and the Hanse towns. It remained in use until mid way through the 16th century, by which time the threat from northern Germany had been largely superseded by that of Sweden, and the castle and dockyard were abandoned.

By 1623 the plentiful woods and forests in the area had caught the eye of Christian IV<sup>76</sup>. Rather than bringing all this timber to Copenhagen it was decided to build a large ship on the spot. In 1624 Daniel Sinclair was appointed as master shipwright for the yard<sup>77</sup> and a small temporary forge was ordered to be erected near where the ship was to be built<sup>78</sup>. It seemed at first uncertain whether this new yard would be on the site of the old dockyard. When the idea was being investigated it was noted that 'Kongen har sendt Steen Villumsen, Admiral paa Bremerholm, til Laaland for ved Nakskov at udse et bekvemt Sted til Bygning af et stort Skib' (the king has sent Steen Villumsen, *Holmens admiral*, to Lolland near

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75. Ingolf Ericsson, 'Engelsborg på Slotø - skibsværft, fæstning og lensmandssæde fra kong Hans' tid', *Hikuin*, 14 (1988), 261-74; Barfod, *Flådens fødsel*, 121-2.

76. Missive to Jørgen Grubbe, *Kancelliets Brevbøger*, 19 November 1623.

77. Memorial to Daniel Sinclair, *Kancelliets Brevbøger*, 31 January 1624. Sinclair's involvement with the yard is discussed in: Martin Bellamy, 'Daniel Sinclair and the Danish Naval Dockyard at Slotø, 1624-34', *Industrial Heritage*, 13 (1995), 2-7. See also Chapter 8.

78. Missive to Jørgen Grubbe, *Kancelliets Brevbøger*, 31 January 1624.



Nakskov to select a suitable site for the building of a large ship)<sup>79</sup>. However, shortly afterwards instructions were sent to the local *lensmand*<sup>80</sup> which seem to confirm that the same site was indeed used:

Han skal straks lade opføre et Hus ved Engelsborg paa Laaland, som kan bruges til de Tømmermænd, Borere, Savskærere og Baadsmænd, der skulle arbejde paa det Skib, som kongen vil lade bygge der.

He shall immediately order a house to be built by Engelsborg on Lolland which can be used by the carpenters, auger-men, sawyers and seamen, who shall work on the ship which the king has instructed to be built there.

This document also shows that a decision had been made to establish a rather more permanent yard and outlines in detail all the various buildings and facilities which were needed for the small shipyard to function. In total seven separate buildings of various sizes were needed. The workers barracks mentioned above was to be 20 bindinger (20m) long and was to have two large fireplaces so that they could warm themselves in winter. A smithy was to be built with two separate forges. Beside this a three apartment building was to be built, of which two rooms were for the smith and his men to live in, and the third for their provisions. A building with four rooms was needed for the clerk, one room for his living room, one for his office and two for stores. The master shipwright also had a four roomed house, two of which were to live in, with the other two for his provisions and for all his instruments and tools. An eight room building was needed for the kitchen and its stores. A separate

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79. Missive to Laurits & Jørgen Grubbe, *Kancelliets Brevbøger*, 10 March 1624.

80. Missive to Jørgen Grubbe, *Kancelliets Brevbøger*, 19 March 1624.

two room building was also needed for the storage of all the necessary spikes and treenails. It is also clear from this description that only the hull of the ship was to be built, with no provision being made for facilities for outfitting or rigging the ship.

When the site was excavated in the 1940s<sup>81</sup> the foundations of two small buildings from this time were unearthed within the fortified walls. These were probably used in connection with the preparation of pitch and tar for caulking the ships, while the rest of the buildings mentioned above would have been located outside the walls. A significant amount of charcoal and soot was also unearthed on the south of the island which would suggest that the forge was located in this area, well away from the yard itself. By 1626 a brewery had also been set up.

The accounts for the building of this ship have survived<sup>82</sup> along with detailed muster lists and inventories for the yard itself which give an invaluable insight into its operation. The number of men working on the ship varied from around 100 to 130. The largest proportion of the workforce consisted of skilled wood workers, with a slightly smaller number of ordinary seamen who presumably acted as labourers during the earlier stages of construction. The majority of the ship carpenters were hired in from Germany, the apprentices were Norwegian, while their foremen and the rest of the personnel, were all Danish.

Early in 1628 Sinclair received another contract to built two more ships at the shipyard<sup>83</sup>. The terms of this contract show that the shipyard, although still state-owned, was now in effect no longer state-run but had become a private operation, with Sinclair having to supply

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81. Marius Hansen, 'Udgravningen af Kong Hanses skibsværft Engelsborg paa Slotø i Nakskov Fjord', *Handels- og Søfartsmuseets Aarbog*, (1948), 20-57.

82. Regnskaber for Skibsbyggeriet paa Slotsøen ved Nakskov, Rigsarkiv, Danske kancelli, Rentekammer Udgift Conto I.d.

83. *Kancelliets Brevbøger*, 7 Feb 1628.



all the labour and materials himself. This is confirmed in the official records for these ships, which in marked contrast to the full records of the first ship, consist solely of accounts of materials supplied to the yard from Bremerholm.

The Danish involvement in the thirty years war had by this time taken on a maritime dimension and the north German ports were being blockaded. The threat of a maritime invasion was in the air and rather than withdraw the whole Danish fleet to Copenhagen it was decided to experiment that year with over-wintering some of the navy's ships in Nakskov Fjord<sup>84</sup>. In total six ships were to be stationed there and repaired as necessary. Two of them needed extensive repairs to their keel although it was not sure at first whether this work could successfully be carried out here<sup>85</sup>. The necessary materials for the refits as well as victuals for the men had to be sent from Copenhagen, and there was nowhere for the ships' crews at the dockyard and so they had to be billeted in local farms. However, the logic behind this experiment was sound enough since Nakskov, being much farther south than Copenhagen, would remain ice-free for a little longer, allowing the ships to re-enter active service more quickly, although the arrangements do appear to have been somewhat haphazard. The threat was removed when Denmark sued for peace the following year and the experiment seems never to have been repeated.

A fourth ship was built between 1631-1633, after which there is no further mention of shipbuilding activity in the area<sup>86</sup>. Sinclair, who was the only master shipwright to have worked there, died in 1636 but the closure of the yard was probably more to do with the fact that after

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84. Missive to Kommissarierne paa Lolland og Falster, *Kancelliets Brevbøger*, 18 October 1628.

85. Missive to Hendrik Vind, *Kancelliets Brevbøger*, 19 December 1628.

86. Missive to Jost Frederik Pappenheim, *Kancelliets Brevbøger*, 12 April 1633.

building four warships the useful supply of timber had by then come to an end, and it had become impractical to continue operations at such a distance from the capital and its ever improving dockyard facilities.

Another factor may have been that, although the yard had been purpose built for the construction of the small-scale warships of the early 16th century, it was no longer adequate for the larger ships of the 17th century, and conditions must have been very cramped. Although a slipway was unearthed within the walls during the 1940s excavations the overall length of the first ship was greater than the walls themselves, and the second contract to build two ships simultaneously could not possibly have been carried out solely within the walls.

The existing layout did not really lend itself to shipbuilding either. The walls may have given plenty of protection from attacking forces and, to a lesser extent, from the weather, but they must have presented serious problems when it came to materials storage and handling. There does not appear sufficient storage space within the walls for all the necessary timber, let alone for its cutting and preparation. No doubt this was done outside the walls and only the finished timbers brought to the slipway. To get them to the slipway meant having to enter the fortifications either through one of the two small side doors or else taken around the end of the walls and across the shore-front. This was clearly a highly inefficient operation and this, together with the other factors mentioned, makes it no surprise that operations did not continue at the yard for any more than a decade.

### 5.3. Glückstadt

The fortified town of Glückstadt was established on the river Elbe in 1616. It was basically a small border garrison town, with a commercial harbour inside its fortifications. At first there was little reason for the



navy to have a base in the area, but the decision to impose tolls on the Elbe in 1629 and the subsequent blockade by the Hamburg fleet in 1630 meant that a significant naval presence was thereafter required<sup>87</sup>.

The possibilities of having any major dockyard facilities were minimal since the nature of the towns fortifications did not easily lend themselves to any river-front development. It was, however, possible for a small number of ships to over-winter there. The usual procedure was for the summer fleet to be replaced by a handful of seaworthy ships which needed no significant repair work, while the others returned to Bremerholm for their refit. Some ship repair facilities must have existed though, since in 1635 a galley was sent there to be repaired<sup>88</sup>, and two years later a much larger warship was also repaired, although the timber and workmen did have to be procured from a local contractor<sup>89</sup>.

Early in 1639 a small warship, which had by then been on the Elbe for three years, needed extensive repairs. Rather than return to Bremerholm it was ordered to the small island of Rethøwel outside Glückstadt, where it was careened and new keel timbers fitted<sup>90</sup>. It was forced to use its own tackle and all the repair materials had to be sent from Copenhagen. This may have been the spur for Christian IV to order preliminary work on what sound like the foundations for some form of harbour later that year<sup>91</sup>, the plans of which he had drawn up himself. Unfortunately no details of this development appear to exist. A few years later there are details of a reberbane being moved from Copenhagen to Glückstadt<sup>92</sup>, though presumably it was just the machinery which was

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87. A map of Glückstadt in 1628 shows that there were no dockyard facilities before this date (F.H. Jahn, *Grundtræk til Christian den Fjerdes krigshistorie*, (København, 1820), endpiece).

88. Letter to *rigsadmiraal*, 6 December 1635, *egenhændige Breve*, III, 451.

89. Letter to Henrik Müller, 14 December 1637, *egenhændige Breve*, IV, 168.

90. Letter to Iver Vind, 14 January, 1639, *egenhændige Breve*, VIII, 136-7.

91. Letter to Henrik Müller, 4 April 1639, *egenhændige Breve*, IV, 223.

92. Letters to Corfitz Ulfeldt, 1638-40?, and 25 February 1642, *egenhændige Breve*, VIII, 136 & 161.

transferred and not the building itself. This would suggest that the naval facilities were being upgraded, but the improvements could only have been of minor importance and little is heard of Glückstadt as a naval base for the rest of Christian IV's reign.

With regards to actual shipbuilding the town was of negligible importance. There was no state run shipyard and there seems to have been very little activity by private contractors. One ship was built in 1627 but it was 1640 before a shipbuilder was granted permission to establish a proper permanent slipway<sup>93</sup>. There was, however, an important private shipyard nearby at Itzehø which completed many ships for the Danish navy<sup>94</sup>, and this was involved to some extent with the refitting of ships stationed on the Elbe.

#### 5.4. Small Regional Bases

As well as the dockyards at Copenhagen, Slotø and Glückstadt there were also a number of small coastal towns which kept their own small vessels for coastal defence. The ships based there were not necessarily naval ships but armed merchantmen known as *borgerskibe* (civic ships) which were run by consortia of merchants in return for tax privileges.

The names of some of the navy's ships show that they also were normally based in the regions, such as *Aarhus Jagt*, *Korsør Skude*, *Marstrands Plage Gallej*, *Ystad Skib* and *Stavanger Boyert*, although many of these were just transport ships.

The only towns which could really be considered as a true naval base were Kolding and Haderslev on the east coast of Jutland, which together kept a fleet of four or five small vessels in operation. Both towns had small commercial shipyards but there was no dedicated naval

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93. Knud Klem, *Skibsbyggeriet i Danmark og Hertugdømmerne i 1700-årene*, II, (København, 1986), 238-9.

94. See Chapters 8 and 10.



yard. When Christian IV designed a galley at Koldinghus Castle he had the local shipwrights build a model of the ship but when the real ship was to be built a state shipwright was called in from Copenhagen to supervise the work<sup>95</sup>.

Although one large warship was built at Haderslev in 1596-8, and another at nearby Årøsund in 1609<sup>96</sup>, there is no evidence to suggest that there was any permanent naval shipyard facility in either place. The commercial yards at the two towns did however build a number of galleys and other small vessels for the navy such as *jagts* and *bojerts*.

### 5.5. Conclusion

By the end of his reign Christian IV had created a truly impressive dockyard infrastructure for his navy. The port city he created at Copenhagen could boast one of the best integrated naval infrastructures in the whole of Europe, with its only possible rival being the Venetian Arsenal<sup>97</sup>. The combined dockyard, arsenal, and victualling store at Copenhagen enabled ships to be built, repaired, and mobilised, and all their necessary equipment manufactured, all within the one area, and all under the direct control of the king and the state administration. The descriptions of Cormenin and Monro, although rather flattering, show that Copenhagen, of which Fynes Moryson<sup>98</sup> could say in 1593 that he 'observed no beauty or magnificence', had under Christian IV become a northern 'factory of marvels'. It is clear that Christian IV was the main

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95. See Chapter 9.

96. See Chapter 8.

97. F.C. Lane, *Venetian Ships and Shipbuilders of the Renaissance*, (Baltimore, 1934), 129-45; R.C. Davis, *Shipbuilders of the Venetian Arsenal*, (Baltimore, 1991), 10-46.

98. Fynes Moryson, *An Itinerary of Ten Years Travel*, (1617, reprinted: Glasgow, 1907-8), IV, 122.

driving force behind the whole development, and it is significant that virtually all commands relating to the construction works came directly from his hand<sup>99</sup>.

There are two ways of looking at these developments. On the one hand Christian IV was a great visionary who created the foundations for the city's expansion, the boundaries of which were not exceeded for over two hundred years. On the other hand it could be said that Christian IV was unrealistically ambitious and created a city far larger than was actually necessary at the time, resulting in much wasted work and expense.

The speed with which the new fortifications were considered necessary, only twenty years after the first modifications, severely questions his original foresight. It is true that the first fortifications greatly improved the existing town walls but the extension of the town boundary was very modest. The fact that he was able to create a fortified naval town whilst leaving the naval dockyard outside the fortifications also seems quite bizarre. Had he had the sense to build a slightly larger wall the first time which enclosed the dockyard, it might have eliminated the need for the subsequent developments. Admittedly this would have created a far less impressive city but it would have certainly been more in keeping with the city's commercial and demographic needs, and with the state budget. As it was the extended city boundaries were to serve the city adequately well until the industrial revolution in the 19th century forced any further expansion. However, Christian IV's ruthless, and at times reckless, ambitions ensured that the city was created in his own extravagant mould, to the benefit of future generations, but to the financial detriment of his own.

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99. Only the construction of the road in 1634 is ordered via the Danske kancelli, all other instructions came personally from Christian IV.



The development of Copenhagen demonstrates lucidly Christian IV's way of thinking. Rather than waiting for organic change to occur he felt he could somehow will his ambitions into fruition by creating an impressive physical structure and hoping this would automatically bring with it the desired commercial or military success, without the introduction of any of the necessary political or administrative structures. It is significant that the only section of his planned new town in Copenhagen that was completed were the Nyboder, which required his own constant supervision to ensure their construction. However, despite the over-ambitious development of the city of Copenhagen, it cannot be denied that the dockyard development was much needed and its massive scale perfectly matched the ambitions and size of the navy at that time.

The one major deficiency of Copenhagen as a naval base, though, was the lack of a dry-dock. Although one was started in the 1630s it was not completed due to technical and financial difficulties. This meant that all ships had to be careened instead, which was a longer and much more problematic procedure. This deficiency sounds strange from a British perspective where dry-docks were relatively numerous, but from a European perspective it was not at all unusual. France did not have a dry-dock until the latter half of the 17th century, and both Spain and Sweden, like Denmark, did not have one until well into the 18th century<sup>100</sup>.

In contrast to the developments in Copenhagen, the establishment at Slotø was extremely modest. The sole purpose for its foundation was simply to exploit the timber in the area, without the expense of bringing it all to Bremerholm. This function was successfully carried out for around ten years while the stocks of local timber remained. It was never

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100. Jan Glete, *Navies and Nations*, 65; José P Merino, 'Graving Docks in France and Spain before 1800', *Mariner's Mirror*, 71 (1985), 35-58.

intended to be a permanent dockyard, and the one experiment at overwintering clearly demonstrated that its remoteness and lack of facilities precluded it from any further development.

As a year-round naval base Glückstadt suffered from the same difficulties as Slotø. All the materials, men, and victuals had to be supplied from Copenhagen, or else procured at a price from local contractors. Despite these disadvantages, though, it is perhaps surprising, given Christian IV's obvious affection and ambitions for Glückstadt, and that he spent long spells at Glücksborg Palace, that he did not do more for the Elbe squadron. Financial considerations may have played a part, especially as the *rigsråd* would not have consented to expending large sums of Danish state revenue on a base in the duchy of Holstein, outside Denmark. This geographical position also created the added disadvantage that it was in a defensively precarious position, lying on the extreme southern edge of the realm on a more or less hostile border. To have created a major naval establishment in such a position would have been folly, and Christian IV perhaps let common sense prevail in this case and resisted any temptation to lavish extravagant facilities on his navy in this area. Just about enough was done to enable a squadron to be kept fit and ready on the Elbe, without the development of any elaborate or costly permanent facilities.

It is surprising that no naval base was developed in Norway. The island of Flekkerø in Flekkerfjord harbour was frequently used as a haven for naval squadrons during bad weather. It had initially been developed as a temporary naval base in 1556 to aid the fight against piracy but its use must have been limited since the blockhouse was demolished again in 1561<sup>101</sup>. The first move to fortify the island under Christian IV came in 1619, and in 1628 a new blockhouse was established.

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101. Barfod, *Christian 3.s flåde*, 112 & 157.



By 1635 the island was fully fortified<sup>102</sup>, but no dockyard was ever developed. The reason appears to be that because Glückstadt was now established as a naval port on the North Sea then it would be able to serve as the base for Norway as well, as a letter from Christian IV demonstrates:

Der skall Ingen y wynter aff Orlog skyben holde siig op vnder Norrie, ty dy, som ligger heer, kan komme saa tylig henad Norrie, som behoff gørris.<sup>103</sup>

In winter none of the warships shall be stationed in Norway, as those that lie here (Glückstadt), can come quickly up to Norway, as the need arises.

The existence of the *defensionskibe* fleet also meant that there was always a force of local ships that could be mobilised, obviating the need for a formal naval dockyard.

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102. Letter to Frederik Urne, 19 May 1635, *egenhændige Breve*, III, 390-1.

103. Letter to Corfitz Ulfeldt, 25 August 1637, *egenhændige Breve*, VIII, 110.

## 6. The Administration of the Bremerholm Naval Dockyard

Having seen how the navy and its dockyards grew at such a rapid pace we should now turn in more detail to see if and how the dockyard administration developed to cope with the navy's growing size. In this chapter we shall investigate how the naval dockyard operated, who was in charge, what work was undertaken, who carried out that work, and how efficiently it all operated.

### 6.1. General Conditions

The Bremerholm dockyard was the single largest workplace in the Danish realm. In the 1620s, when we can first put an accurate figure on numbers, there was a permanent workforce of around 700 men, consisting of around 200 skilled craftsmen and apprentices involved in shipbuilding, 165 skilled craftsmen in the workshops, 100 convict labourers, 150 seamen involved with watchkeeping and ship repair work, plus about 70 ancillary staff. In addition to these men came the seamen who were stationed at Bremerholm during the winter months to assist with the refitting of the fleet. In the early 1620s the total number of seamen retained over the winter was in the region of 800. Not all of these men, of course, worked at Bremerholm, but we can confidently say that the total number of men working at the dockyard in the winter months was well in excess of a thousand.

The dockyard was divided into summer and winter working conditions. Summer lasted from Shrovetide to Martinmas, during which time the hours of work were from 5 a.m. to 7 p.m., with a break between 10 a.m. and 12 noon. During the winter the hours of work were from dawn to dusk with the same two hour lunch break<sup>1</sup>. Productivity rates were

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1. Proviantskriver's commission, *Kancelliets Brevbøger*, 16 April 1625; Smith's commission, *Kancelliets Brevbøger*, 26 April 1626; and Gate-keeper's commission, *Kancelliets Brevbøger*, 26 May 1646.



reduced in line with the shorter hours and additional rations were allocated for the men. Although the hours worked per man were less in the winter, the increased number of men would ensure that an equivalent or greater number of man-hours were worked. It was also common practice to hire additional men on a temporary basis in the spring to ensure that the fleet was ready to sail on time.

All men working at the dockyard were bound to comply with the *Holm- og arsenalartikler* which detailed the codes of conduct and regulations governing all dockyard and arsenal employees. They were first formulated in 1587 and were published, in an expanded form, in 1625. They dealt principally with matters of discipline, naval jurisdiction and the arrangements for watch-keeping, both in the dockyard and aboard the ships in port, but they also outlined the responsibilities of certain officials and craftsmen who were in charge of the dockyard's operation<sup>2</sup>. These regulations, comprising 80 articles in all, were to be read in their entirety to the workers every month. Seamen at the dockyard were also bound to comply with the *Skibsartikler* which detailed the rules and regulations for all sea-going personnel<sup>3</sup>.

Unlike in England the dockyard workers were not members of crafts guilds. Christian IV disliked guilds intensely and considered that their restrictive membership and practices hampered the development of a dynamic and progressive industry, and prevented foreign craftsmen from coming to Denmark. In 1600 he instructed the Copenhagen town council to undertake a review of the town's guilds<sup>4</sup>. Then in 1613 he issued an edict which outlawed crafts guilds altogether, because of the 'store uskikkelighed och motvillighed her udi riget med handverksfolk och andre,

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2. Holm- og arsenalartikler, 8 May 1625, V.A. Secher, *Corpus Constitutionum Daniæ*, (København, 1887-1918), IV, 230-56.

3. See Chapter 7.

4. Missive to Copenhagen town council, 13 March 1600, *Corpus Constitutionum Daniæ*, III, 99-100.

som skraaerne och laugsret hafver' (great nuisance and reluctance in this kingdom which craftsmen and others who come under the guild statutes and laws)<sup>5</sup>. This law was not a success and Christian IV was forced to back down and within a few years guilds were again allowed to operate<sup>6</sup>. The state's employees, including dockyard workers, however, would not have been allowed to organise themselves into guilds.

The management structure within the dockyard can be divided into five basic levels. The senior management essentially consisted of only two men, the *Holmens admiral* and the *materialsriver*. Below them, in what would now be called the middle management, were the clerks and master craftsmen. Then came the *mestersvende* (foremen) who were in direct control of the various skilled tradesmen, and at the lowest level were all the unskilled labourers, boys, and apprentices.

Most of the officials and craftsmen working within the dockyard received a commission through the *Danske kancelli*, which outlined their duties and rates of pay. These varied in length from just a few lines for a minor craftsman to several pages of highly detailed instructions for one of the senior management positions. This ensured that everyone was aware of their terms of reference and also provided a yard-stick by which to monitor their performance. Depending on their seniority the officials and workforce were paid on an annual, monthly or daily basis. Some workers were paid a small annual sum as well as a regular monthly payment. Others were paid solely on a piece-work rate.

Figure 6.1. is an attempt to show the overall dockyard management structure and, where possible, the equivalent annual pay of the workers.

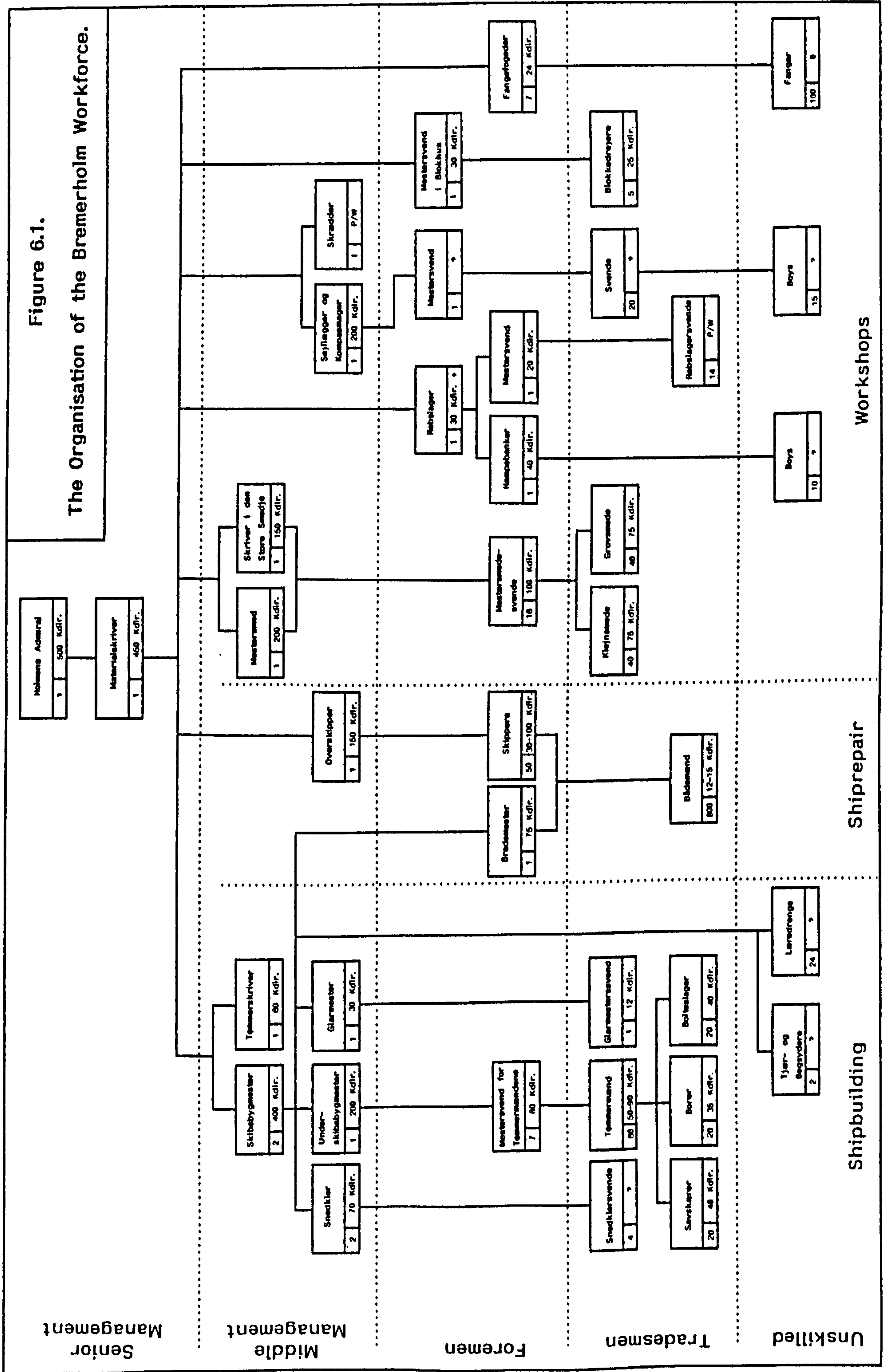
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5. Order relating to guilds, 19 June 1613, *Corpus Constitutionum Daniæ*, III, 408-9.

6. Sven Ellehøj, *Christian IV.s tidsalder 1596-1660*, (*Danmarks historie*, 7), (København, 1964), 223-6.



**Figure 6.1.**  
**The Organisation of the Bremerholm Workforce.**



Due to the availability of information the wages during the 1620s have been used in this diagram, but the wide variations between certain crafts would suggest that they are not all entirely accurate<sup>7</sup>. They are given here simply as a rough guide.

By drawing up such a rigid organisational chart there is a danger in implying a much more formal management structure than there actually was. As with the higher state administration so much was dependent on personality and circumstance. The lines of command were not strictly adhered to, and orders regarding the operation of the dockyard were issued by various officials, not least from the king himself, depending on whether certain posts were filled or whether the officials were present at any particular time.

## 6.2. Senior Management

### 6.2.1. The *Holmens Admiral*

The *Holmens admiral* was the official who oversaw the day to day running of the navy, and unlike the *rigsadmiral* this was not an overtly political post. The office came into existence during the reign of Frederik II as the steadily growing importance of Bremerholm brought about the need for a dedicated official to take charge of its operation<sup>8</sup>. The office holder was typically a nobleman who had already served as an officer at sea, and as well as receiving a salary he was usually assigned a *len* as part of his rewards of office.

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7. Wages have been taken from the men's commissions of appointment in *Kancelliets Brevbøger* and from the *klædekammer regnskaber*. Unfortunately the two do not always tally.

8. The first *Holmens admiral* was appointed in 1564. (H.D. Lind, *Fra Kong Frederik den andens tid: Bidrag til den dansk-norske sømagts historie 1559-1588*, (København, 1902), 74).



He was responsible jointly to the *rigsadmiral* and to the *stadtholder* or *rigshofmester*. Although Christian IV was greatly interested in the work of the *Holmens admiral* he usually directed his written orders to him via the higher state officials or through the *rentekammer* or the *Danske kancelli*.

The responsibilities of the office were enormous. The job was not simply a matter of supervising the construction and repair of ships at Bremerholm, but he also had to single-handedly oversee the running of virtually all aspects of the navy, including its harbour, ships, and men, as well as having to take an active part in the command of ships at sea. It was more than enough for one man and it is hardly surprising that the incumbents of office were frequently rebuked for not carrying out their duties to the required standards. In fact the expansion of the navy under Christian IV had made the job virtually impossible.

In contrast to the higher state officials the duties of the *Holmens admiral* were precisely laid out in their commissions. These steadily got more detailed with each successive appointment. The commissions from Frederik II's time contained just a few articles<sup>9</sup>, but from Godske Lindenov's commission in 1610<sup>10</sup> there were upwards of twenty individual articles.

These commissions show that the *Holmens admiral* was responsible for everything that went on at Bremerholm, including the construction and refitting of ships, the manufacture of all materials in the dockyard workshops, and the discipline of all seamen and craftsmen, and the operation of the royal transport fleet. His official duties also overlapped with those of the *rigsadmiral* to some extent, in that he was also responsible for the recruitment and examination of all seamen and naval officers.

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9. Lavrits Kruse's commission in 1578 contained six articles, and Erik Vognsøn's in 1585 contained eight. (Lind, *Fra Kong Frederik den andens tid*, 196 & 207).

10. *Kancelliets Brevbøger*, 23 Feb 1610.

During the periods that the office of *rigsadmiral* was kept vacant the *Holmens admiral* became the highest naval officer, and so a large part of his time was also spent at sea commanding the fleet, even though these sea-going duties were not specifically mentioned until 1645, and then only in passing<sup>11</sup>.

The first *Holmens admiral* during Christian IV's reign was Børge Trolle who took over the post in 1596. He came from a long line of admirals and was already a well respected seaman when he took up office. However, he stayed at the dockyard for only three years. It is not clear why he left office and there are no references to him in naval service after 1599, despite the fact that he lived until 1610. He may have retired voluntarily but, as he was probably still in his early forties, this seems unlikely. From the start he was a committed career professional, having gone through the accepted route for aspiring noblemen in becoming a *hofjunker* after a period of foreign study, before taking up service at sea. In an age when officials traditionally clung to their positions until promotion or death it would have been unusual for Trolle to have given up his post voluntarily. Although there is no definite proof, the fact that he died with his finances in disarray would suggest that there had been a fall from grace in some way or other<sup>12</sup>.

Whatever the reason for Trolle's departure, the post of *Holmens admiral* was not renewed until 1610 when the increasing prospect of war with Sweden brought with it the need to strengthen the navy's leadership. Godske Lindenov was appointed to the post but his effect at Bremerholm must have been minimal, since he spent most of his time at sea and died before the end of the war in 1612.

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11. *Kancelliets Brevbøger*, 25 Jan 1645.

12. H.D. Lind, *Kong Kristian den Fjerde og hans Mænd paa Bremerholm*, (København, 1889), 68-70.



Another year went by before the office was renewed again, but the appointment of Sten Villumsen Rosenvinge in 1613 marked the beginning of a more stable period of management for the dockyard where the *Holmens admiral* remained in office for more than a few years and the appointment of successors was carried out without delay. His commission was virtually identical to that drawn up for Lindenov, but his wages were 100 Dlr. less, at 500 Dlr. per annum<sup>13</sup>.

Although he stayed in office for many years Sten Villumsen could hardly be described as a model of administrative competence. He was frequently in dispute with his superiors and his workers, and came under suspicion of impropriety on more than one occasion. The most serious claim came in 1618 when he was suspended from duty and brought before the dockyard court on the following charges:

1. That he used the royal sawyers and timber for his own ends without due recompense to the Crown.
2. That he was remiss in his duties regarding his management of the workforce.
3. That he connived with the ropemaker to produce sub-standard rope.

Underneath, the *Kongens kansler* Christian Friis wrote that he had also been asked verbally by the king to discuss Sten Villumsen's frequent absences of three or four days<sup>14</sup>. The verdict of the court is not known but in any event he was soon reinstated.

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13. Instruks og bestalling for Sten Villumsen, 3 September 1613, *Corpus Constitutionum Daniæ*, III, 412-7.

14. Instruction to Christian Friis, c. 3 Dec 1618, C.F. Bricka & J.A. Fredericia (eds.), *Kong Christian den Fjerdes egenhændige Breve*, VII, 20-1.

In 1625 Villumsen called on Prince Christian (V), in the absence of the king, to investigate the working practices of the master shipwrights, and in particular their private contracting work<sup>15</sup>. There was evidently some ill feeling here and the master shipwrights responded by making a confidential report to the prince on 'shipbuilding, the navy, the ship's carpenters, and other operations at Bremerholm' which made mention of certain 'letsindige praktikker' (improvident practices)<sup>16</sup>. It is not clear exactly what the allegations were, but Villumsen was called upon to account for them. Nor is it known what, if any, action was taken, although the fact that the prince had to intervene shortly afterwards to break up further disputes between the two parties would suggest that the affair was not satisfactorily resolved<sup>17</sup>.

Sten Villumsen was given permission to leave his office in 1630. Again the reason for his departure is unclear but it would be unfair to suggest that he had been forced from office. He had recently been assigned a *len* in Norway and it would not be unreasonable to assume that he had perhaps had enough of the wrangling at Bremerholm and decided to move to Norway to manage his estate. Indeed one of the conditions of his being allowed to go was that he was to supervise the ironworks in Norway. As a *lensmand* he still continued to have connections with the navy by, for example, supplying timber and inspecting Norwegian ships which had been offered for royal service.

His successor was Erik Ottesen Orning who likewise had a controversial period in office. For the first few years he is mainly heard of in relation to the command of sea voyages and the operation of the royal cargo fleet in bringing supplies to Bremerholm. The first signs of dis-

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15. Missive to Sten Villumsen, *Kancelliets Brevbøger*, 21 May 1625.

16. Missive to Axel Arenfeldt & Mogens Kaas, *Kancelliets Brevbøger*, 15 May 1625.

17. Missives to Sten Villumsen, David Balfour and Daniel Sinclair, *Kancelliets Brevbøger*, 12 July 1625.



satisfaction appear in 1639 when the king noted that his captains had been complaining about the lack of preparation of their ships which was 'vden thuiffuel aff *Admiralens* Nachlessighed, som nu vyl corrigeris' (without doubt through the admiral's dereliction, which will now be corrected)<sup>18</sup>. In July 1641 Christian IV himself experienced the poor state of the ships under Ottesen's charge. He reported in an obvious state of rage that<sup>19</sup> :

... befandt Ieg Skiibet sa lack, at man ded med stor Nød kunde holde, at ded icke saanck, Och ded aff mangel at pumperne bade uar uferdige saoch forroden, at dii stod inted at hiielpē, førend gud i hymmelen ued En uynd hiaalp oss ind pa Bergen waag.

Dentyd man besluttede siig at Erfahre, huor leckiid waar, da befandtis leckiid at uerre ymellom Staunen och galliion kneyt, huilcken mangel der formenis dennom pa holmen lenge at haffue uerrit bekendt.

Kabyssen uar Icke allene Ilde med Leer och Saalddt foruarit, Mens ochsa inted med kobber, som brugeligdt Er, foruarit, Saat Ieg Om Natten y min skiiorte motte op och leske branden y køckenit

... I found the ship so leaky that it was only with great diligence that the ship was prevented from sinking, and that because of a lack of pumps, which were unfinished and in such a bad state of repair that they were useless, it was only God in heaven who helped us with a favourable wind into Bergen.

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18. letter to Corfitz Ulfeldt, 20 Dec 1639, *egenhændige Breve*, IV, 272.

19. Letter to Sten Beck & Hans Ulrik Gyldenløve, 13 July 1641, *egenhændige Breve*, V, 99.

Afterwards it was decided to establish where the leak was, which was found between the stem and the figure-head, the condition of which must for a long time have been known to those at Bremerholm.

The galley stove was not only badly maintained with clay and salt, but also had no copper fit for use, so that I had to go in the night in my night-shirt to douse the fire in the galley.

He went on to note that the ship's skipper claimed that Erik Ottesen neither listened to, nor understood, their complaints and that he would always assign to him the worst of the seamen at his disposal. The king had been under the impression that his seamen were well trained and was horrified to find that only a fraction of those on board could read a compass or were able to handle an oar properly<sup>20</sup>.

Erik Ottesen was immediately suspended from duty until he apologised and could demonstrate that the claims against him could never be repeated. The king was still not sure whether he had been reinstated by January 1642 when he referred to 'Erick Ottessøn eller den som kommer y hans sted' (Erik Ottesen or whoever is coming in his place)<sup>21</sup>. He did keep his job, however, only to come into conflict with the king again later that year and be threatened once more with dismissal<sup>22</sup>.

His conduct as a commander at sea also came into question during the *Torstenssonkrig* but he still clung to his post until his death in February 1645. He would not have held on to it for much longer though, because negotiations had already begun with his successor in January

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20. Letter to Corfitz Ulfeldt, 21 July 1641, *egenhændige Breve*, V, 106.

21. Letter to *rentemestrene*, 18 Jan 1642, *egenhændige Breve*, V, 166.

22. Letter to Jørgen Vind, 31 Oct 1642, *egenhændige Breve*, V, 260.



that year. Even his death could not prevent further disgrace, because when the Corfitz Ulfeldt embezzlement scandal broke he was clearly implicated in the whole affair<sup>23</sup>.

Kristoffer Lindenov, son of Godske Lindenov, took over the post in 1645. He appears to have been fairly reliable as *Holmens admiral* during the rest of Christian IV's reign, although his additional appointment in 1647 as *oberstløjtnant* (lieutenant colonel) in the army must have impinged on his ability to carry out his naval duties. His task, however, was made much easier with the appointment first of a *rigs-viceadmiral* in 1645, then a *Holmens viceadmiral* in 1652, and ultimately the new admiralty administration of 1655 shared the burden of his responsibilities. Like many of his predecessors, though, he left office in disgrace in 1657. Although the exact reason is unclear, there was a suggestion that he had been involved in the embezzlement of seamen's wages<sup>24</sup>.

#### 6.2.2. The *Materialskriver*

Working in conjunction with the *Holmens admiral* was the *materialskriver* (clerk of materials), who was responsible for the supply of all materials needed to build and maintain the ships. As such he acted as the senior manager of the various dockyard workshops, supervising their supply of raw materials and regulating the quantity and quality of their output.

This post was almost on a par with the *Holmens admiral*, and both men were required to work in close co-operation. Indeed some of the points relating to the supply of materials in the commissions of the two posts are virtually identical. The *materialskriver* operated with a great deal of autonomy with regard to the materials produced within the dockyard, but any additional materials that had to be procured from private

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23. Lind, *Kong Kristian og hans Mænd*, 78-9; See also Chapter 3.

24. H.D. Lind, *Kong Frederik den Tredjes sømagt: det dansk-norske søværns historie 1648-1670*, (København, 1896), 104.

merchants or contractors had to be ratified and countersigned by the *Holmens admiral*. This, together with the fact that his wages were a little lower than the *Holmens admirals*, at 450 Kdlr., indicate that he was in a slightly junior position. However, he was still very much a senior manager, and held authority over all the other dockyard clerks<sup>25</sup>.

He was to keep a register of all materials supplied to Bremerholm and make a yearly inventory of all naval stores. A record was kept of all materials that were issued to each ship, and the inventories of all the ships' skippers were checked to ensure that they tallied with the materials issued. In order that the warships remained well equipped and to save costs, new materials were issued only after the same weight of old material was returned. The old materials were then re-used in the royal transport ships. To regulate this system separate account books were kept for the issue of new and old materials, and for the return of materials from the ships<sup>26</sup>.

The *materialskriver* had three or four assistant clerks and bookkeepers. In addition there was also a *tømmerskriver* (timber clerk), who was responsible for checking, measuring and keeping accounts of all timber coming to the dockyard. This was very much a junior post, earning only 60 Kdlr.<sup>27</sup>, but it did warrant its own *underskriver*<sup>28</sup>. The timber accounts consisted simply of a register of incoming timber and a rudimentary record of timber issued on a day to day basis to the different workshops and craftsmen<sup>29</sup>.

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25. Gotfried Mikkelsen's commission, *Kancelliets Brevbøger*, 22 December 1630.

26. Rigsarkiv, Marinearkivet før 1655, 16-27. Bremerholmens materialskriverregnskaber 1593-1650.

27. Commission for Jacob Jensen, *Kancelliets Brevbøger*, 22 Dec 1630.

28. Commission for Povel Mortensen, *Kancelliets Brevbøger*, 11 Dec 1619.

29. Rigsarkiv, Marinearkivet før 1655, 28-29. Bremerholmens Tømmerregnskaber 1594-1658.



In 1635 this post was amalgamated with that of *materialskriver*, who was in turn granted an additional *underskriver*. In effect the *materialskriver* took on the responsibility while the new *underskriver* carried out the same work, at the same rate of pay, as the previous *tømmerskriver*<sup>30</sup>. The accounts for timber also continued to be kept separate from the other materials.

### 6.3. The Dockyard Workforce

The function of the dockyard was split between the construction of new ships and the maintenance of existing ships. Ship repair constituted much the largest activity since each of the twenty to thirty warships, as well as the countless transport ships, had to be kept seaworthy on an annual basis. This work was mostly seasonal, with the majority of work being carried out while the fleet was laid up for the winter, in preparation for the following year's sailings. The work on new construction was much more constant all year round, although at most only two or three ships would be being built at any one time.

Although ship repair was the largest activity in terms of manpower, it is easier to look at the organisation of ship construction first, since much of the workforce and the materials they produced were also used in ship repair.

#### 6.3.1. Ship Construction

Ship construction can basically be divided into two different elements: the construction of the hull; and its outfit with all the necessary equipment needed for it to be able to put to sea.

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30. *Kancelliets Brevbøger*, 3 Sept 1635.

In overall control of both aspects was the *skibsbygmester* (master shipwright) who designed the ship and supervised the workforce. There were also junior shipwrights that were designated as *underskibsbygmester* or simply *skibsbygger* (shipwright). The distinction between the master shipwrights and the ordinary shipwrights is unclear but it would appear that the higher rank was a recognition of ability and seniority and naturally carried with it a much higher wage. Their actual duties regarding shipbuilding appear to vary very little.

Unlike many posts within the Danish state system the appointment of shipwrights appears to have been dependent primarily upon skill. It was common for the shipwrights to be engaged first as private contractors, building a number of naval ships, so that their skills could be judged prior to their being engaged as full-time servants of the Crown. Robert Petersen, David Balfour and Klaus Jansen all followed this route. Promotion from within the dockyard was also possible, as was the case with Svend Andersen, who moved from being a senior shipcarpenter to become *underskibsbygmester* and eventually master shipwright.

The number of master shipwrights engaged as permanent employees was very small. Shipwrights were really only needed to supervise the construction of new ships as the skilled shipcarpenters could carry out most of the routine ship repair work. Since many of the navy's ships were built in the provinces, the number of shipwrights actually working at Bremerholm could be very small indeed.

It was stipulated, however, that a master shipwright should be present at Bremerholm at all times to supervise the work of the craftsmen and to ensure that good timber was always used<sup>31</sup>. As a means of ensuring the shipwright's diligence the cost of any mistakes caused by the negligence of his men would be deducted from his wages. The master

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31. Commission for Robert Petersen, *Kancelliets Brevbøger*, 2 November 1604.



shipwrights were also expected to train 12 *læredrenge* (apprentices) in a four year course of ship's carpentry, the best of whom were to be further instructed in the art of shipwrightry. They were granted extra rations for this work and were paid 4 Kdlr. for each apprentice who completed their course<sup>32</sup>.

These conditions were reiterated in the *Holm- og arsenalartikler* of 1625, which contained only five articles dealing directly with the shipwrights' work. These can be summarised as follows<sup>33</sup>:

37. The master shipwrights should always be at their post and supervise the *tømmermænd* at all times. If any work by the shipwright or his *tømmermænd* needs to be re-worked a second time then each ought to be brought to justice.

38. The master shipwrights shall, along with the *Holmens admiral*, sign for all materials brought into the dockyard for their use, and be responsible for their sparing use. If any material is found to be faulty they will be brought to justice, and they must immediately inform the *Holmens admiral* of any deficiencies.

39. The master shipwright has absolute command over all carpenters, sawyers, auger-men, and apprentices which he uses daily. Under threat of the highest punishment, he must not use them for his own work, as the Crown's work has priority.

40. No ship's carpenter shall be employed unless the master shipwright is satisfied that they are competent. The master shipwright is to keep a register of all carpenters and their abilities.

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32. Missives to *rentemestrene*, *Kancelliets Brevbøger*, 6 May 1625 and 27 May 1637.

33. *Holm- og arsenalartikler*, 243-4.

41. Any old iron removed from a ship must immediately be passed on to the *materialsdriver*.

This last article was further expanded on in the *Holmens admiral's* commission, which stated that:

10. Whenever any ship is built or rebuilt the *Holmens admiral* and the shipwright are to specify the type, size, and quantity of each spike, and where they are to be used on the ship. When the ship is being planked the number of spikes used on each and every strake is to be noted, until the ship is planked inside and out. Likewise for wales, knees and spikes used for every row of deck planking from stem to stern.

11. When a ship is being re-timbered the *Holmens admiral* together with the shipwright is to ensure that all iron spikes and bolts which are removed from the old timber are carefully looked after and a note made of where they were previously used on the ship so that they can be re-used. When a new ship is being built every iron spike and bolt is to be weighed and measured and signed for by both the *Holmens admiral* and the shipwright and a note made of where it was positioned in the ship. This is to ensure that when the ship reaches the end of its life they can be salvaged and so that it is known how many to expect from those charged with its demolition.<sup>34</sup>

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34. Erik Ottesen's commission, *Kancelliets Brevbøger*, 28 Oct 1630.



The actual work of building the ships was carried out by the *skibstømmermænd* (shipcarpenters). They were supervised by around five *mestersvende for tømmermændene* (foreman journeyman carpenters). Sometimes the building of smaller vessels such as barges and galleys would be entrusted solely to a *mestersvend* rather than to a fully qualified shipwright. Occasional mention is also made of a *baadebygger* (boat builder)<sup>35</sup> but this was not a formal designation and probably referred to a *mestersvend* currently occupied in the building of a boat.

The *skibstømmermænd* were paid a day-rate which varied according to their ability. According to an ordinance of 1625 there were four different grades, the highest being paid 28 skilling, the others 24, 20 and 16, respectively<sup>36</sup>, which approximates roughly to between 50 and 90 Kdlr. per annum<sup>37</sup>. There were twenty carpenters in each grade.

Working in tandem with the *skibstømmermænd* were the *savskære* (sawyers) who cut the timber to the correct size and shape, and the *borere* and *bolteslagere*. The *borere* (auger-men) were described as 'det Slags Handværks Folk, hvis Arbeyde det er ved Skibs Bygning at boere alle Hulle til Bolterne og Navlerne' (the type of craftsmen whose work it is in shipbuilding to drill all the holes for bolts and nails), and the *bolteslagere* as the 'samme Slags Arbeydere som Boererne, hvilke efter at de haver boeret Hullerne driver ogsaa Bolterne og Navlerne ind' (same type of worker as the *borere*, who after they have drilled the holes, also drive in the bolts and nails)<sup>38</sup>. The *savskære* and *bolteslagere* were paid 12

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35. Rigsarkiv, Marinearkivet før 1655, 30. Store Smedje Regnskaber, 1619.

36. Missive to *rentemestrene*, *Kancelliets Brevbøger*, 6 May 1625.

37. Calculated at 230 days at full pay and 70 days at half pay.

38. Georg Albrecht Koefoed, *Dansk Sprog Ord-Bog: Forsøg til en Dansk Sprog Ord-Bog med Beskrivelse paa hver Ord og deres Benævning i det Frandske og Engelske Sprog*, (Kronborg, 1993).

skilling per day (40 Kdlr. p.a.) while the *borere* were paid 10 skilling (35 Kdlr. p.a.). The sawyers were previously also paid a piece-work rate, with a pair of sawyers earning 1 skilling for every 4 alen (2.5m) cut<sup>39</sup>, but there is no mention of this in the 1625 ordinance. Also mentioned in the accounts were a *schruemager* (screw maker)<sup>40</sup> who presumably fashioned the wooden spikes and treenails, and a *pompborer* (pump borer)<sup>41</sup>, who, rather surprisingly for what must have been a fairly skilled job, earned just 10 Kdlr. per annum.

The manufacture of the masts and upper works of the ships was a specialist trade carried out by the *mersmager* (top maker), who held a relatively high position among the shipcarpenters.

The *Klædekammer* accounts provide valuable information on the number of men employed in the various wood-working trades, the number of days that they worked, and the wages they were paid. They show that the wage structure was much more complicated than the 1625 ordinance, with men being paid from 28 skilling down to 9 skilling per day at one skilling intervals. In the winter months the men were paid only half their normal day-rate. Table 6.1. shows the number of men in each grade in the spring of 1641.

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39. Schlegel (ed.), 'Kort Overslag paa alt Rigens Indtægt og Udgift, som er nu giort og tilsamendragen den 24 Decembris Anno 1602', *Samlung zur Danischen Geschichta*, 1 Bd. 1 stk. (1773), 23-113; *Kancelliets Brevbøger*, 24 December 1598.

40. Rigsarkiv, Marinearkivet før 1655, 15. Bremerholms Proviantskriver Regnskab 1646/47.

41. Rigsarkiv, Rentekammer Udgift Conto I.a., Klædekammer Regnskaber, Udgift 1621/22.



<u>Day Rate (sk.)</u>	<u>Total No. of Men</u>	<u>Total at Bremerholm</u>
28	33	27
27	11	6
26	12	6
25	7	2
24	11	8
23	4	2
22	11	6
21	6	5
20	13	8
19	9	5
18	5	1
17	16	10
16	13	5
15	20	11
14	39	19
13	7	3
12	23	10
11	9	4
10	11	5
9	1	0

**Table 6.1. Wage Structure of Wood-working Craftsmen**

Source: Rigsarkiv, Rentekammer Udgift Conto I.a., Klædekammer Regnskaber, Udgift 1640/41<sup>e</sup>.

The accounts included all crown employees, wherever they were stationed. No clear distinction was made between the Bremerholm workforce and those men working in the provinces, apart from the name of the town being added to the end of the men's names. This is fine if the entry is listed as, for example, 'Mads Pedersen Malmø', but some doubt arises with names such as 'Hans Kolding' or 'Anders Ebbeltoft'. As far as possible all those men working in the provinces have been identified, with the remainder assumed to have been working at Bremerholm. Some of the provincial workers may have been among those called to Copenhagen every spring<sup>43</sup>, but there is no way of determining this.

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42. In these accounts all woodworking craftsmen are grouped together and no distinction is made between the different trades.

43. See later.

The accounting year for these trades was divided into three, between Candlemas (2 February), St. Hans' Day (21 June), and All Saints' Day (1 November). The number of men employed during each period varied slightly, but not perhaps as much as might be expected. However, not all the men employed worked at the dockyard every day. Table 6.2. shows the seasonal variation in workforce for 1640/41. To even out the variations in the number of days worked the total man-days worked is given, and the equivalent workforce if all men had worked full-time.

	Total Workforce			Bremerholm Workforce		
	Men	Man-days	F/T Equivalent	Men	Man-days	F/T Equivalent
2/2/1640 - 20/6/1640	261	26,900	237	143	14,600	128
21/6/1640 - 31/10/1640	271	28,700	254	127	13,600	120
1/11/1640 - 1/2/1641	275	19,100	257	135	9,400	127

Table 6.2. Seasonal Variation of Wood-working Craftsmen

Source: Rigsarkiv, Rentekammer Udgift Conto I.a., Klædekammer Regnskaber, Udgift 1640/41.

The last thing needed to make a ship watertight was to seal the joints by caulking them with oakum and tar. In England this was recognised as a separate trade but this was not the case in Denmark, with the task being carried out by the *skibstømmermænd*. There was not even a separate term for the process, with orders given simply to 'dicte och drifve' (tighten and seal)<sup>44</sup> the ships. In fact the recognition of caulking as a separate trade occurred very late in Denmark. A late 18th century encyclopaedia of sea terms<sup>45</sup> still finds it necessary to state, under the entry for *Kalfaterene* (caulkers):

44. Forordning om skibshøvedsmændene..., October 1627, *Corpus Constitutionum Daniæ*, IV, 375.

45. Koefoed, *Dansk Søb Ord-Bog*.



de Folk som bruges til at digte et Skib, i Engeland og Frankerig  
ere disse en Forskiellig Stand eller Slags af Skibs Tømmermænd.

Those men who are used to tighten a ship, in England and France  
these are a separate trade or type of ship carpenter.

The fitting out of the ships was carried out by a number of other  
skilled craftsmen. The fine woodwork on the ships, such as the outfit of  
the officers' quarters, was carried out by the *snedklere* (joiners) who  
earned 78 Kdlr.<sup>46</sup>. In the 1620s there were two of these craftsmen, but  
by the 1640s there was only one, although he was assisted by four  
*snedklersvende*<sup>47</sup>. The more intricate woodwork on the figure-heads and  
stern carvings was also frequently done by the court wood carvers.

The glass for the ships was manufactured by the *glarmester*  
(master glazier) and his *svend*, who earned 30 and 12 Kdlr. respectively<sup>48</sup>  
. It would be reasonable, though, to assume that the majority of their  
work was concerned more with the royal palaces than with ships.

The ships carvings and other decorations were painted by the  
*skibsmaler* (ship painter) or *Holmens maler* who did not have a permanent  
commission but was only called in when needed and paid on a piece-work  
rate<sup>49</sup>. In fact the decoration of ships was often done by the court  
painters who, rather than painting a canvas, would be directed to paint  
designs, figures and scenes on the king's warships<sup>50</sup>.

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46. Rigsarkiv, Rentekammer Udgift Conto I.a., Klædekammer Regnskaber, Udgift 1621/22.

47. Rigsarkiv, Marinearkivet før 1655, 14. Bremerholms Proviantskriver Regnskab 1643/44.

48. Rigsarkiv, Rentekammer Udgift Conto I.a., Klædekammer Regnskaber, Udgift 1640/41.

49. Lind, *Kong Kristian og hans Mænd*, 391-2.

50. Niels Probst, 'Villum Hornbolt, Hoffets og Holmens Maler', *Marinehistorisk Tidsskrift*, (4/1994),  
93-104.

As a ship neared completion a skipper would be appointed to it, who would work in conjunction with the master shipwright to ensure that the ship was rigged and outfitted in the way that he preferred. A small number of seamen were also usually allocated to a ship at this stage to assist with the rigging and other outfitting tasks.

### 6.3.2. The Dockyard Workshops

The ironwork, rigging and other outfit materials were manufactured in the various workshops situated in the dockyard. Each had its own specialist personnel and management structure.

The largest of the workshops was the forge where all the anchors, spikes and other metal fittings were manufactured. The management was carried out jointly by the *skriver i den Store Smedje* (clerk of the Great Forge) and the *oversmed* or *mestersmed* (master smith).

The *skriver i den Store Smedje* not only kept the accounts of the forge but he also acted as its general manager. He was in charge of procuring the raw and scrap iron, and all the coal needed to fire the forges. All ironwork which was issued by the forge was measured, weighed and its intended destination recorded in his accounts<sup>51</sup>.

The forge was accounted for separately and had its own heading in the *rentemesterregnskaber* accounts. The smiths were paid according to a piecework and hourly-rate agreement, the precise details of which are unknown. The *skriver* therefore had to keep an accurate register of all employees and the amount and type of work carried out. These accounts were then submitted to the *rentekammer* and a lump sum issued to him to distribute the wages to the individual workers.

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51. Rigsarkiv, Sætaten Før 1655, 30. Bremerholmens Store Smedje Regnskab 1618-1621.



In 1624 the new *skriver's* commission<sup>52</sup> stated that he was also responsible for keeping a record of the muster lists for the dockyard and for supervising the supply of food to all the men at Bremerholm. This was most likely just a temporary measure since the post of *proviantsskriver* was vacant at the time and not, as Lind asserts<sup>53</sup>, an integral part of the job. The amount of work did steadily increase though, and his one assistant in 1618<sup>54</sup> was joined by another three by 1624.

The organisation of craftsmen in the forge was similar to that of the shipwrights, the highest level of craftsmen being the *mestersmede* who supervised the design of the ironwork and controlled the working of the forge<sup>55</sup>. The work of the individual blacksmiths was supervised by the *mestersmedesvende* (foreman journeyman smiths). The journeyman smiths were then classified into two kinds, *grovsmedesvende* and *klejnsmedesvende*, who carried out the rough and the fine work respectively.

The *skriver i den store smedje's* wages totalled 116 Kdlr. in 1618, rising to 150 Kdlr. in 1624, and the *mestersmed* earned 200 Kdlr. In the budget estimate of 1630<sup>56</sup> it stated that 18 *mestersvende* received 2 Kdlr., and 80 smiths 1½ Kdlr. a week in wages and victuals, equivalent to approximately 100 and 75 Kdlr. per annum.

The second largest workshop was the rope-walk, which manufactured all the rope and cable needed for the ships. The craftsman in charge was known as the *rebslager paa Bremerholm* (rope-spinner at Bremerholm) and was responsible for assessing the quality of all hemp coming into the dockyard, and for the spinning of all cordage at

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52. Commission for Anders Haar, *Kancelliets Brevbøger*, 11 March 1624.

53. Lind, *Kong Kristian og hans Mænd*, 343-5.

54. Commission for Knud Vorm, *Kancelliets Brevbøger*, 29 April 1618.

55. Commission for Andreas Bentsvinger, *Kancelliets Brevbøger*, 27 April 1626.

56. 'Overslag paa hele Rigets Indtægt og Udgift 1630', *Budstikken*, 60, (Christiania, 1824), 473-82.

Bremerholm. He kept accounts in conjunction with the *materialskriver*, who was his immediate supervisor. From 1626 his wages were based largely on piece-work, earning 9 Marks for every skippund (160 kg) of rough cable, 9 Kdlr. for rope, and 18 Kdlr. for twine<sup>57</sup>.

When raw hemp and flax came into the dockyard it would first be cleaned and worked at the dockyard hemp-mill, under the supervision of the *hampebanker* (hemp beater), who was paid 40 Kdlr. per annum<sup>58</sup>. Specific quantities of hemp were stipulated for each workman and boy to clean in the summer and winter, with the amount of wastage also strictly regulated.

The cleaned hemp would then be passed on to the *rebslager* or the *mestersvend paa Reberbanen* (foreman of the rope-walk) who would supervise the spinning of it into the desired form. The completed rope was then transferred to the drying room where it would lay for fourteen days before being tarred, if necessary. The workers at the rope-walk consisted of around 14 *svende* who spun the rope<sup>59</sup>, and a *begsyder* (pitch boiler) and *tjæresyder* (tar boiler) who presumably would have heated the pitch and tar to treat it<sup>60</sup>.

At the Sejlhus sails and other cloth outfit were manufactured. Cloth probably was not actually woven here since most of the woven cloth came from the tugthus, the *len*, or from private merchants. The *sejllægger* (sail maker) was the master craftsman responsible for manufacturing the sails and had an assistant *mestersvend*. The work-force consisted of around 20 *svende* and 15 boys<sup>61</sup>.

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57. Commission for Hans Teigler, *Kancelliets Brevbøger*, 11 March 1626; Commission for Niels Pedersen, *Kancelliets Brevbøger*, 3 July 1634.

58. Commission for Hendrik Meyer, *Kancelliets Brevbøger*, 14 January 1625; Commission for Jens Madsen, *Kancelliets Brevbøger* 25 October 1635.

59. Rigsarkiv, Marinearkivet før 1655, 14. Bremerholms Proviantskriver Regnskab 1643/44; 15. Bremerholms Proviantskriver Regnskab 1646/47.

60. Rigsarkiv, Rentekammer Udgift Conto I.a., Klædekammer Regnskaber, Udgift 1621/22.



In 1627 Herman Lygtemager received a commission as *sejllægger og kompaslager* and became responsible for the manufacture and repair of compasses, hour glasses and lights as well as sails<sup>62</sup>. Quite how these seemingly unrelated activities became linked is unknown but the practice was continued after his death in 1654. His wages, at 200 Kdlr., were more than double that of an ordinary *sejllægger*.

Also working in the Sejlhus was the *skrædder paa Bremerholm* (tailor) who manufactured all the flags, bulwark and top decorations, and other fancy work which may have been required for the navy. He was paid solely on a piece work rate and received his orders directly from the *Holmens admiral*<sup>63</sup>.

The smallest workshop at Bremerholm was the block-house where around five or six *blokkedrejere* (block turners) made all the blocks, dead-eyes and similar fittings. Like the other workshops it was jointly supervised by the *materialsriver* and the *Holmens admiral*. It is unclear whether there existed a master block turner, but it is likely that the senior craftsman in this area was simply one of the *mestersvende for tømmermændene*. In 1630 it was stipulated that each *blokkedrejer* was to make 20 blocks or their equivalent in block-sheaves, pump-shoes and similar items, every week during the summer, and 16 in the winter<sup>64</sup>. The wages seem to have been relatively low, at just 30 Kdlr. per year in the 1620s for a senior *blokkedrejer*, although by the 1650s this figure had risen to 200 Kdlr.<sup>65</sup>.

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61. Rigsarkiv, Marinearkivet før 1655, 14. Bremerholms Proviantskriver Regnskab 1643/44; 15. Bremerholms Proviantskriver Regnskab 1646/47.

62. Commission for Herman Lygtemager, *Kancelliets Brevbøger*, October 1627.

63. Commission for Jørgen Rassmussen, *Kancelliets Brevbøger*, 23 November 1619.

64. Materialsriver's commission, *Kancelliets Brevbøger*, 22 December 1630.

65. Lind, *Kong Kristian og hans Mænd*, 382.

### 6.3.3. Ship Repair and Maintenance

The fitting out of new ships with sails and rigging, and the repair of existing ships was carried out by their crews under the supervision of the ships' own skippers. With so many ships needing repair on an annual basis it became necessary to have one person to co-ordinate the work on all the ships. This was originally an informal position but in 1626 the first formal *overskipper* was appointed<sup>66</sup>.

The *overskipper* had responsibility for all repair work which did not come under the shipwright's remit and was in charge of all naval personnel present at Bremerholm. Every morning all seamen at the dockyard were mustered by the *overskipper* and each man assigned to work on a particular ship or in one of the dockyard workshops. He naturally worked in close co-operation with the *Holmens admiral* and any equipment requested by individual skippers had to be approved and signed for by both men. The *overskipper's* wages started at 150 Kdlr. but steadily rose to 200 Kdlr. in 1633<sup>67</sup>, and 400 Kdlr. in 1639<sup>68</sup>, putting the post briefly on a par with the master shipwrights. When Rasmus Thyggesen took over the post early in 1640 his salary was set at only 200 Kdlr.<sup>69</sup>, but this was increased to 350 Kdlr. in 1648<sup>70</sup>.

The repair work on the hulls was carried out by the *skibstømmermænd*. As well as those men employed all year round there were also a large number of men who were hired on a temporary basis in

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66. Commission for Rasmus Søfrensen Samsing, *Kancelliets Brevbøger*, 19 July 1626.

67. *Kancelliets Brevbøger*, 8 October 1633.

68. *Kancelliets Brevbøger*, 12 July 1639.

69. Commission for Rasmus Thyggesen, *Kancelliets Brevbøger*, 22 May 1640.

70. Lind, *Kong Kristian og hans Mænd*, 330-1.



the spring, when work on refitting ships was at its height. At first this was an ad hoc arrangement that was used during wartime or for special circumstances<sup>71</sup>.

In 1617 this practice was formalised in a missive sent to a total of 36 *lensmænd* ordering them to send as many shipcarpenters as possible to Bremerholm for two months, from March, every year<sup>72</sup>. This policy initially had only limited success, with only 11 men arriving in the first year<sup>73</sup>. The following year 59 men arrived but a further 79 failed to turn up<sup>74</sup>. However, as registers were gradually made of all *tømmermænd* it became more difficult for men to evade this order<sup>75</sup>, but problems still persisted in getting enough men to comply, and Christian IV repeatedly had to request his *lensmænd* to provide the necessary men throughout his reign<sup>76</sup>.

One aspect of the repair of a ship's hull was to clean it of marine growth by careening the ship. This was a skilled and delicate operation which could easily damage the ship and injure men, and could even lead to the loss of the ship altogether. There was a dedicated official who was responsible for this task, known as the *brademester* (slip master), who was the highest paid of the foreman carpenters and was also known as the *øverste mestersvend for tømmermændene* (senior foreman journeyman carpenter). He earned 65½ Kdlr. per annum<sup>77</sup>. His job entailed emptying

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71. Jørgen H. Barfod, *Christian 3.s flåde* (København, 1995), 60-1 & 265; Lind, *Fra Kong Frederik den andens tid*, 9, 48, 75.

72. Missive to *lensmænd*, *Kancelliets Brevbøger*, 17 February 1617.

73. *Kancelliets Brevbøger*, 20 February 1617.

74. *Kancelliets Brevbøger*, 30 April and 13 November 1618.

75. Knud Klem, 'Christian 4. og Bremerholm', *Handels- og Søfartsmuseets Årbog*, (1977), 84-8.

76. Missives to *lensmænd*, *Kancelliets Brevbøger*, 20 June 1623; 6 February 1624; 10 January 1632; and 11 February 1633.

77. Rigsarkiv, Rentekammer Udgift Conto I.a., Klædekammer Regnskaber, Udgift 1640/41.

the ship of all movable material, hauling it over to one side using a system of blocks and tackle, and then ensuring that the ship returned to a stable upright position at the end of the manoeuvre.

The total number of men employed in repairing the ships varied from a couple of hundred in the summer months to two or three thousand in the winter.

#### 6.3.4. The Ancillary Workforce

To keep the operation of the dockyard running smoothly and to ensure that the workers were fit and healthy required a variety of ancillary workers. Although they carried out vital tasks they were secondary in importance to the main workforce and may be dealt with fairly briefly here<sup>78</sup>.

Each of the three entrances to the dockyard was controlled by a *portner og vægter* (gate-keeper and watchman) who held responsibility for opening and closing the gates and making sure that no-one entered or left without authorisation, and to ensure that no materials were stolen. The *portnere* were paid 68 Kdlr. per annum and were assisted by three *vagter* (sentries) who each earned a total of 54 Kdlr. per annum<sup>79</sup>. A watch was also kept aboard ships that were laid up at the dockyard and a watch was maintained on these by a day and a night watch. In 1620/21 there was a day watch of 20 and a night watch of 25. By 1630 the total number of seamen on watchkeeping duties had risen to 144<sup>80</sup>.

All goods entering or leaving the dockyard, and all materials issued to the ships, were assessed by the *overvejer, vrager, tolder og maaler* (chief weigher, assessor and measurer) who worked under the supervision

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78. Unless otherwise stated the information in this section comes from Lind, *Kong Kristian og hans mænd*.

79. Commission for Peder Lauritzen, *Kancelliets Brevbøger*, 26 May 1646.

80. Rigsarkiv, Rentekammer Udgift Conto I.a., Klædekammer regnskaber, 1620/21 & 1630/31.



of the *proviantskriver* and the *materialsriver*. His assistant, the *undervejer*, was responsible for keeping the books as well as the actual measuring. The importance of the post is reflected in the relatively high salary of 150 Kdlr. for the *overvejer*<sup>81</sup>. The *undervejer* received half of this and there was also a boy helper who received 4 Kdlr. a month<sup>82</sup>.

The kitchen was run by the cook and his assistant, the *kældersvend*. These are the only men ever mentioned in connection with the kitchen in the accounts but the quantity of food required to feed the hundreds of workers was vast and, although the food was principally boiled meat, salt fish and bread, it is inconceivable that just two men could prepare and serve it all. In 1580 the kitchen had a staff of ten<sup>83</sup> and it is reasonable to assume that this figure increased as the dockyard expanded during Christian IV's reign. Jón Olafsson describes one of his acquaintances in 1616 as the 'ypperste Kældermester paa Bremerholm' (highest cellar master at Bremerholm)<sup>84</sup>, which would suggest that there was certainly more than one *kældersvend*. There is also mention of a *fischebløder* (fish soaker) in the accounts<sup>85</sup>.

The cook and his assistants came under the *proviantskriver*'s direct control, as did all ship-borne cooks. The number of men who were allowed to receive meals and those allowed a beer ration was agreed every week with the Holmens admiral and any additional men who required rations had to be separately accounted for. Strict guidelines were

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81. Commission for Laurits Nielsen, *Kancelliets Brevbøger*, 9 May 1634.

82. Commission for Hans Christensen, *Kancelliets Brevbøger*, 30 May 1625.

83. Lind, *Fra Kong Frederik den andens tid*, 201-2.

84. *Memorier og Breve, I, Islænderen Jon Olafssons oplevelser som bøssekytte under Christian IV*, (København, 1966), 25.

85. Rigsarkiv, Marinearkivet før 1655, 28. Bremerholms Tømmerregnskaber 1601/02.

issued as to how much food was to be issued. For instance a barrel of headless cod was sufficient for 336 meals, a barrel of grain 1408, a barrel of butter 3332, and so on<sup>86</sup>. These numbers varied from time to time but no indication is ever given as to quite how the figures were calculated.

The administration of the dockyard hospital, which from 1628 was located outside the dockyard itself, was carried out by the *forstander i sygehuset* (hospital manager). A cook and *kældersvend* prepared the patients' food and two women were employed as cleaners. The treatment was undertaken by the *bartskær* (barber surgeon), who also attended to patients at the arsenal, provianthus and the tugthus. In 1636 a professional physician, or *medicus*, was also engaged who was intended to supervise the barber surgeons, but he stayed in the post for less than a year. Another physician was appointed in 1644, and in 1646 he became the physician for both the navy and the tugthus, with a salary of 400 Kdlr.<sup>87</sup>

The spiritual needs of the workforce were administered by the *Bremerholms sognepræst* (Bremerholm parish priest). This post came into being when the old forge was converted into the Holmens Kirke in 1619. He also assumed the role of dean to the sea-going chaplains in the navy. His staff at the church expanded as the navy grew, and by the end of Christian IV's reign there were two curates and two vergers. The curates led the services inside the dockyard for those working on Sundays and holy days and also acted as teachers for the boys at the dockyard. When the old hospital was converted into a school in 1628 a full time *skolemester* (schoolmaster) was appointed as a member of the church staff. He was to teach a class of twelve boys an 18 month course in the basics of the three 'R's and the catechism.

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86. Missive to Sten Villumsen, *Kancelliets Brevbøger*, 27 April 1624.

87. Commission for Niels Wichmand, *Kancelliets Brevbøger*, 26 May 1646.



The instruction of boys in the arts of seamanship and navigation was carried out by the *lærer i navigation* (navigation teacher). This post was loosely attached to the church school and was held initially by an Englishman, and then by a Dutchman. Strangely the post was left vacant from 1624 until 1647. The instructor was paid as an ordinary skipper and was expected to put to sea as such if the need arose<sup>88</sup>.

There were two naval courts of law at this time. The first, the equivalent of the English High Court of Admiralty, met at the Castle and was presided over by the *rigsadmiral*, *rigskansler* and other members of the state administration. This met infrequently and heard non criminal cases relating to maritime law, and the settlement of disputes concerning prize money and maritime tolls. The second was essentially a court-martial and dealt with more mundane matters such as theft and indiscipline. This was presided over by the *Holmens admiral* and its members were called from serving naval officers<sup>89</sup>. These courts had no dedicated personnel until 1646, when a *fiskal paa Bremerholm, Tøjhuset og Flaaden* (fiscal of Bremerholm, the arsenal and the navy) was appointed to oversee matters. He was to ensure that 'alt går rigtigt til på Bremerholm, i tøjhuset og på flåden efter gældende bestemmelser' (all is kept in order at Bremerholm, the arsenal and the navy after the current provisions)<sup>90</sup>. He was not paid a regular salary but received a quarter of all goods confiscated and fines imposed. There were also two *Holmens profos* (naval provosts) who kept discipline among the workforce.

The last documented ancillary official at Bremerholm is the *vindskriver*, who was paid 64 Kdlr. a year to keep a record of the wind direction by day and night. This post was established in the 1620s after

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88. Commission for Bagge Wandell, *Kancelliets Brevbøger*, 16 June 1647.

89. F.S. Grove-Stephensen, 'Marinens jurisdiktionsforhold før 1660', *Marinehistorisk tidsskrift*, (2/1984), 19-31.

90. Commission for Peder Knudsen, *Kancelliets Brevbøger*, 16 March 1646.

an ordinance was issued that required the *Holmens admiral* to keep a register of wind to try and prevent ships from coming to grief through unpredictable weather<sup>91</sup>.

In addition to all these men there would have been a variety of other workers such as storemen, carters, and stable hands who looked after the horses which were needed to shift heavy materials and the oxen which drove the forges. A *møgspreder* (muck spreader) is mentioned in 1580<sup>92</sup> and no doubt this task carried on into Christian IV's time.

In total it is estimated that there would have been in the region of about 70 ancillary staff, excluding the seamen on watchkeeping duties.

#### 6.3.5. Prisoners 'in Bremerholm's Iron'

The last type of worker that was found at the dockyard were the so called *fanger i Bremerholms jern* (prisoners in Bremerholm's iron). The practice of using prisoners in the royal dockyard dates from as early as 1566 when vagrants were rounded up and sent to work there<sup>93</sup>. This practice was formalised in 1573 when all *lensmænd* and market towns were instructed to send as many vagrants, gypsies, beggars and thieves as possible to Copenhagen<sup>94</sup>. Gradually it became standard practice that all persistent offenders who had been sentenced to death instead had their sentences commuted to a life's hard labour at Bremerholm. Any further misdemeanour by them would result in their original sentence being carried out at the dockyard gallows<sup>95</sup>.

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91. Forordning om orden med de krigsskibe, 6 February 1621, *Corpus Constitutionum Daniæ*, III, 627-8.

92. Lind, *Fra Kong Frederik den andens tid*, 201.

93. Fr. Stuckenberg, 'I Bremerholms jern', *Historisk tidsskrift*, (1892), 670.

94. Missive til Lensmændene og Købstæderne, 13 August 1576, *Corpus Constitutionum Daniæ*, III, 20.

95. Missives to *lensmænd* 24 March 1601 and 18 May 1620, *Corpus Constitutionum Daniæ*, III, 139 & 617.



Criminals could be sentenced to a period of punishment in Bremerholm's iron of anywhere between one and twenty years depending on the nature of their crime. Christian IV himself sometimes decided on the duration of these prisoners' punishments<sup>96</sup>. As a particularly harsh punishment for Crown servants who had committed a crime against the state, they were sentenced to be fettered together with one of the most disreputable prisoners at Bremerholm<sup>97</sup>. Swedish prisoners of war could also find themselves clapped in iron at the dockyard<sup>98</sup>. The practice of condemning vagrants to a life of hard labour also continued well into Christian IV's reign<sup>99</sup>, and an ordinance on begging from 1636 stated that beggars should 'føres til Bremerholm, der at arbejde i jern eller i lænke, eller på vore jagter og galejer' (be sent to Bremerholm, there to work in iron or in chains, or on our *jagts* and galleys)<sup>100</sup>. It was further enshrined in law that anyone found unemployed and refusing to work was to be sent to work in irons<sup>101</sup>.

As the term suggests, all prisoners were bound in iron fetters. One observer noted that 'ulydige og skalkagtige mennesker og løsgængere arbejde her med lænker og jern om benene, livet, og halsen' (disobedient and roguish men and vagrants work here with chains and iron on their legs, waist and neck)<sup>102</sup>, and depending on the nature of their work they were also sometimes fettered together. Jón Olafsson provides an interesting description of being put into 'Bremerholm's iron':

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96. Details of prisoners, October 1622 and 22 October 1623, *egenhændige Breve*, I, 249-63 & 335-48.

97. Letter to Corfitz Ulfeldt, 21 February 1641, *egenhændige Breve*, V, 22.

98. Letter to Corfitz Ulfeldt, 28 June 1644, *egenhændige Breve*, V, 480.

99. Four vagrants sent to Bremerholm, *Kancelliets Brevbøger*, 6 April 1634.

100. Stuckenberg, 'I Bremerholms jern', 669.

101. Reces 1643, *Corpus Constitutionum Daniæ*, V, 317.

102. Stuckenberg, 'I Bremerholms jern', 669.

Thereupon Grabow bade the Provost conduct me to the Island (i.e. Bremerholm) to Master Anders, who was the King's chief smith, and ordered him to fasten an iron ring round my neck, outside my clothes, as was done with several persons. On it, at the nape of my neck, there was a thin iron ring, on which hung a bell of such dimensions that a man with large hands could conceal it inside them<sup>103</sup>.

The total number of prisoners at any one time is hard to judge. Table 6.3. shows, from the few surviving records available, the numbers of prisoners that were sentenced:

<u>Year</u>	<u>No. of Men Sentenced</u>
1621	53
1622	77
1623	48
1624	36
1625	36
1626	14

**Table 6.3. Men Sentenced to Work 'in Bremerholm's Iron'**

Source: Rigsarkiv, Marinearkivet for 1655, 7. Fortegnelser over fanger, 1621-1626.

These figures do not show the total number of prisoners but simply the new ones arriving each year. Of these a fair proportion either died or escaped. The 1642 budget estimate<sup>104</sup> gives a total of 154 prisoners, but by 1646 their number was estimated at only 100<sup>105</sup>. They were

103. Bertha S. Phillpotts (Ed.), *The Life of Jón Olafsson*, Vol. I, (Hakluyt Society, Series II, Vol. LIII, 1923), 188.

104. Chr. Bruun (ed.), 'Kort Overslag over Rigens Indtægt og Udgift 1642', *Danske Samlinger*, 6 (1870-71), 325-47. See Chapter 3.

105. Rigsarkiv, Danske Kancelli, B186, Oluf Daas Optegnelser, f.39-40.



originally housed in Copenhagen Castle but by 1620 a new prison had to be erected within the dockyard to cope with the growing number of prisoners. This was further enlarged in 1640<sup>106</sup>, suggesting that the number of prisoners steadily increased throughout the reign.

They were guarded by six *fangefogeder* (prison warders)<sup>107</sup> but these were prone to corruption, and a payment of only 2 Daler could secure the release of a prisoner<sup>108</sup>.

The prisoners were put to a variety of work in the dockyard, mainly in the forge or the rope-walk, where they carried out the heavy and dirty work such as operating the 'trædemølle' (tread-wheel)<sup>109</sup>, shifting materials and tarring cables. They were also used to man the oars of the galleys at sea. They were not, however, restricted only to working at the dockyard and were frequently sent to carry out labouring work at Frederiksborg castle, the Crown gardens<sup>110</sup>, and the arsenal.

#### 6.4. The Effectiveness of the Dockyard Administration

Having outlined in detail the workings of the dockyard administration we should now ask how effectively it operated, both in terms of the work that was carried out and the way in which it was managed.

Despite the number of dockyard officials the king himself remained the key to the dockyard's effective operation. He was closely involved in all aspects of its running, and dictated orders relating to all manner of

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106. See Chapter 5.

107. Rigsarkiv, Marinearkivet før 1655, 14. Bremerholms Proviantskrivers Regnskab 1643/44.

108. *Kancelliets Brevbøger*, 11 December 1638.

109. Rigsarkiv, Marinearkivet før 1655, 7. Fortegnelser over fanger, 1621.

110. Rigsarkiv, Marinearkivet før 1655, 7. Fortegnelser over fanger, 1623.

activities, from the appointment of senior officials and the building of new ships to petty matters such as the fitting of a new bowsprit<sup>111</sup> or the baking of bread<sup>112</sup>.

The king's role in the decade from 1600, when there was neither *rigsadmiral* nor *Holmens admiral*, was especially important. Although there was a *stadtholder*, Lind<sup>113</sup> maintains that Christian IV himself took on the responsibility for running Bremerholm, probably with the help of one of the skippers. There is undoubtedly some truth in this. However, the idea that he could have seen to the day to day management of what was a huge task, even for someone who had no other duties, is clearly ludicrous. The notion that 'Kongen kom selv dagligen paa Holmen, opmaalte og udvalgte selv det Tømmer, som skulde bruges, eftersaae Arbeidet, og reviderede Regnskaberne' (the king himself came daily to Bremerholm, measured and selected the timber that should be used himself, oversaw the work, and audited the accounts)<sup>114</sup> is nothing but sheer fantasy.

The precise details of how the dockyard was managed during this period is unclear. Unfortunately the king's letters from this time are sparse and there is not one which mentions naval matters. Even in the protocols of the Danske Kancelli there are very few references to the dockyard in this period, and these are directed primarily to individual naval officers or *lensmænd* and mainly concern the supply of materials. It can only be assumed that for ten years the royal dockyard 'muddled through' under the watchful eyes and verbal instructions of the king and his *stadtholder*. Most likely the master shipwrights dealt with matters

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111. Letter to Breide Rantzau, June/July 1610, *egenhændige Breve*, I, 33-4.

112. Letter to Corfitz Ulfeldt, 27 June 1642, *egenhændige Breve*, VIII, 193-4.

113. Lind, *Kong Kristian og hans Mænd*, 25-31.

114. W. Graah, *Udkast til Danmarks Søekrigshistorie*, (København, 1818), 85-6; H.C. Bering Lisberg further asserted that Christian IV was the first to arrive at the dockyard gates every day (*Christian IV*, (København, 1890-91), II, 115).



relating directly to ship construction and repair, while the naval officers dealt with the supervision of the seamen, with the *materialskriver* overseeing the finances of both. Things could not continue like this for ever, though, and changes were inevitable.

The 1620s mark a critical point in the dockyard's administration. As it became steadily more sophisticated, with the creation of new docks and workshops, strict new guidelines had to be established for working practices within the dockyard. With the threat posed by the Thirty Years War the administrative structure also needed to be tightened up if it was to operate effectively in the king's absence. The publication of the *Holm- og arsenalartikler* in 1625 established a formal code of conduct for the workforce, commissions of appointment were also drawn up for the first time for many of the officials and craftsmen, and several new posts, such as the *overskipper*, were created.

This may have been at the instigation of Christian IV who knew that the organisation must be tightened up if he was not going to be present to oversee matters, but it may simply have been that without Christian IV's direct supervision the dockyard fell into a state of disarray which had to be rectified by introducing tighter controls. In any case the strengthening of the administration was achieved essentially by formalising the existing structure and not through any radical change. The changes were made very much at a lower level and the senior management of the dockyard remained virtually unchanged.

It was in the senior management, however, that the problems really existed. The key naval appointment was the *Holmens admiral*. As we have seen he was personally bound to undertake an almost impossible number of tasks without being entirely sure who he was ultimately responsible to, and was without any adequate support from subordinate 'line managers'. Christian IV's indignation at the poor performance of his *Holmens admiral* is justified in some ways, but he must take some of the blame

himself for putting them in such an untenable situation in the first place. It is hardly fair to expect that one official should take sole responsibility for overseeing the work in the dockyards whilst at the same time being continually ordered to sea as a military commander. To be really effective the post required a truly extraordinary man, but experience showed that Christian IV's choices all proved to be decidedly ordinary.

It is interesting to speculate why Christian IV did not do more to improve the management of Bremerholm. His distrust of delegation no doubt played a part, but his knowledge of the English dockyards may also have been an influence. Christian IV had visited the English dockyards in person in 1606 and 1614, and in 1627 an envoy was sent to review English practices<sup>115</sup>. The English navy and naval dockyard administration were at this time at a low ebb and the placing of the naval administration in the hands of a commission in 1618 did little to improve matters. As a model of reform it was hardly likely to persuade Christian IV to depart from the system which had served him reasonably well until then.

Christian IV did take a less active role in the dockyard's administration for several years after Corfitz Ulfeldt was appointed, but he still kept a close eye on what was going on and was able to state that 'Ieg kender ded selskab uel paa Bremmerholmen' (I know the situation well at Bremerholm)<sup>116</sup>. After Ulfeldt's mismanagement was exposed he once more took over direct command<sup>117</sup>.

In fact the existing organisation had a lot going for it. The lower levels of management by the clerks and master craftsmen operated reasonably efficiently, and the *Holm- og arsenalartikler* and the highly

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115. Michael Oppenheim, *A History of the Administration of the Royal Navy 1509-1660*, (London 1896), 297.

116. Letter to Corfitz Ulfeldt, 4 December 1638, *egenhændige Breve*, VIII, 130.

117. See Chapter 3.



detailed commissions governing the workers duties and responsibilities were far in advance of anything known in the English dockyards at that time. Although there was no guarantee that everyone would uphold everything contained in their commission, at least they should all have known their precise role within the dockyard.

The centralisation of the navy and the dockyard in Copenhagen also created a much more efficient organisation than was possible in England. In England there were four separate dockyards but none had its own rope-walk, sail works or arsenal. This made them dependent on imports, especially of timber and cordage, and on private contractors, who boosted their own profits by supplying poor materials and short measures. In Denmark virtually everything required for the fitting out of ships was manufactured by state employees in the one central dockyard, eliminating the need for duplication and significantly reducing the opportunities for corruption.

Another significant advantage that the Danish naval administration had over the English system was that all employees were paid at least a living wage, and in some cases a very handsome wage indeed, which was regularly reviewed and increased according to the official's seniority and responsibility. In England, wages had failed to keep pace with inflation, tempting officials and workers into abusing the system to supplement their meagre official income. Although corruption could not be eliminated altogether in Denmark, the level of wages did drastically reduce the *need* for corruption.

However, what had been an adequate naval administration during the early years of Christian IV gradually became inadequate as the size of the navy rapidly expanded. Even though the work-load had more than doubled the dockyard administration remained essentially the same as it had been at the start of his reign. Christian IV failed to recognise that impressive ships and dockyards were not enough. Equally as important

was an efficient administration that enabled it to be deployed effectively. However, it must be said that the primary purpose of the naval dockyard was to enable the navy to put to sea every year, and in this regard it undoubtedly succeeded, although the way in which this was achieved was inefficient, outmoded and no longer suited to the large navy created by Christian IV. It is not surprising then that efforts were made soon after his death to re-organise the dockyard's administration, resulting in the admiralty college of 1655.

This 10 man body consisted of the *rigsadmiral*, a *rentemester*, the *Holmens admiral*, the *Holmens viceadmiral*, three captains with responsibility for victualling, shipbuilding and repair, and materials provision, a secretary, and two *admiralitetsråd* (admiralty councillors) concerned with commercial matters<sup>118</sup>. This was not the ultimate solution to the problem, and several changes were made in subsequent years, but at least a formal structure had been devised which reduced the burden of responsibility on the *Holmens admiral* and clearly delegated the working of the dockyard administration into several specific areas.

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118. Instruks for admiralitetskollegiet på Bremerholm, 29 August 1655, and Forordning om fordelingen af opsynet på Bremerholm, 8 June 1656, *Corpus Constitutionum Daniæ*, V, 192-3 & 281-2.



## 7. The Organisation of the Seagoing Navy

As with the administration of the dockyard, there had to be some kind of organisational system in place if the navy was to function effectively at sea. Rules of discipline had to be encoded and a recognised command structure had to be in place aboard every ship. In addition effective lines of command and a means of communication had to be established when ships sailed together in squadron.

### 7.1. Organisation Aboard Ship

#### 7.1.1. Naval Discipline

Naval discipline was governed by the *Skibsartikler* (ships articles). Versions of these regulations had existed since the early 16th century and were issued, with minor alterations, to every ship before it set sail, but it was not until 1625 that they were standardised and published<sup>1</sup>. The published version was based on articles drawn up in 1582, but were greatly expanded, both in terms of detail and in the number of articles. All officers and men who boarded the king's ships were to swear an oath of allegiance to the king and the ship, and were bound to uphold these *skibsartikler*.

They were published at the same time as the *Holm- og arsenalartikler*<sup>2</sup>, and similarly outline the codes of conduct and the disciplinary procedures, but the *skibsartikler* related specifically to life aboard ship. There were a total of 100 articles, divided into 11 sections: religious observance; allegiances; justice and maltreatment; avoiding coas-

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1. *Skibsartikler*, 8 May 1625, V. A. Secher, *Corpus Constitutionum Daniæ*, (København, 1887-1918), IV, 256-87; F. S. Grove-Stephensen, 'Marine jurisdiktionsforhold før 1660', *Marinehistorisk tidsskrift*, (2/1984), 19-20.

2. See Chapter 6.

tal hazards; watchkeeping; signalling; fighting conduct; ammunition; prize goods; victualling; and quartering and sickness. Some were directed specifically to certain members of the crew and others were more general in nature, varying from highly serious ones governing the safety of the ship and the punishments for mutiny and murder, as well as more petty ones such as prohibitions against complaining to the cook or throwing food overboard, both of which carried the punishment of keel-hauling. In order that the men could forget neither their allegiance nor the heavy punishments for indiscipline the *skibsartikler* were to be read in full to the crew every month or two, depending on the need.

### 7.1.2. The Senior Officers

Every warship carried at least one *overofficer* (senior officer). The most senior officer commonly serving on a ship was the *kaptejn* (captain). His role was essentially symbolic, representing and maintaining the authority of the king at sea. He was responsible for carrying out the instructions contained in the ship's sea pass, and in battle situations he would be called upon for tactical decisions, but for the most part he had little to do with the actual running of the ship apart from being in charge of discipline. This was similar to the situation in England where only 'Gentleman Officers' had the social status and code of ethics that enabled them to command in war.

All captains received a commission through the *Danske Kancelli* and their ability first had to be attested by the *rigsadmiral*, but this by no means meant that every captain was a competent seaman. In fact a commission could be gained with very little sea experience and, as has been seen<sup>3</sup>, the *rigsadmiral* was not always the most able person to examine competent seamanship. Many of the officers were in fact little more than

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3. See Chapter 2.



courtiers whose military obligations took them to sea rather than to the battlefield. There were some officers, though, who saw a career in the navy and started as *adelsburse* (noble pages), serving aboard ship as volunteers to learn seamanship<sup>4</sup>, much as the English midshipmen of a later age did.

In contrast to army captains, who received a commission that specifically stated their position in the army, naval captains were usually appointed as 'Kaptejn til Lands og til Vands' (captain on land and at sea)<sup>5</sup>. This apparently confirms that officers were not necessarily specialists in naval affairs, but this rather confusing terminology may simply have meant that naval captains were also expected to serve at Bremerholm when not actually at sea. A typical commission reads as follows:

Bestalling for Søfren Harboe som Skibskaptejn og ellers med Tjeneste til Lands og til Vands, hvor Kongen befaler, med en aarlig løn af 300 Kurantdlr. og en Hofklædning for sig selvanden fra Bestil-  
lingsdagen af, at udrede af Rentemestrene<sup>6</sup>.

Commission for Søfren Harboe as ship's captain, and otherwise for service on land and sea, where the king commands, with an annual pay of 300 Kdlr. and a suit of courtly robes for himself from the day of commission, to be paid by the *rentemestre*.

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4. R. Steen Steensen, 'Søværnets Officersskole', in Steensen (ed.), *Flåden gennem 475 år*, (København, 1961), 428.

5. Jens Vognsen's commission, *Kancelliets Brevbøger*, 23 February 1625.

6. *Kancelliets Brevbøger*, 5 February 1628.

The *løjtnant* (lieutenant)<sup>7</sup> was junior to the captain and on larger ships one or more of them would serve under him, depending on the size of ship. They were also frequently given command of smaller ships. Unlike captains, the lieutenants' commissions were specifically related to service at sea, using the terminology of '*løjtnant til skibs*' (ship's lieutenant)<sup>8</sup>.

Compared to many state employees, the senior officers' commissions were very concise, but at the same time totally imprecise. They simply bound themselves to serve at the king's discretion and by 1645 it was realised that these obligations were so vague and open to abuse that new regulations needed to be introduced. An ordinance summed up the situation thus:

Eftersom vi befinder, at vore søcapiteiner oc leutenanter liden eller ingen opsigt hafver med vores flode eller med deris underofficerer udi vores skib, al tid forevendendis, at enhver selfver til sit bør at svare, hvorofver al ting gemenlig stander udi disordre, end dog vi fornemmeligen derfor hafver capiteiner oc leutenanter udi vores tieniste.

Since we find that our sea captains and lieutenants take little or no supervision of our navy, or of their junior officers in our ships, as they are expected, each ought to answer for himself for what reasons everything usually stands in disorder, even though we specifically have captains and lieutenants in our service for this purpose<sup>9</sup>.

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7. The class of lieutenant seems to have been formally introduced in 1578 although they were mentioned when the admiralty guild was formed in 1558. H.D. Lind, *Fra Kong Frederik den andens tid: Bidrag til den dansk-norske sømagts historie 1559-1588*, (København, 1902), 194; Jørgen H. Barfod, *Christian 3.s flåde*, (København, 1995), 125.

8. Commission for Frants v. Stenwinckel, *Kancelliets Brevbøger*, 10 April 1631.

9. Ordinans for skibskaptejnernes forhold, 10 May 1645, *Corpus Constitutionum Daniæ*, IV, 455-8.



A set of regulations governing their role and conduct were then outlined to try and remedy this situation. It was stipulated that captains and lieutenants should be familiar with all aspects of the running of a ship and were to oversee everything aboard their ship and ensure that everything concerning it and its men was as it should be. They were to take ultimate responsibility for the ship's safety and ensure that the hull was correctly ballasted and kept watertight; that the rigging was correctly rigged and all running gear was kept greased; and that the cannon were kept in good order and ready for use. They were to sail the correct course, as instructed, and only use those harbours that were suitable for their ship. They also held responsibility for law and order among the crew and were to ensure that all victuals were of the correct standard and measure. In addition all captains and lieutenants were to meet at Bremerholm every spring so that their precise duties for the coming year could be assigned by the *Holmens admiral*.

It is significant that these regulations were introduced in the aftermath of the navy's poor record in the *Torstenssonkrig*, during which Christian IV complained that his officers were incompetent and were putting the state's sea-power at risk<sup>10</sup>. The effects of the new regulations, however, were not immediately felt and the incompetence shown by Ove Giedde as *rigsadmiral* in wrecking his flagship<sup>11</sup> did not prove a good role model for his officers. The new regulations were really of little use unless effective training was provided for the education of officers. Even when the new navigation school was established in 1647 it was aimed at

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10. Letters to Corfitz Ulfeldt, 14 & 26 July 1644, C.F. Bricka & J.A. Fredericia (eds.), *Kong Christian den Fjerdes egenhændige Breve*, V, 484-5 & 487-9.

11. See Chapter 2.

teaching those boys intending to become junior officers rather than captains and lieutenants, so it is little wonder that the majority of senior officers in Christian IV's navy were of such a poor standard.

There were also a number of other ranks of *overofficer* in the navy. Apart from the *rigsadmiral* and the *Holmens admiral*, there was no permanent rank of admiral. An *admiral* was simply a captain who was placed in charge of a squadron of ships, and who still retained the rank of captain aboard his own ship. Officers who were of noble birth were sometimes referred to as *skibsherremænd* (ship's lords)<sup>12</sup>, and if the king or *rigsadmiral* put to sea, their ship's captain was usually referred to as the *flagkaptejn* (flag captain). To simplify all these distinctions the officer in command of a ship, whatever his actual rank, was frequently referred to as simply the *skibshøvedsman* (ship's leader).

As a ship usually carried a complement of soldiers as well as seamen, specific officers were appointed to supervise them. The *kaptejn over soldatterne* (captain of soldiers) was the most senior, and there could also be a *løjtnant til lands* (lieutenant of land troops) aboard the ship. In the event of there being no captain then the most senior lieutenant was termed the *kaptejnløjtnant* (lieutenant-captain)<sup>13</sup>. These officers had no responsibility for the running of the ship and were simply responsible for the command of the sea-going soldiers.

Despite Christian IV's distrust of guilds, the officers had their own *admiralitetslav* (admiralty guild). This was established in 1558 but little is known of its history. The guild had a set of rules and regulations governing the conduct of its brethren, but the only references relating to it concern the provision of alcohol, suggesting that its main purpose was that of a drinking club. It was traditionally presented two barrels of

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12. During Christian IV's reign 27% of all officers were of noble birth. (H.D. Lind, *Kong Kristian og hans mænd paa Bremerholm*, (København, 1889), 132.)

13. *Skibsartikler*, 280.



beer by Copenhagen Castle at Christmas, and in 1642 it requested the waiving of excise on a last of beer. In that year its members numbered 300, consisting not only of ships' captains and lieutenants but also skippers and other junior officers<sup>14</sup>. There was also a *skipperlav* (skippers guild) for commercial seamen, to which some naval officers also belonged<sup>15</sup>.

### 7.1.3. The Junior Officers

The *underofficere* (junior officers) were equivalent to the English warrant and petty officers. The most important of these was the *skipper*, who was in absolute control of the running of the ship and was responsible for its good repair and seaworthiness. A skipper could also occasionally be put in command of smaller warships and was generally the highest rank aboard the royal transport ships.

The skipper's duties were well established by tradition, but by 1625 it was noted that:

vi dagligen forfarer stor uskickelighed paa vor flode, skibe oc Holm at begaais af aarsag, at skipperne deris anbetroede bestilling enten icke flittig nok hafver efterkommit eller oc den egentlig icke i alt forstandit<sup>16</sup>.

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14. Letter from Admiralitetslav, 27 November 1642, Rigsarkiv, Danske Kancelli, B160, Indlæg til registre og tegnelser.....

15. Lind, *Fra Kong Frederik den andens tid*, 187 & 242; H.D. Lind, *Kong Frederik den Tredjes sømagt: det dansk-norske søværns historie 1648-1670*, (København, 1896), 16-7.

16. Instruks for skipperne i kongens tjeneste, 29 April 1625, *Corpus Constitutionum Daniæ*, IV, 217-26.

we daily experience great incompetence in our navy, ships and dockyard due to the fact that the skippers either do not comply with their pledged commission diligently enough or they really do not fully understand it.

A formal commission was then drawn up to clarify the skipper's responsibilities in an effort to improve matters. This stated that he was to be responsible for all of the ship's equipment and was to keep an inventory of everything that belonged to the ship, from anchor cables down to nails and bolts. In addition a register was also to be kept of everything issued annually from the dockyard, such as flags, compasses and lights. He was also responsible for preserving the soundness of the ship's timbers by keeping everything clean and the ship well ballasted.

Skippers were to supervise the quartering of men to ensure that the less experienced could learn from their shipmates and also to supervise the intake and distribution of victuals. They were also expected to be present when buoys were laid so that they could learn the shipping lanes, and were also to sail at least once every two or three years into the eastern Baltic so that they could operate there in times of emergency without a pilot.

The skipper's commission therefore overlapped to a large extent with the captain's, but while the captain merely took on the responsibility for certain provisions, the skipper, it seems, directly supervised the work.

Alongside the skipper sailed the *styrmand* (steersman) who navigated the ship. These were also used as pilots and were specially recruited from all areas of Denmark-Norway to ensure that the fleet could navigate safely through any of the home waters. The *styrmand* was assisted by the *kvartermestre* (quartermasters), who were promoted from the rank of seaman to physically steer the ship.



The *skibsskriver* (purser) was responsible for keeping a muster roll of all men aboard the ship, and the amount of wages and victuals issued to them. Any cargo that was carried was inventoried by him and he also kept a log of any disciplinary actions that were needed during the voyage. If there was no chaplain aboard the ship then the purser was to read the gospels to the men in his stead<sup>17</sup>. The *skibsskriver* was assisted by the *skibmænd* (holdsmen) who were responsible for the stowage of all materials in the hold of a ship.

Whilst the skipper, with the assistance of the *højbådsmand* (boatswain), supervised the seamen, the *arkelimester* (master gunner), sometimes also referred to as the *konstabel* (constable), supervised the gunners. In conjunction with the ship's captain, he kept an inventory of all cannon and small arms aboard the ship, and was responsible for issuing powder and ammunition<sup>18</sup>.

The ship's captain was ultimately responsible for discipline aboard ship, but the *skibsprofos* (naval provost) and his *svende* actually policed the men and dealt out any punishments.

#### 7.1.4. The Men

There were three classes of men aboard a ship: seamen; gunners; and soldiers. Each had their own distinct function, although there was some element of overlap in their duties.

*Bådsmand* (seamen) were those men who carried out all tasks to do with the running of the ship, such as hauling cables and setting sails. As soon as they went aboard a ship they were divided into starboard and larboard watches. Each watch was then further divided into messes of five, six or eight men. Within each mess there were always to be a num-

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17. Lind, *Kong Kristian og hans mænd*, 356-7; *Skibsartikler*, 257.

18. Holm- og arsenalartikler, 8 May 1625, *Corpus Constitutionum Daniæ*, IV, 249.

ber of experienced seamen who could teach the less experienced in the arts of seamanship. The most senior seaman in the mess was called the *rodemester* (mess master)<sup>19</sup>.

*Bøsseskytter* (gunners) were those men who operated the ship's cannon. They actually came under the direct command of the arsenal rather than the dockyard, and were expected to serve on land as well as at sea<sup>20</sup>. Not all gunners, therefore, were necessarily expert in naval gunnery, but in 1629 Christian IV attempted to rectify this and issued details for the drill for seagoing gunners<sup>21</sup>:

1. Dennom skall uyssis paa ded skiib, som nu leggiss ind udi haffnen ved tøyhussid, At wyske och laade Støckerne
2. At rette et Støcke, naar et skyb ligger ret, eller naar ded heller.
3. At røcke Støckerne ind och gørre dem faast, som dy bør at uerre vdi Søn.
4. At lucke porten och foruarre dem udi en Søegang.
5. At uyske och laade med et taagell, som dertill giordt er.
6. At taage lod och krud aff et støcke.

1. They are to be taught in the ship which now lies in the tøjhus harbour, to sponge and load the guns.
2. To elevate a gun, when the ship is upright or when it heels.
3. To run the guns in and make them fast, as they ought to be at sea.
4. To close the ports and protect them against a rough sea.

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19. Skibsartikler, 260-1.

20. Holm- og arsenalartikler, 254.

21. Letter to Hertug Frederik, Hertug Ulrik and Thomas Nold, 24 January 1629, *egenhændige Breve*, II, 174.



5. To sponge and load them with a rope, which is used for the purpose.
6. To take the ball and powder out of a gun.

The ratio of gunners to seamen was at first not great as the cannon, once run out, stayed out and were loaded from outboard. This changed in the 1640s as inboard loading was introduced, and greater numbers of men were needed to haul the guns in and out for every shot<sup>22</sup>.

*Soldatter* (soldiers) similarly were not specifically trained to fight at sea. They were simply a section of the army who were assigned to duty aboard the king's ships, rather than his forts or battlefields<sup>23</sup>. They were not entered in the navy's books and were paid through the army's own administration. In battle they fought with small arms and were the main force when enemy ships were boarded.

The gunners and soldiers were known collectively as *krigsfolk* (war men) and in times of war they received their orders directly from their own senior and junior officers, such as sergeants and corporals. However, when they were not engaged in either battle drills or actual fighting, they were expected to assist the seamen in the less skilled aspects of running the ship, such as scrubbing the decks and manning the pumps, and were directed by the ship's officers<sup>24</sup>.

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22. Preben Holck, 'Outboard Loading', *Mariner's Mirror*, 17 (1931), 282-3.

23. Missive to Falcke Lykke, *Kancelliets Brevbøger*, 9 March 1637.

24. *Skibsartikler*, 261.

Although the work of the different classes of men were specialised the boundaries between them was still fairly flexible. Seamen were sometimes temporarily designated as gunners<sup>25</sup>, and if there were not enough seamen to man the ships then gunners could be used instead<sup>26</sup>. All men, whether they were seamen, gunners or soldiers were also expected to participate as watchkeepers.

#### 7.1.5. The Total Ship's Complement

In addition to those men already described there were a number of other junior officers and men aboard a ship such as junior officers' mates, surgeons and cooks, as well as craftsmen such as carpenters and sail makers, who kept the ship in good repair whilst at sea.

Table 7.1. shows as near a complete list of crew members as possible, with their pay and the ideal number of men aboard the three main classes of warship<sup>27</sup>. Some designations that are mentioned from time to time are imprecise, for instance the naval provost's *svende*, watchkeepers and *rodemestre* were probably just seamen and soldiers who were appointed to these particular duties for the duration of the voyage, and were not really a formal rank. For the sake of clarity these have been omitted from the table.

In addition to the crew members listed here, the king also carried a retinue of around 40 servants, cooks, and medics, for himself and his mistress when he set sail, in one of the larger ships<sup>28</sup>.

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25. Rigsarkiv, Rentekammer Udgift Conto I.a., Klædekammer regnskaber, 1626/27, f.194.

26. Letter to Corfitz Ulfeldt, 25 January 1643, *egenhændige Breve*, V, 291-2.

27. Letter to *rentemestre*, March 1633, *egenhændige Breve*, III, 95-6.

28. Letter to Corfitz Ulfeldt, 7 January 1644, *egenhændige Breve*, V, 433-5.



Rank	English equivalent	Wages (Kdlr.)	No. of Men		
			Capital Ship	Battleship	Small Warship
<u>Overofficere</u>	<u>Senior Officers</u>				
Kaptein	Captain	200-400	1	1	0
Løjtnant	Lieutenant	150-200	2	1	0
Kaptein over soldatterne		?	1(?)	1(?)	0(?)
Løjtnant til lands		?	1(?)	0(?)	1(?)
<u>Underofficere</u>	<u>Junior Officers</u>				
Skipper	Master	30-100	1	1	1
Underskipper	Master's Mate	40	2	1	1
Styrmand	Pilot	24-300	4	2	1
Højbådsmand	Boatswain	34-38	1	1	1
Højbådsmands Mat	Boatswain's Mate	20-25	3	1	1
Arkelimester	Master Gunner	24	1	1	1
Arkelimesters Mat	Gunner's Mate	?	1	1	1
Skibmand	Holdsmen	34-38	4	2	2
Skibmands Mat	Holdsmen's Mate	20-25	4	2	2
Trompeter*	Trumpeter	24	3	1	0
Skibsskriver	Purser	34-38	1	1	1
Bartskærer	Surgeon	12-15	1	1	1
Bartskæredreng	Surgeon's Boy	?	1	0	0
Skibspræst	Chaplain	100-130	1	0	0
Skibspræstedreng	Chaplain's Boy	?	1	0	0
Skibs Profos	Naval Provost	23-28	1(?)	1(?)	0(?)
Kvartermester	Quartermaster	60-120	4	2	2
<u>Mand</u>	<u>Men</u>				
Bådsmand	Seaman	12-15	130	60	30
Bøsseskytter	Gunner	36-84	30	15	8
Soldater	Soldier	?	100	40	30
Tømmermand	Carpenter	60-72	4	2	1
Sejllægger	Sailmaker	17-23	2	1	0
Bødker	Cooper	17-23	1	1	0
Kok	Cook	15	1	1	1
Kældersvend	Steward	15	1	1	0
Trommeslager	Drummer	12	1	1	1
Pøkkerdreng	Ship's Boys	9	8(?)	6(?)	0(?)
TOTAL			312	146	85

\* Trumpeters could be substituted by pipers or shawm players.

Table 7.1. The Ship's Complement

Sources: Skibsartikler, 8 May 1625, *Corpus Constitutionum Danica*, IV, 257-87; Missive to *rentemestre*, *Kancelliets Brevbøger*, 19 February 1625; Letter to *rentemestre*, March 1633, *egenhændige Breve*, III, 95-6; Rigsarkiv, Rentekammer Udgift Konto I.a., Klædekammer regnskaber.

It is not easy to establish exactly which ranks held precedence over others aboard the ship. The crew's wages listed in Table 7.1. give some indication of the seniority of ranks aboard the ship, but the rules for the distribution of prize money provide further evidence. Table 7.2. shows the number of shares that each man was entitled to.

<u>Rank</u>	<u>Prize Share</u>
Ships Captain:	12
Captain of soldiers:	11
Lieutenant-Captain:	10
Lieutenant <i>til søs</i> :	9
Lieutenant <i>til lands</i> :	8
Skippers, sergeants, & <i>underskipperø</i> :	7
<i>Styrmænd, arkelimester &amp; højbådsmand</i> :	6
Pursers, holdsmen & quartermasters:	5
<i>Rodemestre</i> , corporals, gunners, naval provosts, <i>adelsburs</i> , cooks, stewards & the most experienced seamen:	4
Soldiers & ordinary seamen:	3
Ship's boys:	1½ or 2

Table 7.2. Prize Shares for Crew Members

Source: Skibsartikler, 8 May 1625, *Corpus Constitutionum Danicæ* IV, 280.

We also know that the chaplains and the barber-surgeons were to mess with the skipper, while the *styrmænd* and trumpeters were to mess with the *højbådsmand*<sup>29</sup>.

29. Missive to Sten Villumsen, *Kancelliets Brevbøger*, 11 September 1623.



It is therefore possible to construct a conjectural organisation chart for a ship's command structure. The structure shown in Figure 7.1. shows just one interpretation for one of the larger ships, and may well be incorrect in certain minor details. As with the dockyard management chart there is a danger of implying a greater degree of formal organisation than was actually the case. However, it is given here simply in an attempt to show how the different crew members interrelated in broad terms, and ought not to be taken as a definitive ship-board organisational structure.

## 7.2. Naval Recruitment

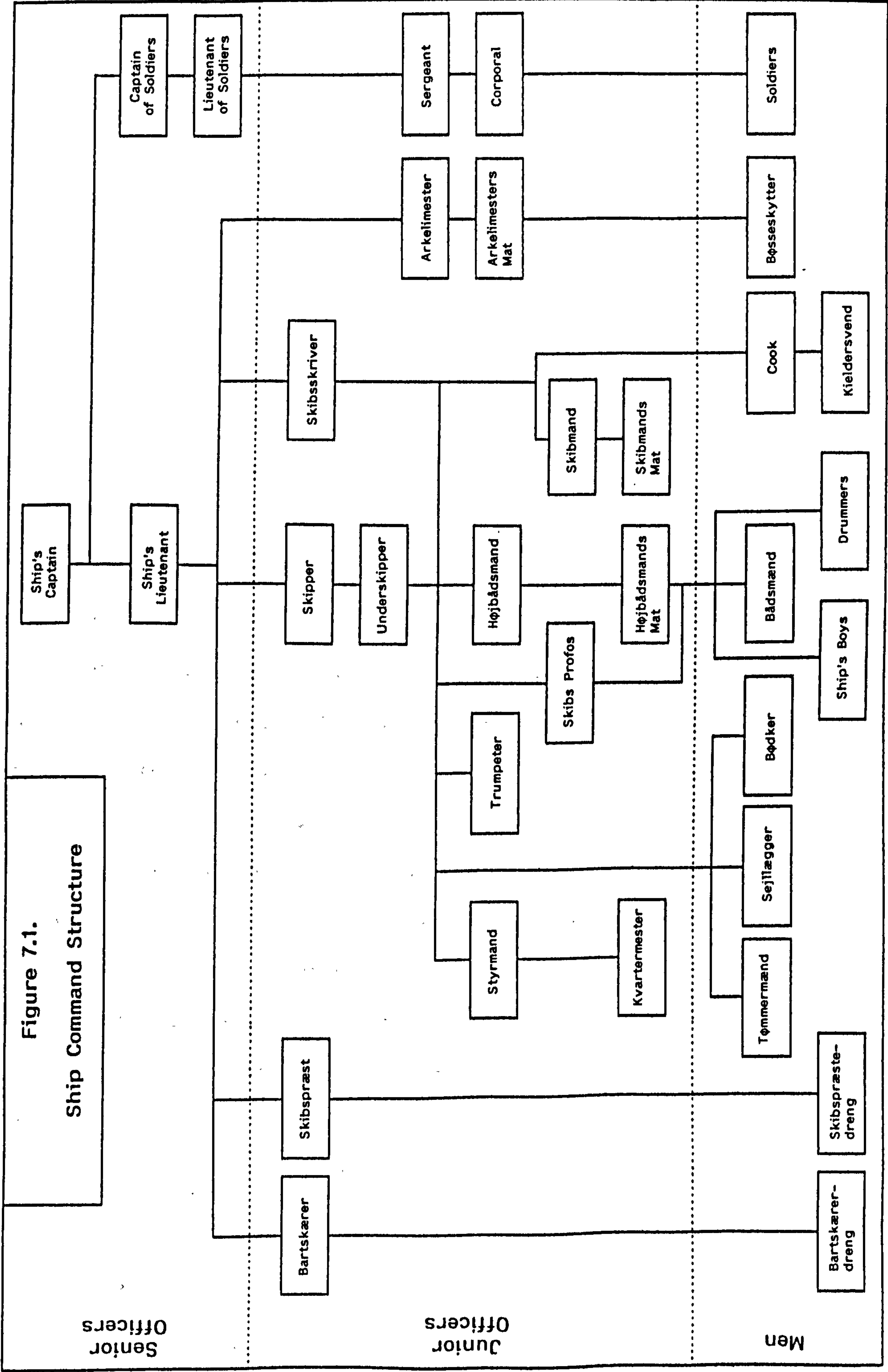
The conscription and recruitment of seamen was a vital element in the organisation of the sea-going navy and virtually every year Christian IV issued orders for men to be raised. The numbers recruited ranged from just a few dozen in the early years to many hundreds from the 1620s onwards. In times of conflict the figure could rise to as high as 1400<sup>30</sup>. Table 7.3. shows the number of *båds mænd* who were to be recruited, as noted in the protocols of the Danske Kancelli and in Christian IV's letters.

Although orders for the recruitment of seamen were not recorded every year, it must be assumed that men were recruited in all the intervening years as well, since large numbers continued to be discharged every year after their regulation period of service, initially set at five years<sup>31</sup>.

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30. Open letter, *Kancelliets Brevbøger*, 2 January 1628; and Letter to *rentemestre*, 13 February 1635, *egenhændige Breve*, III, 333-4.

31. *Kancelliets Brevbøger*, 12 December 1620, 12 December 1621, 24 January 1626, & 7 February 1627.





<u>Year</u>	<u>No. of Men to be Recruited</u>	<u>Year</u>	<u>No. of Men</u>
1596	Unspecified number	1628	1400
1601	46	1629	376
1606	875	1630	411
1609	As many as possible	1631	403
1610	199	1632	10
1612	As many as possible	1633	50
1613	As many as possible	1635	1400
1616	As many as possible	1639	330
1618	411	1640	400
1619	As many as possible	1642	300
1622	400	1644	540
1624	856	1645	650
1627	160		

**Table 7.3. Recruitment of Seamen**

Sources: *Kancelliets Brevbøger*, *egenhåndige Breve*, *Corpus Constitutionum Danica*.

The men were recruited predominantly from the *len*, with each *lensmand* being asked to provide a prescribed number of men. They were restricted in the types of men they supplied and the following were exempt: those who had a wife and children; only sons working for their mothers; farmers who were listed as soldiers; those who owned their own, or part of a ship; town dwellers with steady occupations; those already in service in the Spanish Company's ships; and all those who had royal exemptions. Naturally experienced seamen were preferred although only one man was to be taken from each merchant ship if possible, and only in severe circumstances were fishermen to be taken<sup>32</sup>.

The harbour towns were also expected to supply an annual quota of seamen, but from 1631 the payment of the *bådsmandshvervningskat* (recruitment of seamen tax) exempted them from this obligation<sup>33</sup>.

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32. Missives to *lensmænd*, *Kancelliets Brevbøger*, 5 and 25 Feb 1624.

33. Missive to *lensmænd*, *Kancelliets Brevbøger*, 31 January 1631. See also Chapter 3.

Although Denmark did not employ the press gang, as in England, to fill her ships, the men taken from the *len* and coastal towns were still essentially pressed men. Impressment in England had its origin in medieval feudal service, and this was precisely the situation in Denmark-Norway, with the local lords and burgomasters required to provide their master with a certain quota of men in return for their own privileges.

Not all seamen of course were forced into the navy and there must have been a fair number of volunteers, although it would be impossible to determine the proportion of pressed men to volunteers. In some years captains were sent out to recruit seamen in addition to those supplied from the *len*. It was not possible to give specific numbers of men to be recruited so the captains were simply instructed to raise as many men as possible<sup>34</sup>. Sometimes the *lensmænd* were also asked to assist the captains with their recruiting, although this must have impinged on their own ability to supply their required quota.

As the navy could only sail during the summer months there was a problem about what to do with all the seamen and gunners that were in the king's service when they were not at sea. The traditional solution was to station men in towns all over the realm, in what was known as *borgeleje* (town billeting), where they were given free lodging and victuals, or a cash equivalent. There was naturally a tendency for men to try and escape their duty, and in an effort to avoid desertion weekly musters were held in each town and their week's food money was paid out only at that time<sup>35</sup>.

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34. For example in 1616 three captains were sent out in January to recruit as many seamen as possible, who were then to muster at Copenhagen by Easter. *Kancelliets Brevbøger*, 9 January 1616.

35. Open letter to towns, 6 April 1581, *Corpus Constitutionum Daniæ*, III, 206-8; Open letter to town burgomasters, 24 October 1587, *Corpus Constitutionum Daniæ*, III, 481-4; Open letter to *baadsmænd* and *bøsseskytter*, 24 October 1587, *Corpus Constitutionum Daniæ*, III, 484-5.



This arrangement was far from satisfactory and the system was open to corruption. Desertion remained a serious problem and some men who were on the seamen's register never actually turned up for duty at Bremerholm during their entire lives. In 1616 it was therefore stipulated that once men had been recruited to the navy they must remain in constant service for a period of five years before being allowed to return home<sup>36</sup>. From this time the majority of men who did not remain aboard their ships in the winter months were either housed in barracks at Bremerholm or were billeted in Copenhagen or the surrounding area.

Table 7.4. shows the total number of officers and men serving in the navy during the summer months. The seasonal nature of the navy's operations meant that a large number of seamen were taken on temporarily for the summer months only. These men were paid monthly and were known as *månedstjenere* (monthly servants). In winter the number of seamen was reduced to only about 60% of these figures. It is not known what the temporary seamen did during the winter months, or whether the same men were recruited year after year. Gunners were retained all year round and returned to the arsenal for service during the winter.

The massive increase in the number of seamen between 1620 and 1630 highlights the rapid development of the navy during the later stages of the *Kejserkrig*. This increase was achieved not only by the recruitment drives shown in Table 7.3. but also by increasing the standard length of service from five to eight years<sup>37</sup>. The peak years came during the *Torstenssonkrig* when nearly 5000 officers and men were engaged<sup>38</sup>.

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36. Open letter on *bådsmand* and *bøsseskytter*, 4 July 1616, *Corpus Constitutionum Daniæ*, III, 481-3.

37. *Kancelliets Brevbøger*, 24 January 1626.

38. Lind, *Kong Frederik den Tredjes sømagt*, 3.

	<u>1620</u>	<u>1630</u>	<u>1640</u>
Captains & lieutenants	22	36	62
Skippers	50	78	88
<i>Styrmænd</i>	54	59	80
Junior officers, mates, & other special ranks	84	407	610
Surgeons	10	3	27
Trumpeters	8	10	19
<i>Arkelimestre</i> & gunners	289	448	580
<i>Båds mænd</i>	761	2343	2460
Ships' boys	100	115	170
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Total	1378	3499	4096
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**Table 7.4. Total Number of Officers & Men (Summer Months)**

Sources: Rigsarkiv, Rentekammer Udgift Conto L.a., Klædekammer regnskaber, 1620/21; 1630/31; 1640/41.

The number of men fell again in the late 1640s after the fleet was decimated, and when Christian IV called for the number of men to be reduced as a cost cutting measure<sup>39</sup>. Even before the war, though, he was calling for a reduction in the number of officers<sup>40</sup>. By 1648 the total number of men had been reduced to only around 1600<sup>41</sup>.

There does not seem to have been any real problem in obtaining the necessary number of men to serve in the navy. Apart from understandable problems experienced during wartime there are very few references to difficulties in recruiting seamen in the protocols of the *Danske Kancelli* or in the king's letters. If a tax was able to be intro-

39. Letter to Corfitz Ulfeldt, 8 January 1648, *egenhændige Breve*, VIII, 408-9.

40. Letter to Corfitz Ulfeldt, 19 May 1642, *egenhændige Breve*, VIII, 174-5.

41. Lind, *Kong Frederik den Tredjes sømagt*, 23.



duced as an alternative to coastal towns supplying men then it would tend to suggest that enough seamen were readily recruited from the *len*. The fact that the period of service was limited to only five or eight years<sup>42</sup>, as opposed to the indefinite service practised in England, and because men could expect regular food and wages, must have made service in the Danish navy a much less daunting proposition. Frederik II made sure that his seamen were better fed, clothed and paid than any previous monarch<sup>43</sup>, and Christian IV continued this policy. Even when state funds were low in the 1630s and 1640s, and doubts were raised over the ability to pay the men, Christian IV's benevolence towards his seamen ensured that the money was usually found from somewhere. Three hospitals were also founded in 1616 by Christian IV for invalid seamen at Roskilde, Slagelse and Helsingør<sup>44</sup>. It was not until the severe penury of Frederik III's reign that seamen found themselves being paid short wages and issued with insufficient clothes and rations.

If difficulties were encountered, particularly during wartime, then men were recruited from England, Scotland, Germany and the Netherlands. Seamen of all nationalities sailing through the Sound were also pressed into service for a limited time.

### 7.3. The Organisation of the Fleet at Sea

When the navy put to sea there had to be a recognised line of command between the different ships. The organisation of the fleet and its division into squadrons was personally controlled by Christian IV who, every spring, would issue an instruction detailing which ships should be mobilised and where they should sail<sup>45</sup>.

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42. Men could be re-conscripted, though, in times of war. (Open letter on seamen and gunners, 4 July 1616, *Corpus Constitutionum Daniæ*, III, 481-3).

43. Lind, *Fra kong Frederik den andens tid*, 229.

44. Open letter on seamen and gunners, 4 July 1616, *Corpus Constitutionum Daniæ*, III, 481-2.

Before each ship set sail its captain would receive a *søpas* (sea pass) from the *Danske Kancelli* detailing his orders and where he was to sail<sup>46</sup>. Depending on the nature of the mission, the ships either sailed individually or in squadrons, and in the event of war the fleet as a whole could sail together. When a squadron of ships was formed it was commanded by the most senior captain who then took on the title of *admiral*. Larger squadrons would also have an *underadmiral*.

When the entire fleet went into action it would be divided typically into four separate squadrons. The first led by the *generaladmiral* and his *underadmiral*, the second by the *vicegeneraladmiral* and the *viceunderadmiral*. The third and fourth were each led by its own *kvartaladmiral* and *underadmiral*. Each squadron sailed in formation. At the head came the first admiral-ship, this was followed by two smaller ships sailing line abreast, forming a triangular shape. This was then followed by the second admiral-ship and two smaller ships in another triangle formation and then following up in the rear were all the supporting small ships and galleys<sup>47</sup>.

This type of formation was unwieldy, particularly in confined areas or heavy seas, but had gained acceptance through years of usage<sup>48</sup>. It was in fact impossible to maintain after the initial attack and any battle would soon degenerate into a confused meleé. This is what happened during the the attack against the Hamburg fleet in 1630. Initially a rigid formation was tried but Christian IV quickly realised that the Elbe was

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45. For example: Fleet list March/April 1628?, *egenhændige Breve*, VII, 45-8; and letters to Claus Daa, 6 December 1635 & 31 March 1640, *egenhændige Breve*, III, 451-4 & IV, 321-2.

46. For example: *Søpas* for Hendrik Vind aboard *Rytteren*, *Kancelliets Brevbøger*, 1 May 1626.

47. Finn Askgaard, *Christian IV, Rigets væbnede Arm*, (København, 1988), 64-7.

48. Niels Probst, 'Nordisk søtaktik i 1500- og 1600-tallet - og slaget i Køge Bugt den 1. juli 1677', *Marinehistorisk tidsskrift*, (4/1992), 3-23.



hardly the place for fancy manoeuvres and his plan of attack was altered so that each ship was instead detailed to attack a specific Hamburg ship<sup>49</sup>. This approach proved much more effective and the battle was quickly settled. However, it did not prevent similar intricate formations being tried again in 1640<sup>50</sup> and during the *Torstenssonkrig*<sup>51</sup>, again with rather dubious success.

These manoeuvres make more sense when we look at naval strategy of the time, which was constrained by the practice of loading cannon from outboard. The English and Dutch also used small squadrons of ships to sail by their enemy and discharge their guns one at a time before retiring to reload. It was not until the mid to late 17th century that Denmark, in line with the other European navies, adopted the full broadside attack and the standard line-ahead battle formation<sup>52</sup>.

Communication between ships was effected using a system of signal flags, cannon shots and lanterns. During the Northern Seven Years War the admiral Herluf Trolle outlined his own codes which covered basic signals such as a cannon shot to indicate that the admiral's ship was getting under way or anchoring<sup>53</sup>. Such signals were fairly simple and most likely used time and again, but they were not formally adopted as standard. Even when the *skibsartikler* were published in 1625 only one article was devoted to signalling and this stated simply that the admiral should have his captains aboard before sailing to detail the particular signals

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49. Battle plans, 24 Aug 1630, *egenhændige Breve*, II, 282-4.

50. Battle plan, 7 May 1640, *egenhændige Breve*, IV, 333-6.

51. Chr. Bruun, *Slaget paa Kolberger Heide den 1 juli 1644*, (København, 1879).

52. Brian Lavery, 'The Revolution in Naval Tactics', in Martine Acerra, José Merino and Jean Meyer (eds.), *Les Marnes de guerre européennes, XVIIe-XVIIIe siècles*, (Paris, 1985), 167-72.

53. Barfod, *Christian 3.s flåde*, 177.

that he would use<sup>54</sup>. This was similar to the situation in England, but at least there some signals had become standardised<sup>55</sup>.

#### 7.4. The Effectiveness of the Seagoing Navy's Administration

Having looked in detail at the organisation both of individual ships and of naval squadrons, we ought now to assess just how effectively it worked at sea.

The strict disciplinary measures outlined in the *skibsartikler* ensured that there were no serious problems in maintaining order among the men. They were also well fed and paid, and although there were problems from time to time in finding the necessary finance, there was never any danger of large scale mutiny or other disruption aboard the navy's ships.

The organisation of the men and their supervision by the junior officers seems to have worked fairly effectively, and there was never any serious question raised over the efficiency of the crew<sup>56</sup>. Although formal training in seamanship still left much to be desired the policy of recruiting and conscripting men experienced in the maritime trades, and the division into messes, so that inexperienced men could learn from their mess-mates, meant that there was a fairly high level of competence among seamen. The move away from the *borgeleje* system to billeting men at Bremerholm also provided a more professional crew, and one which could be mobilised effectively.

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54. *Skibsartikler*, 271.

55. W.G. Perrin (ed.), *Boteler's Dialogues*, Navy Records Society, LXV (1929), 281-6.

56. When Christian IV complained in 1641 that only 40 out of 200 seamen aboard *Store Sophie* could understand a compass he was being a little unfair. It was hardly necessary for ordinary seamen to be versed in navigation to haul on ropes, set sails, etc. (Letter to Sten Beck & Hans Ulrik Gyldenløve, 13 July 1641, *egenhændige Breve*, V, 98-100).



As with so many aspects of Christian IV's government, though, the problems with the navy were most apparent at the top end of the command chain. Senior naval officers received little or no training and had to rely to a large extent on the skill of their junior officers. The senior officers' commissions were so vague as to be almost worthless, and the fact that many of the officers were courtiers, using the navy as a means of advancement in the court meant that their commitment to the navy as a profession must come into doubt. A few well trained captains filtered through the *adelsburs* system, but this method of taking on aspiring young noblemen as volunteers was so irregular that it had little real impact<sup>57</sup>. Even when the senior officers' commissions were rewritten in 1645, little attempt was made to educate officers in the arts of seamanship, and the majority of them remained entirely dependent on their junior officers when it came to actually sailing the ships.

The lack of any permanent posts of admiral, or indeed of any type of formal career advancement among officers, would also have had its effect on professionalism in the navy. With the *rigsadmiral* being such a political appointment there was little respect for him as a seaman in most cases. The majority of men that Christian IV appointed to this post were of decidedly moderate skill. There were only two *rigsadmiraler* who could really have been described as professional navy men, but ironically these two proved to be the shortest serving of them all. This situation, although convenient for the king in maintaining his own personal control of the navy, did not help to provide any kind of effective leadership for it in his absence.

This lax and somewhat unprofessional style of command has its roots in the time when naval battles consisted simply of boarding an enemy ship and engaging in hand-to-hand combat, similar to a land battle

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57. This system was outwardly similar to the English Midshipman programme instituted by Pepys in 1686, but it had none of the rigorous training and promotion associated with the English system.

but fought at sea. However, by the time of Christian IV it was no longer adequate to send the navy into battle commanded by men who had little knowledge or experience of naval warfare.

The formation of naval strategy and battle tactics in Denmark lay very much in the hands of Christian IV and he dictated the formations to be used and the plans of battle to be employed. However, this meant that his subordinate officers were inexperienced and untrained in tactical matters. When the king was not present at the scene of battle his senior officers were therefore unable to effectively take his place.

Of the major naval battles fought during his reign Christian IV was present at two, the attack against the Hamburg fleet in 1630 and the battle of Kolberger Heide in July 1644. In the first he achieved victory, but only after a protracted campaign in which he had to abandon his initial tactics, and the second was indecisive, although the Danish fleet did gain the upper hand. In the other battles his captains achieved a limited victory in the battle of Listerdyb in May 1644 against a much inferior opposition, and suffered a crushing defeat at Femern Bælt in October 1644.

This defeat was precipitated by two factors. Firstly the inability of the Danish captains to effectively blockade the Swedes in Kiel fjord, after the king had left the fleet, allowed the Swedes to join up with the Dutch fleet. Secondly Christian IV made the fatal strategic error of dividing his fleet in three to search for the escaped Swedish navy. This meant that when one of the squadrons did eventually find the Swedish-Dutch fleet the captains faced overwhelming odds and defeat was inevitable.

Christian IV was quick to lay the blame for the navy's defeat on the poor performance of his officers, but he must also share some of the blame, not only for his poor strategic decision, but also for not recognising the need to train his officers more effectively. The absence of any



permanent rank of admiral also caused a lack of continuity in the organisation of naval manoeuvres, which was also not helped by the fact that signalling codes had to be newly established before every voyage.

The question of naval officers' competence is curious. It was not as if the problem had not been previously identified, since throughout Frederik II's reign ships' captains had been regularly criticised for their incompetence<sup>58</sup>. The noble *skibsjunkere* and *skibsherremænd* were considered among the worst and, although they played a lesser role in Christian IV's navy, there was little attempt to improve matters by hiring skilled men or training those already in service. A few skilled English and Dutch officers were hired by Christian IV, but they had little real impact on the navy as a whole. It was not until 1663, when the Dutchman Curt Adeler Sivertsen was hired as *Generaladmiral*, that a conscious decision was made to bring in highly skilled officers from overseas to lead by example. A formal officer's training school was not established until 1701.

In conclusion then, it can be said that the ships were reasonably well organised and disciplined, and when they sailed alone, the poor standard of senior officers was not a major problem. However, when it came to large squadrons, the deficiency in officer training and the lack of any permanent command structure or formal signalling code, significantly reduced the effectiveness of the navy at sea.

How does this situation compare to other countries?

In terms of manning the fleet and the organisation aboard ship Denmark compares very favourably indeed. The Danish semi-feudal method of manning the navy was far from perfect but it was much better than the situation in England. In theory English crews were to be recruited every year to provide the necessary manning for that year's sailing, and

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58. Lind, *Fra Kong Frederik den andens tid*, 43, 100, 220 & 227.

the majority of men would then be paid off at the end of the voyage. In practice though the conditions on the king's ships were so poor that few men were willing to join voluntarily and the dreaded press gangs had to be used to fill the ships. Once on board the crew could then find themselves captive for many years, simply because there were no funds to pay them off.

Although the physical conditions aboard ship would have been little different in the two navies, the terms of employment were significantly better in Denmark. The seamen were paid a more attractive wage, which was also much more likely to be paid than in England, where promissary 'tickets' were frequently issued instead. The period of service was limited to just five or eight years, instead of the indefinite service practised in England where a man could be repeatedly pressed into service until the age of 60. Denmark also took much greater care of sick and injured seamen, with three naval hospitals operating in Christian IV's reign. In England there was only the inadequate 'Chatham Chest' which issued charitable funds to incapacitated seamen. A dedicated English naval hospital was not opened until the end of the 17th century<sup>59</sup>.

In terms of the professionalism of the crew Denmark was also superior to England. The *skibsartikler*, which governed discipline and working practises, was much more advanced than anything known in England, where the medieval 'Black Book of Admiralty' still governed discipline. The first 'Articles of War', which appeared in 1653 were designed specifically to counter the unprofessional conduct of naval officers during the First Anglo-Dutch War, and had little, initially, to do with the discipline of crew members<sup>60</sup>. The practice of maintaining a core of seamen was also significantly more advanced than England where a formal continuous serv-

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59. Christopher Lloyd, *The British Seaman 1200-1860: A Social Survey*, (London, 1970), 87-9.

60. N.A.M. Rodger, *Articles of War*, (Havant, 1982), 7-11.



ice was not introduced until the end of the 17th century<sup>61</sup>.

Naval manning was also a problem for Sweden in the early 17th century. Before 1635 the men were conscripted using a levy system on the coastal towns and were maintained in a similar way to the Danish *borgeleje* system. Gustav Adolf's military success made recruitment for the army much more popular than the navy, which hampered efforts to recruit sufficient seamen<sup>62</sup>. In 1635 though, the *ständigt båtsmanshåll* system was introduced which created a standing reserve of men who were to assemble every year at the dockyard in Stockholm. Every coastal parish was to supply a quota of men and these were organised into regional companies and regiments. In times of war the quotas could be doubled<sup>63</sup>. Thus a formal structure was put in place which enabled the navy to be manned much more effectively than in Denmark.

Sweden also had its own *Sjöartiklar* which were broadly similar to Denmark's, although much less extensive. They developed in a similar way to Denmark's, being first issued as specific instructions for a particular voyage, but later being issued as general instructions. The Swedish articles were issued slightly later than in Denmark, appearing first in 1570 and updated in 1644, but there was little significant difference between the content of the disciplinary codes of the two Scandinavian navies.

The Dutch navy depended solely on its captains to recruit enough seamen to sail in their ships. There were very few men who could be termed as professional 'naval' seamen since the crews were recruited on the labour market in the spring for that year's sailing and paid off once the ships returned to port. With the maritime trades so predominant in

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61. Lloyd, *The British Seaman*, 115.

62. Michael Roberts, *Gustavus Adolphus*, (London, 1958), II, 296-9.

63. *Svenska Flottans Historie*, (Malmö, 1942), I, 337-40.

the Netherlands there was little problem in finding the necessary men, although an embargo could be placed on merchant sailings until the naval requirements had been met<sup>64</sup>.

It therefore seems that of the northern European royal navies Denmark had fewest problems in manning the fleet in the early 17th century, although Sweden developed a more effective system in the late 1630s. The methods of naval conscription at this time were basically feudal and with Danish society still essentially organised along feudal lines there was consequently less resistance to the practice. Better terms of employment also improved the prospects of voluntary recruitment to the navy and reduced the risks of desertion.

With regard to the lack of professionalism of senior officers, though, Denmark was not alone. In England, France, Sweden and Spain, where the royal courts and the navies were also closely interlinked, privilege and patronage often played a greater part than competence when it came to the appointment of officers.

This was different in the Netherlands where professional naval captains and admirals were kept in permanent employ by the admiralties of the maritime provinces and the constant state of warfare between the United Provinces and Spain meant that Dutch captains built up a far greater experience of naval tactics than their Scandinavian counterparts.

The professionalism of Swedish naval officers and their tactical abilities were little better than the Danes. In the Battle of Kolberger Heide in 1644 they still based their tactics on boarding the Danish enemy. Swedish naval tactics were therefore no better than her adversary's, and neither side could claim victory in this encounter. Although the imbalance

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64. Jaap Bruijn & Els van Eyck van Heslinga, 'Seamen's Employment in the Netherlands (c.1600-c.1800)', *Mariner's Mirror*, 70 (1984), 7-20.



of the fleets in the Battle of Femern Bælt made the outcome almost inevitable, it is still significant that the Swedes achieved their success with the help of their Dutch allies.

Christian IV can therefore take some credit in the way that his navy was manned and the way that his crews were organised. As we have seen many times before, though, Christian IV was not a great innovator in administrative matters and it was the very fact that Danish society remained essentially feudal that allowed the navy to be manned effectively. He cannot take much credit for the professionalism of his officers, but neither should he be seen as particularly backward, since similar problems existed in all of the other royal navies of Europe.

In terms of naval tactics, though, he can be best described as a little naive. He did have some successes and perhaps with a little more luck, a lot more patience, and a little less ego, he would have achieved greater success at sea. The main problem was that the effective command of the navy depended too much on his own personal leadership. When he was unable to give that leadership his subordinate officers were not sufficiently qualified either to carry out his instructions effectively or to act on their own initiative.

The organisation of the sailing navy therefore reflects what we have seen already in Christian IV's administration of government and of the dockyard. His inability to delegate meant that there was no effective command structure to organise things in his absence, and too much attention was paid to small details while more fundamental issues were ignored.

**PART C**

**THE SHIPWRIGHTS  
AND THEIR SHIPS**



## 8. Scottish Master Shipwrights in the Danish Navy

### 8.1. The Introduction of Foreign Master Shipwrights to Denmark

Danish native shipbuilding talent in the 16th and 17th centuries was relatively poor beyond the building of small coastal and fishing vessels. The dominance of at first the Hanse merchants and then the English and Dutch in the Baltic meant that there was no great commercial impetus to develop Danish shipbuilding. Danish merchants could quite easily secure a passage on any number of the ships passing through the Sound, so why should they go to the expense, and added risk, of building and operating their own ships? As Fynes Moryson explained in 1593:

their marchants use not to Export or fostre Comodityes by any long Navigation into forrayne parts, because the Shipps of all nations passing the Sounde supply their wants, and export their dried fish and like Comodityes they can spare. So the marchants haue no strength of well armed shipping<sup>1</sup>.

Therefore when the Danish state navy began to be formed at the beginning of the 16th century it was recognised that either warships would have to be purchased from abroad, or else expert foreign shipwrights would need to be recruited to build them in Denmark.

The purchase of ships was problematic since ships were not always readily available when needed, and the quality of materials and workmanship could not be properly monitored if ships were built in foreign lands. The purchase of warships from competing foreign powers could also create serious diplomatic problems. By relying on purchased ships the

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1. Fynes Moryson, *The fourth Part of an Itinerary: Of the Comonwealth of Denmarke*, Booke II, Chap. II., Library of Corpus Christi College, Oxford, MS. C.C.C.94, f.242-3.

composition of the navy would also necessarily be somewhat random, depending on what types of ship could be secured. The problem of availability could be alleviated to some extent by seizing prize ships, but the problems of quality and maintaining the desired composition of the navy remained, and the diplomatic consequences could easily outweigh any advantage.

The answer had to be the recruitment of expert master shipwrights from abroad. Little is known of the master shipwrights working for the Danish crown in the early 16th century apart from their names. The first, responsible for building the very large *Maria* in 1511, was at first called Mester Johan but later Mester Hans<sup>2</sup>, suggesting perhaps that he was a German, probably from one of the Hanse towns, whose name Johan became Danicised to Hans. We know definitely however that Dutch shipwrights were hired in 1538 and that the Dutch-sounding Henrik Kolterman was working in the 1540s and 1550s<sup>3</sup>.

By the reign of Frederik II the practise of hiring in master shipwrights from abroad had become standard practise. In the 1560s two Dutch shipwrights, Frederik Bauch and Cornelius Skibbygger, were employed, and in 1568 three French shipwrights were hired to build galleys in Norway<sup>4</sup>. However, it was British shipwrights who were to be most favoured from the 1570s onwards.

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2. Jørgen H. Barfod, *Flådens fødsel*, (København, 1990), 197-8.

3. Jørgen H. Barfod, *Christian 3.s flåde*, (København, 1995), 64 & 128.

4. H.D. Lind, *Fra Kong Frederik den andens tid: Bidrag til den dansk-norske sømagts historie 1559-1588*, (København, 1902), 9, 109 & 141; Barfod, *Christian 3.s flåde*, 187 & 264; Thomas Hauge, 'Galeier i den dansk-norske marine', (*Norsk Tidsskrift for Søvæsen*, 69 (1954), 352.



An English shipwright was sought as early as 1558<sup>5</sup> but it seems that the first to actually be employed was Hugo Beda. He first received a commission as 'Skibstømmermand og Bygmester' (shipcarpenter and master shipwright) in 1570<sup>6</sup> and received a further commission in 1573 in which he was granted a rent-free property in Norway in addition to his 300 Dlr. annual wages<sup>7</sup>. We know that he was English because in 1582 payment was granted to 'Hugo Bedow, vor Skibsbygger, og nogle andre Engelske' (Hugo Beda, our shipwright, and some other Englishmen)<sup>8</sup>. We also know that Beda's assistant, Hans Madsen, was English from Fynes Moryson, who stated in 1593 that 'the Chiefe Shipwright who then built the Kings Shippes was an Englishman named Matson'<sup>9</sup>.

Madsen received a commission in 1573 as a *mestersvend*, and worked alongside Beda in Norway, building new vessels and rebuilding existing ships<sup>10</sup>. After the demise of Beda<sup>11</sup> he moved permanently to Copenhagen and received a commission as Bremerholm's shipwright in 1592<sup>12</sup>, in which he was ordered to build both large and small ships, in return for an annual wage of 150 Dlr. plus victuals to the same value.

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5. Barfod, *Christian 3.s flåde*, 119.

6. Lind, *Fra Kong Frederik den andens tid*, 142.

7. Beda's commission, 25 September 1573, Rigsarkiv, Danske Kancelli, B54, Sjællandske Registre, 1572-78, f.65.

8. Receipt for Erik Brockenhus, 20 May 1582, *Norske rigsregistrarer*, II, 466.

9. Moryson, *The fourth Part of an Itinerary*, f.242-3.

10. Madsen's commission, 25 September 1573, Rigsarkiv, Danske Kancelli, B54, Sjællandske Registre, 1572-78, f.65.; Open letters, 4 August 1575, *Norske rigsregistrarer*, II, 162-3.

11. He is last heard of in 1591. Letter to Axel Gyldenstjerne, 13 October 1591, *Norske rigsregistrarer*, III, 216.

12. Madsen's commission, 13 January 1592, Rigsarkiv, Danske Kancelli, B54, Sjællandske Registre, 1588-96, f.234-5.

Although these English shipwrights were well respected for their craft in Denmark they were not so well regarded by their own countrymen. In 1582 an English merchant complaining about the Sound tolls stated that the king of Denmark 'has English shipwrights that build him goodly ships and galleys, after the English mould and fashion'<sup>13</sup>. He further stated that the king's agent in London, John Foxall, had no difficulties in supplying him with 'shipwrights nor any other persons, as masters, mariners, or captains and men for his wa(rships)'<sup>14</sup>. In 1590, the English ambassador also formally complained to the Danish king that he was 'intizing awaye her Majesty's servants and ship-wrights to fashion your navie after the same moulds'<sup>15</sup>.

It seems that the English shipwrights were particularly respected for their ability to build ships using the carvel method. When Frederik II ordered a ship from Beda in 1573 he explicitly stated that it should be built with 'Kraueyle Værk' (carvel work)<sup>16</sup>, and he later stated that, for the better defence of the realm, all ships over a certain size should now be constructed using this method<sup>17</sup>. Carvel building of the larger Danish warships had become standard by the mid 16th century, but Beda built

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13. Thomas North, mariner, to Walsingham, 24 April 1582, *Calendar of State Papers (Foreign)*, 1581-82, 649.

14. The surviving correspondence concerning Foxall does not mention shipwrights, but does mention the supply of warships, guns, gunners and seamen: Frederik II to John Foxall, 16 February 1566, *Calendar of State Papers (Foreign)*, 1566-68, 18; Frederik II to John Foxall, 23 Oct 1573, *Calendar of State Papers (Foreign)*, 1572-74, 431; Letter from John Foxall, May 1570, and list of cannon supplied, March 1571, William Dunn Macray, 'Report on the Archives of Denmark', *45th Annual Report of the Deputy Keeper of the Public Records*, (1883), Appendix II, 24 & 48; Frederik II to Queen Elizabeth, 17 February 1567, 22 October 1573, & 8 July 1574, William Dunn Macray, 'Second Report on the Archives of Denmark', *46th Annual Report of the Deputy Keeper of the Public Records*, (1884), Appendix II, 22, 24 & 25; Foxall to Gyldenstern, 10 December 1565, 18 March 1566, 29 September 1566, 23 October 1566 & 18 December 1566, Macray, 'Second Report', 40-1.

15. Edward A. Bond (ed.), *The Travels of Sir Jerome Horsey*, Hakluyt Society, 1st series, XX (1856), 243-4.

16. Letter to Beda, 11 November 1573, *Norske rigsregistranter*, II, 76.

17. Letters to Paul Hvitfeldt, 22 February 1676, *Norske rigsregistranter*, II, 180-3.



most of his ships in Norway, where this technique was still novel. Curiously though, evidence from a wreck of one of Madsen's ships, *Gideon*, suggests that it may have been built using a double-skinned clinker technique<sup>18</sup>.

The fact that foreign shipwrights were employed, however, did not mean that there were no Danish shipwrights. The foreign shipwrights were expected to pass on their craft to the Danes and in Frederik II's time the two most accomplished Danish master shipwrights were Mester Bertel<sup>19</sup> and Mester Hans Katlin<sup>20</sup>. Another Dane, Johan Worm, was appointed as Madsen's assistant in 1592<sup>21</sup>. Although Hans Katlin was put in charge of shipbuilding at Bremerholm in 1574, the Danish shipwrights tended to be of lesser importance, with Beda and Madsen apparently building the larger ships.

Christian IV continued this tradition of employing foreign shipwrights, but he at first favoured Scottish shipwrights. As during Frederik II's reign these men became the principal master shipwrights in the navy, while the few Danish shipwrights who were also employed were used in a lesser capacity.

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18. Niels Probst, 'The Introduction of Flush-Planked Skin in Northern Europe - and the Elsinore Wreck', in C. Westerdahl (ed.), *Crossroads in Ancient Shipbuilding*, (Oxford, 1994), 143-52.

19. M. Bertel was working at least from 1569, was elected to the *Danske Kompagni* in 1576, and was still in service in 1582. Lind, *Fra Kong Frederik den andens tid*, 185; Københavns Stadsarkiv, Privatarkiver I, Det danske kompagnis Broderbog, I, p.27.; Letter to Christoffer Valkendorf, *Kancelliets Brevbøger*, 1 October 1582.

20. Katlin's commission, 28 June 1574, Rigsarkiv, Danske Kancelli, B54, Sjællandske Registre, 1572-78, f.121.

21. Worm's commission, *Kancelliets Brevbøger*, 15 June 1592.

## 8.2. The Scottish Master Shipwrights

### 8.2.1. Robert Petersen

The first of the Scottish shipwrights to be employed by Christian IV was Robert Petersen (originally Paterson?), who remains somewhat of a mysterious person. Nothing is known of his life prior to his work for the Danish crown, and very few details exist of his career in Denmark.

He is first mentioned in 1596 when instructions were issued to the *Holmens admiral* to:

handler medt then skodtzsche skiffbygeren att hand nu strax begiffuer sig till forskreffne wortt slot Hadersleffhus och therßammestedt Bygger och opßetter forskreffne schib<sup>22</sup>

deal with the Scottish shipwright to immediately go to our aforementioned castle Haderslevhus and there build and fit out the aforementioned ship.

Petersen built this ship, the 44 gun *Viktor*, as a private contractor, employing his own workforce. It was completed in the spring of 1598 and in June Petersen was awarded an additional 170 Dlr. for his work<sup>23</sup>.

The *Viktor* was a fairly large ship and was used as Christian IV's flagship on his voyage to the North Cape in 1599. In spite of the caulking of the cannon ports being so bad that the ship was in danger of sinking at one stage<sup>24</sup>, the ship was considered to be a good sailer, and it was stated that:

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22. Missive to Børge Trolle, 25 September 1595, Rigsarkiv, Danske kancelli, B57 Sjællandske Teg-  
nelse, XIX, f.5.

23. Missive to Hofmester, *Kancelliets Brevbøger*, 18 January 1598; Missives to Børge Trolle, *Kancel-  
liets Brevbøger*, 7 December 1597, 10 February and 16 June 1598.

24. Hans Madsen had to carry out some remedial work on the ship's return to Bremerholm (Rigsarkiv, Marinearkivet for 1655, 28, Bremerholms Tømmerregnskaber, 1599/1600).



Viktor var saa vel beseilet, at dersom vi brugte nogen mere seil, kunde ingen af de andre følge os før de fik omlastet<sup>25</sup>

*Viktor* was so well fitted with sails that, when we put on some more sail, none of the others could follow us until they were unloaded.

Despite this ship being so well regarded Petersen appears to have received no further contracts. In fact nothing else is heard of him until he was taken on as a royal master shipwright on 12 June 1604. Hans Madsen disappears from the records at around this time<sup>26</sup>, and as Petersen's wages were identical to Madsen's it seems likely that he was taken on as his replacement. His commission<sup>27</sup> stated that:

Mester Robbert Peitterssøn ... wor Skibbøgger ... skulle stedtze were thill stede paa Bremerholm her for wortt slott Kiøbenhaffn, dersammestedsz att ware paa wor skibe denne er att bøgge och hielpe naar behoff giøres. Vdi huilcken hans tieniste hand haffuer loffuitt thill sagt och seg forplict troligen fliteligen och well att wilde lade bruge, Och att hand jdelig och altid skull were hoeß tømmemend paa Holmen, dersammenstedz grandgiffuerlig att haffue agt och thillsiun, att Wort arbeide wdi ingen maade bliffuer forsommit.

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25. J.H. Schlegel (ed.), 'Kong Christian den Fierdes Reise omkring de Norske kyster indtil den Russiske Grændse, 17 April - 13 Juli 1599, beskreven ved Jonas Carisius, kongelig sekretær', *Samlung zur Danischen Geschichte...*, 1. Bd. 4 Stk. (1773), 43-90.

26. Madsen last appears in the timber accounts for 1602/03. (Rigsarkiv, Marinearkivet for 1655, 28, Bremerholms Tømmerregnskaber).

27. Petersen's Commission, 2 November 1604, Rigsarkiv, Danske Kancelli B54, Sjællandske Registre, 14, 1596-1604, f.492-3.

Master Robert Petersen ... our shipwright ... shall remain permanently in place at Bremerholm, here by our castle at Copenhagen, to supervise our ships that are built there and help when the need arises. In which service he has promised to commit himself faithfully, and diligently however he is used, and that he shall at all times be with the carpenters at Bremerholm, and to have direct supervision there so that our work is in no way neglected.

For wages he received 150 Dlr. plus 20 Dlr. for firewood, and free accommodation. He has also awarded the following victuals: 2 skippund (320 kg) of rye; 2 skippund of barley; 2 oxen;  $\frac{1}{2}$  barrel of butter; 1 barrel of herring, 1 barrel of salt fish; 4 woger (71.6 Kg) dried cod; 1 barrel of peas; and 1 barrel of grain. In addition to the 20 Dlr. for firewood he was also allowed to dispose of any 'spaane och andett wbrugeligt thømmer' (chippings or other useless timber), similar to the way English shipwrights were also allowed to keep the so-called 'chippings'.

Despite being engaged as master shipwright Petersen mysteriously disappears from the records. No reference can be found of him in either the dockyard or *rentekammer* accounts or in the *Danske kancelli* records. The reason for his disappearance is not known. He may have returned to Scotland, but no reference can be found to him in any Scottish records; he may have fallen into disrepute, in which case there would surely have been some mention of him in the state records; or he may simply have died shortly after his appointment, which would appear to be the most likely answer.



### 8.2.2. David Balfour

At the time that Petersen was building the *Viktor* the *Holmens admiral* was instructed to 'handle med en skotsk Skibstømmermand om Bygningen og Opsætningen af en Gallej' (deal with a Scottish shipcarpenter for the building and fitting out of a galley)<sup>28</sup>. This Scottish shipwright was David Balfour who was later to become one of the most important of Denmark's master shipwrights. Unlike Petersen, we know a great deal of his early life from a nobility patent, or 'birthbrief', drawn up by Charles I in 1629<sup>29</sup>.

He was born in 1574, the son of David Balfour of Shanwel<sup>30</sup> and Joanna Balfour of the house of Orwel. He was therefore of the lower nobility, but was related to the high noble house of the Balfours of Burleigh<sup>31</sup>. He lost his father at the age of two and after puberty (ex ephæbis) travelled abroad on his own to study mathematics before returning to Scotland<sup>32</sup> to live in St. Andrews. Unfortunately, like Petersen, we do not know how Balfour then ended up in Denmark.

His first contract for the Danish crown was for the galley that he built beside Copenhagen Castle in 1597. This large galley measured 40 alen long (22m), had 24 oars on either side and was fitted with an 'Orloff' mast and a bowsprit. The ship was to be delivered complete in every way, for which Balfour received 200 Dlr. for his own and his carpenters' wages<sup>33</sup>.

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28. Missive to Børge Trolle, *Kancelliets Brevbøger*, 1 July 1597.

29. Rigsarkiv, Privatarkiver, Kronologisk Rk. 5/11/1629.

30. Shanwell House in the parish of Orwel, Kinross-shire.

31. He was the great-great grandson of Michael Balfour of Burleigh.

32. E patrio solo ad externas oras, non discurrendi studio, Sed animi bonis artibus excolendi adfectu, Secunda fama et integris moribus migrasse Tandem cum in Mathesi profectum non temnendum fecisset.

33. Rigsarkiv, Rentemesterregnskaber, 1597/98, f.444-6.

This ship, for which we do not have a name, must have been well received as later the same year Balfour was awarded another contract to build one of two new 30 oar galleys to be built in Blekinge<sup>34</sup>. Then in 1599 he got his first big contract to build a 'store Orlouffs Skibff' (large warship).

Work on the ship, again using Balfour's own workforce, was begun at Bremerholm early in 1600. He received his first payment of 500 Dlr. in April 1600 and payments of around 100 Dlr. were thereafter made nearly every month, until the vessel's completion in August 1601. In total Balfour received 2300 Dlr. plus 517½ Dlr. worth of victuals for this ship<sup>35</sup>.

This ship, called *Argo*, with a keel length of 54½ alen (30m) and carrying 54 cannon, was the largest warship to have been built for the Danish navy since the *St. Olaf* of 1573 and was immediately used by Christian IV as his new flagship.

This ship was so well received that Balfour was immediately taken on as a royal master shipwright and *hoftiener* (court servant) with wages of 400 Dlr.<sup>36</sup> He then worked at Bremerholm and in the timber accounts he was given timber for 'det Nye skib som schal opβettis' (the new ship which shall be set up), i.e. the small *Trost*, which was completed by the summer of 1602<sup>37</sup>.

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34. Missive to Børge Trolle, *Kancelliets Brevbøger*, 4 December 1597; Rigsarkiv, Rentemesterregnskaber, 1597/98, f.446.

35. Payments to Balfour, 12 April, 12 June, 1 & 24 July, 30 August, 27 September, 31 October, & 8 November 1600, and 28 March, 10 April, 19 & 29 June, 4, 15 & 24 August 1601. Rigsarkiv, Rentemesterregnskaber, 1600/01, f.441-3.; and 1601/02, f.602-5.

36. In fact this seems to have been more of a retainer than a formal wage because payments began on 8 August 1601 when *Argo* was completed, and ended on 14 June 1602 when *Tre kroner* was under way. Rigsarkiv, Rentemesterregnskaber, 1601/02, f.771-2; and 1602/03, f.808-9.

37. Timber issued to Balfour in May, November & December 1601, and March & June 1602 (Rigsarkiv, Marinearkivet for 1655, 28, Bremerholms Tømmerregnskaber, 1601/02 & 1602/03).



He did not stay at Bremerholm for long, however, because in March 1602 he was awarded another contract to build a ship in Flensburg 'paa hanns eigenn kost och med sitt egett folck' (at his own expense and with his own men) which was to be 'paa sin stor lighed som Konn: Ma: dett nye Orloug Schiff Argo,...., eller nogit mindre' (of the same size as H.M.'s new warship *Argo*, or slightly smaller)<sup>38</sup>.

For this new ship Balfour was to receive 3000 Dlr. plus a half last each of rye and barley and a barrel of butter. The king was to supply all timber, iron and other materials for the ship's construction as well as a pair of sawyers and 20 labourers.

The ship was begun in July 1602 and was nearing completion by January 1604<sup>39</sup>. However, far from being slightly smaller than *Argo*, the new ship, *Tre kroner*, was substantially larger. Its keel, admittedly, was only slightly larger at 56 alen (31m), but it was much broader and carried an extra deck, making it capable of carrying a total of 80 cannon.

This larger size may be the reason that Balfour requested a further payment of 220 Dlr. for his work on the ship, which Christian IV refused to concede. However, despite this, the king seems to have been well satisfied with his new flagship and stated that he wanted to use Balfour again and would negotiate with him upon completion of his present work<sup>40</sup>.

The *Tre kroner* was ready to sail to Copenhagen in August<sup>41</sup>, and Balfour's next contract duly came in December 1604 for a ship to be built

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38. Rigsarkiv, Rentemesterregnskaber, 1601/02, f.604-5.

39. A *mersmager* at Bremerholm was issued timber to construct the topworks in January 1604 (Rigsarkiv, Marinearkivet for 1655, 28, Bremerholms Tømmerregnskaber, 1603/04).

40. Missive to David Balfour, *Kancelliets Brevbøger*, 29 January 1604.

41. Missive to Corfitz Ulfeldt, *Kancelliets Brevbøger*, 10 August 1604.

in Norway. This new ship was to have a keel length of 40 alen (22m) with an orlop deck, upper deck and forecastle. It was to carry three 'rows' of cannon on the foredeck<sup>42</sup>. For this ship Balfour was to be paid 1500 Dlr. and a last of barley, with which he was to hire his own men. All the timber, ironwork, blocks and rigging were to be supplied by the Akershus *lensmand*<sup>43</sup>, although it was quickly found that the Norwegian treenails were useless and Dutch ones had to be ordered instead<sup>44</sup>.

Unfortunately the name of this ship is not known, but the size of it suggests that it could well have been the *Sanct Anna*. Precise details of its dimensions are not known but we do know that it carried 30 cannon and 280 men, which is about right for the size of the Norwegian ship. Also *Sanct Anna* entered service in 1608<sup>45</sup>, which is reasonable if we allow two or three years for it to be built.

In between the building of these large ships Balfour also found time to construct a number of small vessels such as the *St. Peter* and *Penitens*, both completed by 1603, which were probably small pinnaces, and the six gun *Makarel* completed in 1607<sup>46</sup>.

In 1607 Balfour was once again taken on as a royal master shipwright. No commission for his appointment exists but in the *rentekammer* accounts it is noted that 'Konn: Maietts: haffuer Naadigst bestillet och antagen Dawid Ballfuhr, vdj Hans Maietts: Tienneste for enn Schiffs

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42. i.e. probably three cannon on either side.

43. Open letter to David Balfour, *Kancelliets Brevbøger*, 20 December 1604; Missives to Jørgen Friis, 21 & 24 December 1604, *Norske rigsregisteranter*, III, 94-5.

44. Missive to Jørgen Friis, 7 May 1605, *Norske rigsregisteranter*, III, 110.

45. Christian IV noted that it set sail on 19 July 1608 (J.H. Schlegel (ed.), 'Kong Christian IV Almanak for Aaret 1608', *Samlung zur Danischen Geschichte...*, 2 Bd. 3 stk. (1775), 59-84.

46. Rigsarkiv, Fæstningsregnskaber, IV, c.1-2., Københavns tøjhusregnskaber, 1602-04; 1607/08;



Biugmester' (His Majesty has graciously employed and engaged David Balfour in his majesty's service as a master shipwright)<sup>47</sup>. His wages were set at 400 Dlr., to be effective from 20 October 1607.

Again he did not stay long at Bremerholm, as by 1609 he had completed another ship, *Justitia*, at Årøsund<sup>48</sup>, near Haderselv in Schleswig, which Christian IV stated had been built using 'uoriss Skouiis udi holsten' (our woods in Holstein)<sup>49</sup>. Balfour therefore must have left Bremerholm more or less immediately after receiving his commission. He also built the 24 gun *Krokodillen* around this time but where this ship was built is not known.

In March 1610 Balfour was contracted to build another large ship, this time at Itzehøe, in Holstein. This ship, later called *Recompens*, proved to be a very problematic contract for Balfour<sup>50</sup>. When he first took on the work he was warned by Christian IV not to build the ship bigger than had been agreed<sup>51</sup>, and again a few months later was instructed not to vary the measurements from those previously agreed<sup>52</sup>. We know from a Swedish report on the fleet the *Recompens* was 'Uti all ting Likt Argo' (in all respects like *Argo*)<sup>53</sup>, and knowing that the last time that Balfour was requested to build a ship the same size as *Argo* he

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47. Rigsarkiv, Rentemesterregnskaber, 1607/8, f.678.

48. Ole Mortensøn, *Renæssancens fartøjer: sejlads og søfart i Danmark 1550-1650*, (Rudkøbing, 1995), 204.

49. Letter to *rigsråd*, 12 April 1633, C.F. Bricka & J.A. Fredericia (eds.), *Kong Christian den Fjerdes egenhændige Breve*, III, 102.

50. I am indebted to Niels Probst of the Orlogsmuseum, Copenhagen, for his help in identifying and interpreting some of the German documents associated with the construction of this vessel.

51. Letter to Gert Rantzau, 10 March 1610, Rigsarkiv, TKIA A32, VII 1608-10, Registrede koncepter til indlandische Registratur.

52. Letter to Balfour, 1 June 1610, Rigsarkiv, TKIA A32.

53. Swedish ship list of 1633 in Riksarkivet, quoted in Niels Probst, 'Nordeuropæisk span-teopslagning i 1500- og 1600-tallet', *Maritim Kontakt*, 16 (1993), 13.

produced the much larger *Tre kroner*, the king was obviously determined to have his instructions adhered to this time. He also received specific instructions concerning the design of the ship's rudder<sup>54</sup>.

In 1611 Balfour wrote to the *Tyske kancelli* to request further payment for 'dei Grossen Schiff zu Itzehoe' (the large ship at Itzehøe)<sup>55</sup>. The *Tyske kancelli*, however, decided that no payment was to be advanced before an inspection of the ship had been made, no doubt to ensure that the ship was indeed being built to the agreed design<sup>56</sup>.

Balfour had also been asked to build a small ship beside the *Recompens* around this time but he was unable to proceed with it until he knew what type of ship it should be. In his request to the *Tyske kancelli* he asked whether it should be 'ein Engelsche katze' (an English ketch) or 'mit ein spigel wie ein Pinnas' (with a square stern like a pinnace). Their reply was that Christian IV had himself decided that it should be like an English ketch<sup>57</sup>.

By March 1612 the larger ship was advanced far enough for a Captain to be appointed<sup>58</sup> and the man chosen was the inexperienced Claus Weinkauff, who had received his commission only the previous year<sup>59</sup>. This created problems for Balfour as, being a military commander, the captain took command of the ship over the shipwright, who was simply a 'Privat Person'. By May news of the 'freundtlich nicht verhalten'

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54. Letter to Baltzer von Ahlefeldt, 27 December 1610, Rigsarkiv, TKIA A32.

55. Letter to Tobia Lautterbach, Secretary of the *Tyske kancelli*, 25 February 1611, with margin notes (9 March 1611), and a draught reply. Rigsarkiv, TKIA A145, Akter vedr. skibsbyggerne David Balfour og Peter Michelsen.

56. The contract no longer exists but a summary of ironwork issued shows that at total of 304 Skippund (48.6 tonnes) was issued, at a value of 5,045 Dlr, between 1610 and 1612. Rigsarkiv, Danske kancelli, B164, IX, pk. 06, læg 17.

57. There was another small 2 gun ship named *Engelske Kittze* in the navy at this time.

58. Muster book of Claus Weinkof 16 March - 1 Sept 1612, Rigsarkiv, TKIA A145.

59. H.D. Lind, *Kong Kristian den Fjerde og hans Mænd paa Bremerholm*, (København, 1889), 193.



(unfriendly behaviour) between Balfour and the Captain had reached Copenhagen, where concern was expressed that 'darmit dem Schiffe nicht kom schade' (the ship does not thereby become harmed)<sup>60</sup>.

By July Christian IV was urging the ship's speedy completion<sup>61</sup>, but the apparently worsening dispute between Balfour and Weinkauff was causing increasing concern, and 'M. Balfour Schiffbauer, sich grossen muderwillent und fechtch gegen dem von Kon: Ma: aufs neue Schiff verordneten Capitain' (Master shipwright Balfour's great maliciousness and querulousness towards the Captain that H.M. has appointed to the new ship), was threatening the final completion of the ship<sup>62</sup>.

Despite this dispute the ship was finally completed and ready to sail on 4 August. However, the fears surrounding the safety of the ship came alarmingly true as the ship foundered in the river on its way out to sea and was nearly lost.

There was naturally an inquiry into the incident and, although the exact nature of the accusations are unknown, Balfour's defence submission has survived<sup>63</sup>. This is written in a rather idiosyncratic and confusing German, which does not help to make his case at all clear. However, it implies that Weinkauff was blaming Balfour for the construction of the ship, while Balfour in turn argued that he had built and prepared the ship properly and that it was Weinkauff's poor seamanship which had caused the accident.

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60. Letter to Baltzer von Ahlefeldt, 28 May 1612, Rigsarkiv, TKUA, Alm. del 124, f.173a.

61. Letters to Baltzer von Ahlefeldt 4 & 12 July 1612; and David Balfour & Claus Weinkauff, 4 July 1612, Rigsarkiv, TKUA, Alm. del 124, f.195a., f.196, & 205a.

62. Letters to Baltzer von Ahlefeldt, 16 & 27 July 1612, Rigsarkiv, TKUA, Alm. del 124, f.209a & f.211b.

63. Letter to Christian IV, undated, Rigsarkiv, TKIA A145.

He stated that as the ship travelled towards Suie it ran aground on a sandbank. Water then leaked in, coming up to the scuppers, and the ship was prevented from capsizing only by securing an anchor on land and attaching it to the mast. As the tide began to fall the ship came further round on the bank and began to fall over on its side. As this happened the ship's boat was caught fast by a cable. This was ordered to be cut free, but when this was done the ship fell even further over.

He then went on to state that from these observations no blame could be apportioned to him as he had provided 'ein fertich wolvorwartern gut richtiges Schiff das an kein feill odder mangell' (a completed, well-constructed?, good correct ship which had neither mistakes nor deficiencies).

However, despite this argument, Balfour was imprisoned in Dragsholm Castle sometime around the end of 1612. The precise reason for his imprisonment is not actually known, but it is more than likely that it was because of the trouble experienced with *Recompens*.

Dragsholm Castle was where noblemen who had committed some heinous crime against the state tended to be incarcerated<sup>64</sup>. *Recompens* was built during the Kalmar War and Christian IV's urgency in wanting the ship completed suggests that he may have wanted to use it in the campaign against Stockholm in the autumn of 1612. If the grounding of the ship was considered Balfour's fault then it may well have been construed as treason<sup>65</sup>.

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64. It was here that the Earl of Bothwell was imprisoned. A.G. Hassø (ed.), *Danske Slotte og Herregaarde*, (København, 1944), 561-78.

65. It may be significant that Weinkauff never commanded another ship after this incident. Lind, *Kong Kristian og hans Mænd*, 193.



Whatever the grounds for Balfour's imprisonment his kinship with the Balfours of Burleigh proved to be invaluable, and his release was secured only after the personal intervention of James I/VI<sup>66</sup>. His petition to Christian IV reads as follows:

Most serene Prince relative, in-law, brother and dearest companion;  
Since certain of our servants from the Balfor family, who neither originate in an obscure place nor are to be despised by us in any way (because of their generous service, which we use daily), have indicated that a certain Scot and skilled shipwright, David Balfor has by now been held in prison at the command of Your Serene Highness for three years or thereabouts (whereby not only has he been almost killed by the sadness and squalor of the long imprisonment but also his wife and infant children have been reduced to almost extreme poverty), and since they have petitioned as supplicants that we send a letter to Your Serene Highness and that we ask you to free the above-mentioned David from Prison; we think, even though we feel that the offences of no one should be excused, that something should nevertheless be conceded to their prayers, because several men are boldly declaring that the above-mentioned David was falsely accused before Your Serene Highness because of the false accusations of his enemies rather than because of any deed of his own. And so we ask of Your Serene Highness that if a charge of a more serious nature can be brought against the above-mentioned David, you will take the trouble to inform us of it. But if it is insignificant and not worthy of troubling your ears, we assert on behalf of our friendship (or rather our fraternity) that whatever his crime is, you should not refuse to pardon him for

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66. Letter from James I to Christian IV, 30 September 1615, (Ronald L. Meldrum (ed.), *The Letters of King James I to King Christian IV 1603-1625*, (Hassocks, 1976)).

that and restore him to his previous freedom by this request of ours. And we do not doubt but that he himself mindful of such great kindness, will struggle with all his strength to obliterate the blemish of any prior offence (but only if there is any) through faith and diligence (if only Your Serene Highness will use his service in the future).

Although the petition is dated September 1615 the order for Balfour's release was not issued until 13 June 1616, when he was ordered to return immediately to Copenhagen<sup>67</sup>. He must have been exonerated or pardoned for his crime since, as James I/VI had suggested, Balfour was once again employed by Christian IV. However, before building any new ships he was first sent on a mission to Jutland to search for suitable shipbuilding timber<sup>68</sup>.

Balfour must have proved his worth as on 2 July 1617 he was once again given a commission as a royal master shipwright with wages, as before, of 400 Dlr. However, he was now no longer the most senior shipwright since Daniel Sinclair was also given an identical commission on the same day<sup>69</sup>. It also seems as though Balfour was serving a kind of probationary period because at first he built only small vessels, and it was many years before he was entrusted with the building of another ship of any size.

In March 1618 Christian IV wrote in his diary 'sendt jeg 1000 Dl. til Jens Sparre som M. David skulde have' (I sent 1000 Dlr. to Jens Sparre which Master David should have)<sup>70</sup>, but there is nothing to indicate what

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67. Missive to Olluf Rossensparre, 13 June 1616, O. Nielsen (ed.), *Københavns diplomatarium*, (København, 1874), V, 25.

68. Instructions for Mester Davet Balfut, *Kancelliets Brevbøger*, 3 November 1616.

69. Rigsarkiv, Danske Kancelli, B54, Sjællands Registre 1613-19, f.267-8.

70. Rasmus Nyerup (ed.), *Kong Christian den Fjerdes Dagbøger for Aarene 1618, 1619, 1620, 1625, 1635 udgivne efter Originalerne*, (København, 1825), 15.



this payment might have been for. It may have been for the building of a ship but since Jens Sparre was at the time in Hammershus in the south of Sjælland it is more likely to have been connected with the felling of timber.

By 1620 Balfour was back working at Bremerholm. The Great Forge accounts show that he was issued with spikes and nails to use for a 'Nye Sckrabbe, thill holmens behouff' (new 'scrubber' for use at Bremerholm). This was most likely a barge used in 'scrubbing' the bottoms of ships when they were being careened, since later in the accounts Balfour was again issued with material for use on 'skibene och dend Nye Pramb' (the ships and the new barge). The accounts show that Balfour continued working at Bremerholm until at least the end of 1621 but he was not responsible for the building of any new ships since the amount of material issued to him was not great and was simply intended 'till schiffs behouf her paa holmen' (for use on ships here at Bremerholm)<sup>71</sup>.

In 1620 two merchants in Flensburg were given the contract to build a ship for the navy. Their contract stated that the ship should be supplied with a ship's boat, the specification for which was drawn up by Balfour<sup>72</sup>. It is clear from this that Christian IV did not yet trust Balfour to build any sizeable vessels for the navy and it must have been a humiliation for Balfour not only to not be given the contract, but that he was thought competent only to design the ship's boat. Two years later Balfour did obtain a contract to build a ship, but this was only a small *jagt* for which he received just 150 Dlr.<sup>73</sup>

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71. Rigsarkiv, Marinearkivet for 1655, 30. Store Smedjes Regnskaber, 21 & 29 February and 6 March 1620, 27 April and 6 September 1621.

72. Open letter, *Kancelliets Brevbøger*, 25 February 1620.

73. Rigsarkiv, Rentemesterregnskaber 1622/23, 78, f.195. See also Chapter 3.

It was not until 1623 that Balfour received his next major contract<sup>74</sup>. This was for a small shallow-draught 22 gun ship with a keel length of 40 alen (25.1m), later called *Hummeren*. The ship was to be built at Bremerholm but using Balfour's own workforce. All materials were supplied by the dockyard and the dockyard's personnel were to be used to launch the ship, but all other costs were to be met by Balfour. The contract stated that the ship was to be completed by August 1624 and that Balfour was to be paid 3500 Rdlr. in four instalments. However, the ship was not launched until October 1624 and the final payment for completion of the ship was not made until May 1625<sup>75</sup>.

Whilst building *Hummeren* Balfour also constructed another smaller ship called *Postillionen*, with a keel length of 33 alen (20.1m). He did not receive a contract to build this ship indicating that it was built in his position as royal master shipwright and using the dockyard's own labour.

With these two ships Balfour seems to have redeemed his reputation. The design of both ships proved extremely successful<sup>76</sup> and many copies of both vessels were made in subsequent years. Already in January 1625 Balfour was awarded a contract to build two more ships identical to *Postillionen*. Like *Hummeren* these ships were to be built at Bremerholm but using Balfour's own workforce. For each ship he was to receive 9000 Dlr., again paid in four instalments, the last of which was to be paid upon completion of the ships by July that year<sup>77</sup>. Again the ships were delivered late, with the last instalments for the ships *Sælhunden* and *Flyvende fisk* being made in January 1626<sup>78</sup>.

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74. Contract with David Balfour, *Kancelliets Brevbøger*, 2 October 1623. A draft of this contract can be found in Rigsarkiv, Danske kancelli, B164, IX, pk. 06, læg 17.

75. Payments to Balfour 8 October 1623, 17 June, 25 September & 30 October 1624 and 12 May 1625, Rigsarkiv, Rentemesterregnskaber, 1623/24, f.84; 1624/25, f.96; and 1/5/1625 - 31/12/1625, f.52.

76. The design of *Hummeren* will be fully discussed in Chapter 11.

77. Open letter, *Kancelliets Brevbøger*, 25 January 1625.



With this new found trust Balfour was able to set up his own private shipyard in Christianshavn. He first purchased a plot of land at Christianshavn in 1624, which included access to a 'haffn udi stranden' (harbour on the beach)<sup>79</sup>. Shortly afterwards he also acquired an additional plot beside it from his father-in-law, Johan de Willem. This combined plot, measuring 96 by 96 alen (60 x 60m), lay at the extreme edge of the new town's development and beside an area of land that had not yet been developed as planned<sup>80</sup>. Balfour, not content with this double plot, also piled in an area of this land to create his new shipyard<sup>81</sup>.

This area has recently been excavated to reveal two slipways and a careening dock created by sinking two small ships. The ships date from the late 16th century and the dock was therefore probably created as part of Balfour's shipyard, when the ships had reached the end of a 20-30 year life-span<sup>82</sup>.

Nothing is known of the actual organisation of this shipyard but we know that Balfour was in dispute with some Dutch carpenters in 1625<sup>83</sup> so it is likely that, as Danish shipcarpenters were in short supply, he employed Dutchmen instead<sup>84</sup>. Some men from Bremerholm were also used

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78. Payments to David Balfour 29 June, 30 July, 17 August & 15 October 1625, and 10 January 1626, Rigsarkiv, Rentemesterregnskaber, 1/5/1625 - 31/12/1625, f.52.; and 1/1/1626 - 1/5/1626 (Udgift), f.46.

79. Open letter, 11 February 1624, *Københavns diplomatarium*, V, 762-3. The harbour was known as Grønnegårdshavn.

80. Measurements of Balfours plot, undated, 8 February 1624, and 25 July 1634, Rigsarkiv, Danske kancelli B160, Indlæg til registre og tegnelser...; Mogens Lebech, *Gamle skibe - gamle huse*, (København, 1959), 20-5.

81. Letter to Christian Friis, Jørgen Urne, Tage Thott & Christoffer Ulfeldt, 4 May 1635, *Københavns diplomatarium*, VI, 166-7.

82. Henrik B. Frederickson, 'Værft og anlæg ved Grønnegårds Havn', *Middelalderarkæologisk Nyhedsbrev*, October 1996. I am indebted to the author for providing an advance copy of this article.

83. Missive to Sten Villumsen and Mogens Kaas, *Kancelliets Brevbøger*, 7 November 1625.

84. Balfour's connection with Johan de Villem lends further weight to this premise as de Villem frequently supplied men and materials to Denmark from the Netherlands.

from time to time, such as the apprentices that were there in 1625, but any wages or victuals given to them by the state were deducted from Balfour's contract<sup>85</sup>.

The first contract to build a ship for the navy at this new shipyard came in 1625. The actual contract does not exist and nothing is known of the design of the ship. It was first referred to as simply 'eett nytt Schiff' (a new ship), but when it entered service it was called the 'ny pram' (new barge). This barge, for which Balfour received a payment of 3200 Edlr.<sup>86</sup>, was eventually given the name *skieldtusen*<sup>87</sup>.

Two small ships were also built at Christianshavn in 1626. The first was initially referred to as the 'Paa Amager Ny Skib' (new ship at Amager)<sup>88</sup>, but later called *Haren*. The other was probably *Mynden*<sup>89</sup>. These ships were of a similar size to *Postillionen* and may well have been additional copies of that vessel<sup>90</sup>. By September 1626 Balfour was experiencing financial difficulties and the *rentekammer* was instructed to advance him some money to complete the work on these two ships<sup>91</sup>.

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85. 190 Rdlr. worth of victuals supplied to the *læredrenge* from the Proviantskriver were deducted from Balfours contract. Rigsarkiv, Rentemesterregnskaber 1/5/1625 - 31/12/1625, f.53.

86. Payments to Balfour 25 December 1625, 4 March & 17 April 1626, Rigsarkiv, Rentemesterregnskaber, 1/5/1625 - 31/12/1625, f.53, and 1/1/1626 - 1/5/1626, f.46.

87. Not until 1628 was its name recorded in the materials accounts. Rigsarkiv, Marinearkivet før 1655, 30. Bremerholms Materialskriver regnskaber, 1628/29.

88. Rigsarkiv, Marinearkivet før 1655, 18. Bremerholms materialregnskaber, Udgift 1626/27.

89. No contract survives for these ships but we do know that the contract was for two ships and that *Mynden* was built by Balfour at this time.

90. *Postillionen*, *Flyvende Fisk*, *Sælhunden*, *Haren* and *Mynden* all carried a complement of 50 men. Rigsarkiv, Marinearkivet før 1655, 13. Bremerholms Proviantskriver regnskaber, 1627/28.

91. Letter to Christopper Urne, *Kancelliets Brevbøger*, 24 September 1626.



Although Balfour now had his own private shipyard he was also still very much involved at Bremerholm. In May 1625 he and Daniel Sinclair were each ordered to begin instructing 12 apprentices in a four year course in ships carpentry, with the best pupils going on to learn the art of shipwrightry<sup>92</sup>. Also in 1625 both shipwrights made a report on shipbuilding practices at Bremerholm which brought them into dispute with the *Holmens admiral* Sten Villumsen<sup>93</sup>.

The dispute probably arose from problems associated with the practice of Balfour building ships at Bremerholm as a private contractor, as well as from disagreements over the newly published *Holm- og arsenal-artikler*. Balfour and Sinclair's commissions of 1617, unlike previous shipwrights' commissions, simply stated that they should be faithful and diligent in their work and not do anything which anyone could complain about. The precise details of what they were to do were not outlined, nor was it stated that they should at all times be present at Bremerholm. This obviously gave them a certain amount of freedom in their working practices, which the new regulations detailed in the *Holm- og arsenalartikler* threatened.

It was Sten Villumsen who originally made a complaint over the work of the shipwrights, and requested them to make a report on shipbuilding practices at Bremerholm<sup>94</sup>. However, this report, submitted to the *Danske kancelli*, proved highly controversial, and claims that there were certain 'letsindige praktikker' (improvident practices) which were injurious to the state prompted an immediate secret inquiry<sup>95</sup>.

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92. Missive to *rentemestrene*, *Kancelliets Brevbøger*, 6 May 1625.

93. See Chapter 6.

94. Missive to Sten Villumsen, *Kancelliets Brevbøger*, 21 May 1625.

95. The report has not survived but some indication of its contents is contained in a missive to Axel Arenfeldt & Mogens Kaas, *Kancelliets Brevbøger*, 15 May 1625.

Although the report was not entirely favourable to Villumsen, Prince Christian (V) in the end agreed with him that it would be to the king's advantage if the shipwrights held complete authority over the work of the shipcarpenters, auger-men, sawyers and apprentices and were to oversee these men at all times<sup>96</sup>.

Understandably Balfour was concerned. How was he to fulfil his private contracts if he was supposed to be always with the king's men? The dispute dragged on and Prince Christian (V) was again forced to intervene to tell both parties to conduct themselves properly and to carry out their duties as instructed. If there were any further complaints they were to take the matter up with the king on his return to Copenhagen<sup>97</sup>. Some compromise must have been reached, though, as nothing further is heard of the dispute.

In 1626 Balfour was given, for the first time since the *Recompens* affair, a contract to build a large warship. The contract no longer exists but we know that the ship, *Oldenborg* was capable of carrying 42 cannon on two decks<sup>98</sup>. The first reference to the ship comes in April 1626 when the king ordered that as payment for 'det store skib' (the large ship) he could receive a keel, and other large ship's timbers<sup>99</sup>. Further payments, in cash, totalling 6544 Edlr. were also made from the *rentekammer*<sup>100</sup>. The

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96. This was stipulated in article 39 of the *Holm- og arsenalartikler* issued on 8 May 1625.

97. Missives to Sten Villumsen, David Balfour and Daniel Sinclair, *Kancelliets Brevbøger*, 12 July 1625.

98. Letter to *rentemestrene*, March 1633, *egenhændige Breve*, III, 95.

99. Missive to Stalder Kaas, *Kancelliets Brevbøger*, 15 April 1626. Further timbers were delivered to Balfour from Scania (Missive to Christopher Urne, *Kancelliets Brevbøger*, 2 May 1626). This shows that, in contrast to his contracts built at Bremerholm, Balfour was to supply the timber as well as the manpower for contracts placed at his Christianshavn shipyard.

100. Payments to Balfour, 16 August 1626, 28 August 1627, 30 April 1628. Rigsarkiv, *Rentemester-regnskaber*, 1626/27 (Udgift) f.97, 1/5/1627 - 1/9/1627 (Udgift) f. 79, 1/9/1627 - 1/5/1628 (Udgift), f.128. The payments of installments is incomplete and further payments must have come from *Kongens eget Kammer*.



*Oldenborg* was completed by the beginning of 1628 and made a favourable impression on Christian IV who stated that it was 'Ett aff myne beste Orloff skiibe' (one of my best warships)<sup>101</sup>.

After *Oldenborg* was completed Balfour was sent to western Sjælland to survey woods for suitable shipbuilding timbers<sup>102</sup>. On his return he received a contract to build two ships that were identical to *Hummeren* except that they were to have an increased keel length of 42 alen (26.3m). This was Balfour's biggest single contract, worth 14,000 Rdlr., for which he was to supply the two ships complete in every way apart from the figure-head and stern carvings<sup>103</sup>. The contract did not get off to a very good start, however, as his wood supplier in Scania let him down and he was in danger of having to stop work. The *lensmand* had to intervene to ask the local farmers to assist with the transport of the timber to Halmstad, from whence Balfour could then ship it to Christianshavn. The cost of this work was subsequently to be deducted from Balfour's contract<sup>104</sup>. The first of the ships, 3 *Løver*, was completed by 1630 and the second, 2 *Løver*, the following year.

Later in 1631 Balfour was sent to Norway to assist with the completion of a warship which had been begun in Trondheim *len* by contractors, but which they could not complete<sup>105</sup>. No warships are known to have been completed in Norway at this time but Oluf Parsberg, the Trondheim *lensmand*, was discussing the building a *defensionskib* in 1630 and one,

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101. Letter to Peder Vibe, 28 August 1642, *egenhændige Breve*, V, 246.

102. Missives to Sten Villumsen and Ernst Normand, *Kancelliets Brevbøger*, 19 October 1628.

103. Accord with David Balfour, *Kancelliets Brevbøger*, 26 November 1628.

104. Missive to Erik Rosenkrantz, *Kancelliets Brevbøger*, 14 February 1628.

105. Letter to Oluf Parsberg, 28 June 1631, *Norske rigsregistrarer*, VI, 328.

called *Den norske Løve*, is recorded in Trondheim harbour in 1633<sup>106</sup>. It therefore seems likely that this was the vessel that Balfour had assisted with the construction of.

Balfour also built another ship in Copenhagen, on his own account, in 1632. This was considered as a suitable *defensionskib* and it was recommended that it be purchased by anyone in Norway who desired a ship for this purpose<sup>107</sup>. The following year Jens Bielke was instructed to negotiate with Balfour for the supply of this vessel<sup>108</sup>, the name of which remains unknown. This raises an important point. After the completion of 2 *Løver* and 3 *Løver* Balfour received no further naval contracts. His Christianshavn shipyard therefore had to rely on the building of ships for private clients. However, the *defensionskib* of 1632 was built 'on spec' without a client, implying that perhaps trade was not as good as it might have been.

Why did Balfour not receive any more contracts to build naval ships after the apparent success of *Oldenborg*, 2 *Løver* and 3 *Løver*?<sup>109</sup> One possible reason is that he became embroiled in a dispute with Copenhagen's town council over the extent and ownership of Grønnegårdshavn, where his shipyard was situated<sup>110</sup>. This dispute essentially concerned the right of Christianshavn inhabitants to levy tolls and led, ultimately, to the establishment of Christianshavn as a separate town

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106. Olav Bergersen, *Fra Henrik Bielke til Iver Huitfeldt*, (Oslo, 1953), 37.

107. Letter to Christopher Urne, 17 November 1632, *Norske Rigs-registranter*, VI, 437.

108. Letter to Christopher Urne, 20 July 1633, *Norske Rigs-registranter*, VI, 574.

109. At least three copies of this variant of the *Hummeren* design were ordered from other builders between 1631 and 1639.

110. Missive to Christian Friis & Frans Rantzau, 25 February 1632, *Københavns diplomatarium*, VI, 127.



with its own council and privileges in 1639<sup>111</sup>. The initial dispute over Grønnegårdshavn, though, was not settled until after his death.

Balfour was also by now becoming rather old and the bigger ship-building contracts were increasingly being given more to Daniel Sinclair than to Balfour. He still maintained his role as master shipwright at Bremerholm, though, until his death in 1634. His widow received his last wages which were 'Berrignidt fra paasche dag Anno 1633, Och till Aars dagen Anno 1634 da hand wid døden er affgangenn' (calculated from Easter day 1633 to the same day 1634 when he died)<sup>112</sup>. Lind gives his date of death as 12 March and his burial as 19 March 1634<sup>113</sup>.

By the time of his death Balfour had made a significant impact on the Danish navy, building at least 25 naval vessels of all sizes, shown in Table 8.1. He must have possessed a precocious talent, with his first contract coming at the age of just 23, and he was entrusted with the building of the massive *Argo* and *Tre kroner* before he had reached 30.

With such a talent his future should have been assured but the dispute over *Recompens* cost him dearly. Not only was he imprisoned but he also lost the confidence of Christian IV. After his release he had to prove his worth once again by working at Bremerholm building small craft and surveying timber, without any of the lucrative private contracts. Slowly, though, he managed to win back the confidence of his master, and with *Hummeren* he was able to demonstrate his prodigious talent once more. However, he never quite regained his former position as Christian IV's favoured shipwright.

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111. Lebech, *Gamle huse - gamle skibe*, 22-7.

112. Rigsarkiv, Rentekammer, Udgift Conto I.a., Klædekammer regnskaber, 1633/34, f.28.

113. Lind, *Kong Kristian og hans Mænd*, 370.

Balfour was not always an easy man to get along with and was involved in numerous disputes. We have seen that in 1611 he was in dispute over *Recompens*, in 1625 his report on shipbuilding practices at Bremerholm ending in an acrimonious dispute with the *Holmens admiral*, and the establishment of his shipyard at Grønnegårdshavn brought him into conflict with the civic authorities in 1632.

<u>Name</u>	<u>Type</u>	<u>Date Built</u>	<u>Where Built</u>	<u>Length</u>	<u>Breadth</u>	<u>Cannon</u>
not known	Galley	1597	Slotsholmen	40	?	?
not known	Galley	1598	Norway	?	?	?
<i>Argo</i>	Large Warship	1599-1601	Blekinge	55.5	17.5	54
<i>Trost</i>	Small Warship	1601-02	Bremerholm	?	?	?
<i>St. Peter</i>	Pinnace ?	1603	?	?	?	?
<i>Penitens</i>	Pinnace ?	1603	?	?	?	?
<i>Tre kroner</i>	Large Warship	1602-04	Flensborg	56	22	80
<i>Makarel</i>	Small Warship	1607	?	?	?	6
<i>Sanct Anna</i>	Medium Warship	1604-07	Norway	40	?	31
<i>Justitia</i>	Large Warship	1607-09	Itzehoe	?	?	44
<i>Krokodillen</i>	Medium Warship	1609	?	?	?	24
<i>Juppiter</i>	Small Warship	1610	?	?	?	?
not known	English Ketch	1611	Itzehoe	?	?	?
<i>Recompens</i>	Large Warship	1610-12	Itzehoe	50?	?	54
not known	Scrubber Barge	1620	Bremerholm	?	?	0
not known	Jagt	1622	Bremerholm ?	?	?	?
<i>Hummeren</i>	Medium Warship	1623-25	Bremerholm	40	13	22
<i>Postillionen</i>	Small Warship	1624	Bremerholm	33	9	16
<i>Flyvende fisk</i>	Small Warship	1625-26	Bremerholm	33	9	16
<i>Sælhunden</i>	Small Warship	1625-26	Bremerholm	33	9	16?
<i>Skieldtusen</i>	Barge	1625	Christianshavn	?	?	?
<i>Haren</i>	Small Warship	1626	Christianshavn	33	9	17
<i>Mynden</i>	Small Warship	1626	Christianshavn ?	33?	9?	18
<i>Oldenborg</i>	Large Warship	1626-28	Christianshavn	51	15	42
<i>3 Løver</i>	Medium Warship	1628-30	Christianshavn	42	13	32
<i>2 Løver</i>	Medium Warship	1628-31	Christianshavn	42	13	32
<i>Den norske Løve?</i>	Defensionskib	1631	Norway	?	?	?
not known	Defensionskib	1632	Christianshavn	?	?	?

**Table 8.1 Ships Built by David Balfour**

Principal sources: *Kancelliets Brevbøger*, *Norske rigregistranter*, *Rentemesterregnskaber*.

However, it was not only officialdom with which he came into conflict. In 1628 the Copenhagen magistrates were informed that he had for a long time been in dispute with a woman in Copenhagen by the name of



Lisbet Bertels. This argument was over money, with Balfour involved in a 'stor penge spilde och vnødige vdgifft' (great gamble and unnecessary outlay). It was obviously a very serious matter since the government felt the need to intervene because 'voris dagligen arbeide end ochsaa er bleffuen der offuer forsømmet' (our daily work has as a result been neglected)<sup>114</sup>, but the outcome of this dispute is unknown.

In 1634 Balfour was also involved in another dispute, this time with the merchant Richard Hawiis (or Rikard Hanyes) who had purchased the ship *Crocodillen* from him. Hawiis complained that Balfour had failed to deliver the ship at the promised time and that the deal was now void<sup>115</sup>. Details of this dispute arise shortly after Balfour's death and it may be that this was the reason for the ship not being completed on time, in which case Balfour could hardly be to blame. Hawiis, however, still continued his claim against Balfour's widow long after Balfour's death<sup>116</sup>.

Despite all his difficulties Balfour managed to preserve his social standing as a foreign nobleman. By purchasing a plot in Christianshavn he was in celebrated company and counted many noblemen and *rigsråd* members as neighbours, including *stadtholder* Frans Rantzau, *rigsmarsk* Jens Juel, *rigsadmiral* Claus Daa and *Holmens admiral* Sten Villumsen. In 1629 his social status was further reinforced with the receipt of an official nobility patent from Charles I.

According to Danish common law a foreigner becomes a naturalised Danish citizen upon marriage to someone of the same standing<sup>117</sup>. Balfour

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114. Missive to Copenhagen town council, 6 September 1628, *Københavns diplomatarium*, VI, 106.

115. Missive to Erik Ottesen, *Kancelliets Brevbøger*, 29 June 1634.

116. Letter to Floris Reinertsen et al, 7 November 1635, *Københavns diplomatarium*, 178.

117. Thomas Riis, *Should Auld Acquaintance be forgot: Scottish-Danish relations c.1450-1707*, (Odense, 1986), I, 106.

married three times, although none of his wives were of the nobility. Balfour's nobility patent may therefore have been in some way connected with an application for status as a Danish lord.

Little is known of Balfour's first two wives, Agnete Dunchesia and Maria Escyllæa (Eskilsdatter), but his third, Johanne Villums, was the daughter of the Dutchman Johan de Villem, one of the richest merchants in Copenhagen, who made his fortune in supplying arms to the state and was involved in the Greenland whale fisheries and the Danish East India Company<sup>118</sup>. In total Balfour fathered 16 children, including Agnete born in 1620 and Elisabeth in 1623<sup>119</sup>, but all of them apparently died before him.

As well as his high social standing he also seems to have been held in high regard in intellectual circles. In the 1630s he owned a property beside Copenhagen University<sup>120</sup> and his funeral eulogy was given by the university's professor of metaphysics<sup>121</sup>. The scientist, theologian, historian and Court astronomer Niels Heldvad also wrote the following dedication to him in one of his many volumes<sup>122</sup>:

Erlig, Velbyrdig, Edel oc konstrig Mand Mester David Balfowr,  
kongl: May: Offuerste Skibsarkelie Bygmester, Min besynderlig gode  
Ven.

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118. Steffen Heiberg, 'Johan de Villem', *Dansk biografisk leksikon*, (København, 1984), 15, 547-8.

119. Landsarkivet for Sjælland, LA 1-21-1, Bremerholms Kirkes dåbs- og trolovelsesprotokol, 1617-39, 145 & 159.

120. It is not known when he purchased this site but details of purchases of land abutting his property are known from July 1631 and March 1634. H.U. Ramsing, *Københavns Ejendomme 1377-1728*, (København, 1943), III, 88; Det kongelige Bibliotek, Gl. kgl. Saml. Nr. 727 fol., II.

121. He was given 4 Rdlr. for this service. 'Udtog af D. Jacob Matthisens Tegnebog', *Danske Magazin*, 1 Bd. (1745), 218-9.

122. Niels Heldvad, (Nicolao Heldwadero), *Onomat-etymologicon de Originibvs nominum ...*, (København, 1630).



Eder min kiere M. David haffuer ieg ville *dedicere* oc tilskriffue denne lille *Tractat*, efftersom J er fød oc baaren aff ypperlig Adels Stamme oc herkomst vdi Skotland, huilcket aff eders Gebortsbreff nocksomelig staar at bevise som den mechtige kong *Carolus, Magnæ Britanniaë, Franciaë & Hiberniaë Rex, sub Sigillo aurco* giffuer eder vidnisbyrd.

Huad oc eders bedrøfft oc konst er anlangt vil ieg intet omtale, efftersom Gierningen priser oc berømmer Mesteren, & *vino vendibili non opus est suspensa hedera*, som man pleyer at sige. ...

Dereffter i ocsaa Welbyr: David Balfowr effter Kongelige May: Christiani 4 befalning oc bekostning opbyggt mange adskillige store Skibe, blandt huilcke ere høyligen at berømme det Skib som kaldis de 3. Kroner, desligeste *Recompens, Argo, Justitia, S. Anna, Poenitentz, Makaril, Jupiter, S. Peder, Trost*, den lang Galley, noch en Galley, Hummer, Postilion, Sælhunden, Fluende Fisk, Haren, Munden, Oldenborg, Prammen som kaldis Skeltudzen, oc mange flere, med ocsaa de 2. store Skibe som nu staae paa stappelen, Eder til en besynderlig ære oc berømmelse paa eders konst oc dueligheds vegn. Oc haffue icke været en wduelig Adels Mand: EXALTAT VIR-TUS NOBILITAT GENUS.

Honourable, well-born, noble and skilful man Master David Balfour, H.M.'s greatest warship builder, my particular good friend.

To you my dear Master David I want to dedicate and ascribe this little tract, since you are born and raised of the highest noble origin and lineage in Scotland, which by your nobility patent<sup>123</sup> under the seal of the mighty king Charles of Great Britain, France, and Ireland, clearly shows and gives witness to.

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123. The patent was published in full at the end of the dedication.

What your achievements and art amounts to I will say nothing of, since the works praise and bring fame to the master, and 'wine to sell, not labour, is hanging in the vines', as one used to say. ... Thereafter, you, noble David Balfour have after His Majesty Christian IV's instructions and cost built many diverse large ships, among which is the highly praised ship called *Tre kroner*, as well as *Recompens*, *Argo*, *Justitia*, *St. Anna*, *Pøniten*s, *Makarel*, *Jupiter*, *St. Peter*, *Trost*, the long galley, another galley, *Hummeren*, *Postillion*, *Sælhunden*, *Flyvende Fisk*, *Haren*, *Mynden*, *Oldenborg*, the barge called *Skieldtusen*, and many more, also with the two large ships which now stand on the stocks<sup>124</sup>, you have a particular honour and fame on account of your art and ability. And have not been an incompetent nobleman: Exalt the virtue of noble birth.

With such an effusive dedication from one of the county's leading scientists and intellectuals it is clear that Balfour's skill was held in very high esteem. By the 1630s Balfour had therefore totally recovered from the ignominy of imprisonment and had regained both his social standing and the king's faith in his technical abilities. Despite the *Recompens* incident and its consequences, Balfour's career was certainly illustrious by any standards, and he can rightly be considered as one of the principal shipwrights of early 17th century Europe.

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124. 2 *Løver* and 3 *Løver*



### 8.2.3. Daniel Sinclair

Whilst David Balfour was in prison in Dragsholm Castle another noble Scottish shipwright, Daniel Sinclair, appeared in Denmark. Nothing is known of his early life but it seems that he initially operated as a private shipbuilding contractor, as the following minute of the English East India Company from 1614 shows:

Mr Governor Mr Deputie and some others of the Company hauing had confirence 2 or 3 seuerall tymes with a Scottishe Lord about his exposition for the building of a shipp in Sueuia<sup>125</sup> or Denmarcke of 500 tonns as substantiall as the dragon, acquainted this courte with some of the conditions, that hee demandeth £6 per tunne without Sheathing, masting & caryuing, and soe many other exceptions as that they doe find yt will make the chardge farre greater than to build in Ireland, beside the hazard of buildinge with greene tymber, and out of their sight: whereas they finde by experience that many faults are made, when they have their Eye still on them, And therefore rightlie weighinge the sundrye inconvenyences that doe depend thereupon, they would not yield to give above £3 per tunne, and desyred Mr Deputy to retourne their saide resolution unto his Lordshipp<sup>126</sup>.

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125. The latin term for northern Germany, i.e. probably Holstein.

126. Court Minutes of the East India Co. 16 August 1614, Court Minute Book Vol. III, British Library, BL OIOC B/5, 196-7.

This 'Scottish Lord' could only be Sinclair since Balfour was at that time imprisoned in Dragsholm Castle and it would be a remarkable coincidence if there was yet another Scottish nobleman shipwright in Denmark at that time.

Although Sinclair was unsuccessful in this instance, he must have been fairly well established by then as in the same year he was admitted to the brotherhood of the most distinguished guild of Copenhagen, the *Danske kompagni* (Danish Company), as a 'schiffbøgger' (shipbuilder)<sup>127</sup>. He must therefore already have been resident in Denmark for some time to have achieved this social rank.

Entry to the *Danske kompagni* was often, though not exclusively, gained through royal service, but there are no records which link Sinclair to the Danish navy at this time. The earliest we can date his connection with the navy is 1617, when he received a formal commission as royal master shipwright at the same time as Balfour<sup>128</sup>. It is a little strange, though, that he was taken on at the same high rate of pay (400 Rdlr.) as Balfour, who had already shown his ability as a builder of warships, so perhaps Sinclair had been involved in some capacity prior to his formal engagement in 1617. Unfortunately no dockyard accounts exist for this period which would help to shed light on the matter<sup>129</sup>. His ability as a shipwright in 1617 certainly could not have been doubted.

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127. Københavns Stadsarkiv, Privataarkiver I, Det danske kompagnis Broderbog, I, p.64.

128. Sinclair's commission, 2 July 1617, Rigsarkiv, Danske Kancelli, B54, Sjællands Registre 1613-19, f.267-8.

129. He has been speculatively linked with the building of *Patentia*, which was launched from Bremerholm in 1616. However, it is highly unlikely that he could have built such a large vessel as a private contractor without some reference appearing in the *rentekammer* accounts or in the protocols of the *Danske kancelli*.



At first Sinclair worked at Bremerholm, although we do not know on what ships he worked. At the beginning of 1619, though, he was sent to Korsør to select timber to build a small transport *skøjte*<sup>130</sup>. This timber was then sent to Bremerholm, where the ship was built.

Then in January 1620 Sinclair received his first contract to built a ship<sup>131</sup>. The ship was to measure 300 lasts, without guns and ammunition, and was to be built at 'Bakulzshaffuen' in Blekinge, 'paa sin egen bekostning och med hans eget folck' (at his own cost and with his own men). In return Sinclair was granted 14,300 Kdlr., to be paid in four instalments<sup>132</sup>. Most of this was paid through the *rentekammer*, although in 1620 Christian IV gave him 500 Rdlr. from the *Kongens eget Kammer*<sup>133</sup>. The ship, the 36 gun *Røde Løve*, was completed by 1622, but Sinclair was still complaining that he had not been fully paid two years later<sup>134</sup>. David Balfour was then instructed to investigate the claim<sup>135</sup>, with the result that in February 1625 Sinclair received a further 511 Kdlr. from the *rentekammer*<sup>136</sup>.

After *Røde Løve* was completed Sinclair returned to Bremerholm where he was involved in shipbuilding work of some kind<sup>137</sup>, although

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130. Missive to Ebbe Munk, *Kancelliets Brevbøger*, 22 January 1619; Missives to Hans Staffensen, Axel Urne & Mogens Pax, *Kancelliets Brevbøger*, 13 March 1619.

131. Missive to Tage Thott, *Kancelliets Brevbøger*, 14 February 1620.

132. Rigsarkiv, Rentemesterregnskaber, 1619/20, f.133-5.

133. Payment to Sinclair 18 October 1620, Nyerup (ed.), *Kong Christian den Fjerdes Dagbøger*, 102.

134. It was probably *Røde Løve* Sinclair was demanding payment for in an undated letter to the king. Rigsarkiv, Danske Kancelli, B160, (1616-36).

135. Missive to Hendrik Vind & Jens Munk, *Kancelliets Brevbøger*, 31 October 1624.

136. Missive to *rentemestrene*, *Kancelliets Brevbøger*, 23 February 1625; Rigsarkiv, Rentemesterregnskaber, 1624/25, f.96.

137. Jens Munk received a payment on his behalf on 26 April 1623 for the delivery of oak planks and other ships timbers for 'hand Ma: Skiffs biugnings behouff' (his majesty's shipbuilding's requirements). Rigsarkiv, Rentemesterregnskaber, 1622/23, f.195-6.

the precise nature of this work is unknown. He did not stay there for long, though, as at the end of 1623 he was ordered to Lolland to organise the felling of large amounts of timber<sup>138</sup>. Some of this was for general use at Bremerholm, and some was to make oars for a galley which was being built<sup>139</sup>, but the majority of it was to be used to build a new large ship. Rather than transport all this timber to Bremerholm it was decided that it should be built somewhere in Lolland<sup>140</sup>. Christian IV suggested that King Hans' old dockyard on the small island of Slotø in Nakskov Fjord might be a suitable site for the building of the ship<sup>141</sup> and sent *Holmens admiral* Sten Villumsen to investigate<sup>142</sup>.

This site was indeed deemed suitable and preparations were made to build all the necessary buildings<sup>143</sup>, and shipcarpenters were hired from the surrounding area<sup>144</sup> as well as from northern Germany<sup>145</sup>.

Whilst the shipyard was being constructed preparations were also put under way for the building of the ship. Sinclair had to draw up a detailed estimate of the timber required, with details of the length and breadth of all timbers above and below the gun ports, and for the outer planking and decks, as well as the type and number of spikes required for each area of the hull<sup>146</sup>.

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138. Missives to Laurits Grubbe and Jørgen Grubbe, *Kancelliets Brevbøger*, 19 November 1623.

139. Memorial for Daniel Sinclair, *Kancelliets Brevbøger*, 31 January 1624.

140. Missive to Jørgen Grubbe, *Kancelliets Brevbøger*, 31 January 1624.

141. Missive to Daniel Sinclair, *Kancelliets Brevbøger*, 17 February 1624.

142. Missive to Laurits Grubbe and Jørgen Grubbe, *Kancelliets Brevbøger*, 10 March 1624.

143. Missive to Jørgen Grubbe, *Kancelliets Brevbøger*, 19 March 1624. See Chapter 5 for a description of the physical layout of the dockyard.

144. Missive to Axel Urne, *Kancelliets Brevbøger*, 27 May 1624.

145. Instructions for Jens Munk, *Kancelliets Brevbøger*, 3 February 1624.

146. Missive to Axel Urne, *Kancelliets Brevbøger*, 27 May 1624.



Within a few weeks of work beginning, however, Sinclair and his men were ordered to go to Bremerholm, where the king wished them to carry out a certain piece of work<sup>147</sup>. This was at the same time as the negotiations with Sweden at Knærød were occurring, and it may well have been the proposed naval mobilisation that Sinclair was to help with<sup>148</sup>. In any event the anticipated mobilisation did not occur and Sinclair returned to his new ship at Slotø.

The ship, the 54 gun *Store Sophia*, was the largest built since *Trekroner* of 1604. It was completed by 1627 and served as the navy's principal flagship in the 1630s. When Charles Ogier<sup>149</sup> saw the vessel in 1635 he was certainly impressed and gave the following description:

Prætorium Legatus ascendit, non scala, sed gradibus in cochleam factis, quales in domibus sunt: rectius castrum, aut oppidum diceres, tam vasta illa est, quinquaginta nimirum & amplius passum longitudine: quinquaginta tormenta bellica: tres fori, superior quidem qui aeri expositus est: Secundus in quo viginti tormenta. Tercius in quo cætera. Tresque illi fori nitidi, & tersi, atque omnibus impedimentis liberi. In inferioribus supellex ac penus omnis resposita. In puppe quator sibi superimpositas diætæ siue cubicula numeravi, superius Nauclerorum, secundum Nauarchi, tertium Regis siue Admiralii, in quo sex lecti, tres hinc inde.

Quarta deinde inferior diætæ, armamentarium est, vbi omnis generis arma, enses, bombardæ, circuli ignei, granata, lanceæ igneæ, cæteraque instrumenta maleficia, quæ nefarius ac sacer hominum furor adinuenit. Quæ omnia nobis sigillatim explicata sunt.

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147. Missive to Axel Urne, *Kancelliets Brevbøger*, 7 June 1624.

148. See Chapter 1.

149. Charles Ogier, *Ephemerides, Sive Iter Danicum*,... (Paris, 1656), 59–60.

Præcipuum malum duo viri simul expansis brachiis complecti vix poteramus. Funis Anchorarius manuum mearum complexu contineri non poterat: carinæ latera tres, & quator pedes crassa erant.

The ambassador went up into the admiral's ship not by a ladder but by steps built into the hull, of the sort found in a house, so great is it that it can rightly be called a castle or a town, it is surely 50 paces or more in length and has 50 cannon. It has three decks, the uppermost of which is open to the elements, on the second are 20 cannon, and on the third are the rest. These three splendid decks are free from any obstruction. In the hold all kinds of supplies and victuals are stowed. In the poop are four compartments or cabins on top of each other. The uppermost is for the skipper, the second for the captain, and the third, in which there are six beds, three on either side, is for the king or admiral. In the fourth and last compartment is the magazine, in which all types of guns, swords, bombs, fire-balls, grenades, fire-lances, and various other instruments of war, which wicked and pious men have invented in a rage. All of which we were shown, piece by piece. The main mast can scarcely be encircled by two men with outstretched arms. My hands were not able to encircle the anchor cable. The ship's sides are three or four feet thick<sup>150</sup>.

During the building of *Store Sophia* Sinclair was accused of selling the tops of trees for his own advantage<sup>151</sup>. Sinclair naturally denied these allegations and wrote a finely scripted deposition in his defence to

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150. This translation is based to a large extent on J.H. Schlegel's German translation, published in *Samlung zur Danischen Geschichte*, (1773).

151. Missive to Daniel Sinclair, *Kancelliets Brevbøger*, 14 November 1625.



the *Kongens Kansler*, Christian Friis<sup>152</sup>. This document not only provides some interesting details about the work of a state shipwright in the felling of trees, but also gives some useful clues to Sinclair's character.

After a long formal introduction he detailed all the felling activities he had been involved in over the last year, and accounts for the use and whereabouts of all the tree-tops and branches of these trees.

The previous winter he had felled 653 oaks in Jørgen Grubbe's estate, but because of the great amount of work involved only the trunks of 600 were immediately transported. When he returned the following spring he found that Grubbe's factor had authorised the sale of the branches and some of the remaining trees to local farmers for firewood.

That same winter he also cut 200 oaks in Anne Wittrup's estate, the branches of which were suitable only for firewood. He also felled a large number of trees in the woods of Maribo Kloster. Those suitable for shipbuilding were used by Sinclair, the remainder were given over to the factor there.

In Nielstrup's woods he felled 300 oaks which were taken to a public harbour to be shipped to Copenhagen. Maribo's burgomaster was sold the unsuitable tops and branches as firewood, but he felt he received a poor bargain and accused Sinclair of selling some of this wood to his own advantage. Sinclair in turn claimed that because the wood was taken to a public harbour much of the timber was cut up and stolen by the seamen and farmers who used the harbour.

Of the trees in the Crown's woods he stated that 80 to 100 were felled in Hallsted Klosters *len*, the tops and branches of which were given to the *lensmand* for use as firewood in the *len*.

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152. Rigsarkiv, Danske kancelli, B160, 29/1/1626.

Thus far Sinclair had related the facts coolly and soberly but, to reinforce his innocence, he becomes more emotional and relates a touching tale about how one day he was travelling through the Crown's woods in bad weather and came across a house, the good people of which lit him a fire to warm himself by. In return for this he had the factor reimburse them with the top of one of the felled crown trees. This, claimed Sinclair, was the one and only tree-top that he used and that:

Derssom der kannd befindes Wiedere ennd dennd eene Thoep Jeg endtenn haffuer saalld eller bortgiffuen Thaapper aff Treeren eller tømmer der kannd vere foed eller allenn langgt, endten her eller andenstedtz ieg ehr vdschichett aff hanns Mayts. Will ieg derfoer gioreen stande till Rette, ssaa hoyt min hoyt Øeffrighed kand vere begierendis.

If there can be found more than this one top and that I have either sold or given away the tops of the trees or timber that was a foot or an ell long, either here or elsewhere, where I have been sent by H.M., I shall give a full account of it, as far as my master may desire me to.

He then goes on to state, in rather hurt tones, that:

Gunstige herr Candtzler ieg bliffuer saa høyeligen andgiffuen for min hoye Øeffrighed for dett Jegh alldrig weed aff eller Thennchte. Lige saa dere ieg bøeghde dennd Røede Løeffue vdj Bleginnde, bleff ieg tidt och offte andgiffuen som daag befanndtes anderledis.



Gracious Lord Chancellor I have been denounced before my superior for things I do not know of and never thought of, similar to when I built the *Røde Løve* in Blekinge when I was frequently denounced for that which however was found otherwise<sup>153</sup>.

From this we can see that Sinclair was a very proud man with a great sense of his own importance, and is clearly upset about the allegations brought against him. The superb penmanship and the clearly argued defence in this document also bear witness to a highly skilled and educated man. In contrast to Balfour's rather garbled defence of the *Recompens* affair, this was an erudite piece of work, and certainly seems to have helped Sinclair's case, as no more is heard of the allegations.

Shortly after the *Store Sophia* was completed Sinclair was given a further contract to build two more ships at the Slotø yard. These were to be exact copies of Balfour's *Hummeren*, and were to be completed by Whitsun 1629<sup>154</sup>. However unlike the *Store Sophia* these two ships were to be built using Sinclair's own labour force and he was to pay for all materials used, except for the ironwork and the masts which the state would supply. For this work Sinclair was to receive 14,000 Rdlr., paid in four instalments, but with the value of any timber supplied from Lolland deducted from this sum.

While these ships were under construction in 1628 the combined Danish-Swedish navy carried out their relief of Stralsund<sup>155</sup>. In the aftermath of this operation it was decided to over-winter six of the Danish warships at Slotø, where Sinclair was to supervise any necessary repairs, including careening, caulking and light timber work<sup>156</sup>.

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153. These allegations, the details of which are unknown, may explain why the payment for this vessel was delayed for so long.

154. Accord with Daniel Sinclair, *Kancelliets Brevbøger*, 7 February 1628.

155. See Chapter 1.

156. Missive to Commissioners in Lolland and Falster, *Kancelliets Brevbøger*, 18 October 1628.

Not surprisingly the work on the two new ships was hindered to some extent. An official was sent to Slotø in 1629 to make sure that the two ships were being built according to the contract<sup>157</sup>, which presumably they were, since no complaints were recorded. The ships, though, were delivered late, the first, *Kronet fisk* entered active service in 1630, while the second, *Lammet*, was not ready until the following year<sup>158</sup>, with the final payment being made on 4 May 1631<sup>159</sup>.

That same day Sinclair also received the first instalment for the construction of another ship at Slotø. This large ship was to have a keel length of 50½ alen (31.7m)<sup>160</sup>, had three decks and carried 44 cannon. Again this ship was to be built by Sinclair operating as a private contractor with the state supplying just the ironwork, masts and stern decorations. All other materials and labour costs were to be met by Sinclair. The contract was worth 9,500 Rdlr., again paid in four instalments and with the value of any timber supplied from Lolland deducted from this sum. The ship was to be delivered by Whitsun 1632.

This was a rather hopeful delivery date, though, especially as Sinclair was expected to build another ship in Norway a month after receiving this contract. The new ship was to be built for Christoffer Gjøfe, the Nedenæs *lensmand*, who operated as a shipbuilding contractor<sup>161</sup>. The cost of the ship was to be set against Gjøfe's *len* revenues so the contract for the building of the ship was made with Gjøfe and not Sinclair. In the

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157. Missive to Staller Kaas, *Kancelliets Brevbøger*, 17 February 1629.

158. Rigsarkiv, Marinearkivet før 1655, 21. Bremerholmens materialskrivers regnskab, 1629/30 and 1630/31.

159. Payments to Sinclair, 23 April 1628, 18 February 1629, 10 August 1630, & 4 May 1631, Rigsarkiv, Rentemesterregnskaber, 1/9/1627 - 1/5/1628, Udgift, f.128; 1628/29, Udgift, f.162.; 1630/31, Udgift, f.179; 1630/31 Udgift, f.163-4.

160. Contract with Daniel Sinclair, *Kancelliets Brevbøger*, 13 March 1631.

161. See Chapter 10.



contract, though, Gjølø was instructed to negotiate with Sinclair who was to build the ship. The new ship was to be the same size as Balfour's *Tre Løver* and to be ready by August 1632<sup>162</sup>. The identification of this ship cannot be made with any certainty. Of the new ships which appeared in the materials lists for 1632 and 1633 none appears very likely. The ship must have been finished by April 1633, though, as a further contract was concluded with Gjølø to build another ship using a different shipwright<sup>163</sup>.

Whilst this ship was under construction work on the ship at Slotø continued only slowly, and Sinclair received no payments from the *rentekammer* for it between May 1631 and January 1633. However, by the Spring of 1633 it was ready to be launched, when it was given the name *Norske Løve*<sup>164</sup>. Work continued on the ship at Slotø until the end of 1634<sup>165</sup>, but Sinclair's final payment for completion of the ship was not made until July 1635<sup>166</sup>, by which time he was back at Bremerholm repairing other ships<sup>167</sup>.

When he returned to Copenhagen in 1635 Sinclair may also have taken over Balfour's private yard at Christianshavn. However, any involvement could only have been short-lived as he was ordered to have nothing to do with the ships in Grønnegårdshavn until the dispute over tolls and boundaries had been resolved<sup>168</sup>. In any case he would have

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162. Accord with Christoffer Gjølø, *Kancelliets Brevbøger*, 23 March 1631.

163. Contract with Christoffer Gjølø, 25 April 1633, *Norske Rigs-registranter*, VI, 535-6.

164. Missive to Jost Frederik Pappenheim, *Kancelliets Brevbøger*, 12 April 1633.

165. Rigsarkiv, Rentekammer, Udgift Conto I.d., Regnskaber for skibsbyggeriet paa Slotsøen ved Nakskov, C.4. Material Regnskab, Norske Løve 1/3/1631 - 1/11/1634.

166. Payments to Sinclair, 4 May 1631, 30 January 1633, 17 February 1634, 29 April 1635 & 17 July 1635, Rigsarkiv, Rentemester regnskaber, 1630/31 Udgift, f. 163-4; 1632/33 Udgift, f. 197; 1633/34 Udgift, f.140; 1634/35, f. 224; 1635/36, f. 186.

167. Letter to Claus Daa, 22 January 1635, *egenhændige Breve*, III, 327.

168. Missive to Erik Ottesen, *Kancelliets Brevbøger*, 27 August 1635.

had little time to carry out any work there as at the end of 1635 he was again out inspecting timber for use either in shipbuilding or for the planned new dock at Bremerholm<sup>169</sup>, and at the beginning of 1636 he was involved in the building a new *jagt* in Kolding<sup>170</sup>.

This appears to be last ship that Sinclair built as he died on 7 October 1636 and was buried in Nicolaj Kirke four days later. He left behind a wife, Else Villumsdatter, Balfour's step-daughter, whom he married in 1624, and at least three children, one of whom was called Anne<sup>171</sup>. Table 8.2. details all the ships known to have been built by Sinclair.

<u>Name</u>	<u>Type</u>	<u>Date Built</u>	<u>Where Built</u>	<u>Length</u>	<u>Breadth</u>	<u>Cannon</u>
Not known	Transport <i>Skøjte</i>	1619	Bremerholm	?	?	-
<i>Røde Løve</i>	Medium Warship	1620-22	Blekinge	?	?	36
<i>Store Sophia</i>	Large Warship	1624-27	Slotø	53	15	54
<i>Kronet fisk</i>	Medium Warship	1628-30	Slotø	40	13	32
<i>Lammet</i>	Medium Warship	1628-31	Slotø	40	13	32
Not known	Medium Warship	1631-33	Norway	42	13	?
<i>Norske Løve</i>	Medium Warship	1631-35	Slotø	50½	15	44
Not known	<i>Jagt</i>	1636	Kolding	?	?	?

Table 8.2. Ships Built by Daniel Sinclair

Principal sources: *Kancelliets Brevbøger*, *Norske Rigs-registranter*, *Rentemesterregnskaber*.

Sinclair built far fewer ships than Balfour but his contribution to the Danish navy was still significant since the ships he built were almost exclusively medium and large sized warships. However, only three of these ships, *Røde Løve*, *Store Sophia* and *Norske Løve*, were built to his own design, and unlike Balfour his designs were not used as models for additional ships. Sinclair was undoubtedly a highly skilled shipwright but

169. Instructions to Daniel Sinclair, *Kancelliets Brevbøger*, 22 September 1635.

170. Missive to Ernst Normand, *Kancelliets Brevbøger*, 13 March 1636.

171. Landsarkivet for Sjælland, LA 1-21-1, Bremerholms Kirkes dåbs- og troløvelsesprotokol, 1617-39, 42 & 206; O. Nielsen, 'Uddrag af St. Nicolaj Kirkes Begravelsesprotokol', *Personalhistorisk tidsskrift*, 1 rk. Bd. 1 (1880), 198.



he does not appear to have possessed Balfour's brilliant talent. Balfour's disfavour after his imprisonment therefore proved an important factor in enabling Sinclair to take on the role as the builder of large warships.

Although probably not as talented a shipwright as Balfour, Sinclair seems to have enjoyed an even higher social standing. He was a member of the prestigious *Danske kompagni* guild and he owned property in Christianshavn from the new town's inception in 1617<sup>172</sup>.

At the end of 1619 there also appears an interesting transaction in Christian IV's diary. On 4 September the king advanced Sinclair 10 Dlr. from his own purse, which Sinclair then returned on 11 December<sup>173</sup>. This sum is a paltry amount in terms of shipbuilding and must therefore surely have been lent for some personal reason, suggesting a close connection between the king and his shipwright.

The reason for Sinclair's high social standing may be that he was in fact a second generation Scot. When Robert Monro was passing through Lolland in 1628 he met Sinclair and referred to him as 'a worthy gentleman begotten of Scots Ancestors'<sup>174</sup>. Although he said that he 'speakes the Scottish tongue, and is very courteous of all his countrymen which come thither' he was also equally accomplished in Danish, as the tree-tops document testifies. However, the accusations brought against him during the building of *Røde Løve* and *Store Sophia* may be evidence of resentment at a foreigner taking such a high post.

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172. He reserved two plots, one of which, however, was not developed, being on the site of what became Balfour's shipyard. Plan of Christianshavn, 7 December 1617, Det kongelige bibliotek bil-  
ledsamling. (Published in Joakim Skovgaard, *A King's Architecture: Christian IV and his buildings*,  
(London, 1973), 108).

173. Nyerup (ed.), *Kong Christian den Fjerdes Dagbøger*, 68 & 78.

174. Robert Monro, *Monro His Expedition with the worthy Scots Regiment (called Mac-Keyes Regiment) levied in August 1626* (London, 1637), I, 42.

Unfortunately we have no firm details which would help to shed light on his ancestry. Sinclair's seal consisted of a simple escutcheon with a cross (Figure 8.1). This design could be linked with either the Ravenscraig or Hermandston branch of the Lords Sinclair<sup>175</sup>, but the lack of any further adornment of his arms would suggest that if indeed he was of this lineage he was a fairly lowly member of it. There were a number of other Sinclairs (or Sinklars) in Denmark at this time, including *rigsråd* member Anders Sinklar (Andrew Sinclair) of Ravenscraig, but there is no evidence to link Daniel Sinclair to any of them.

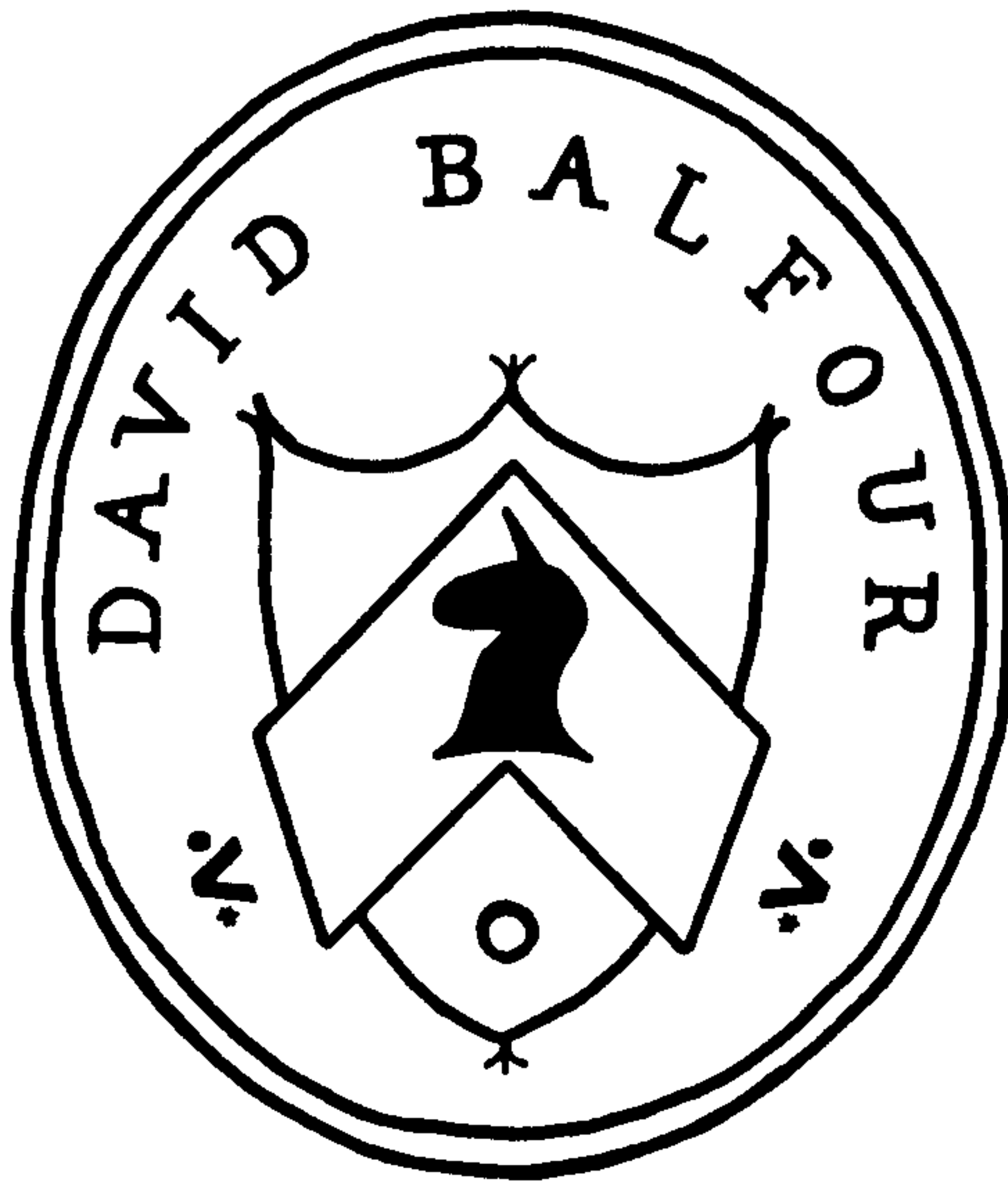
As well as having a high social status Sinclair must also have been a man of considerable independent means since, although the payment of his wages was extremely irregular, there is no record of any complaint. In 1623 he received his whole years wages in salt, in 1624 he received 2 years and 4 months of wages that had been unpaid since 1620, in 1633 he received some of his wages in cloth, and on his death in 1636 his widow received 3½ years and eight days of pay which had gone unpaid since 1633<sup>176</sup>.

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175. R.W. Saint-Clair, *The Saint-Clairs of the Isles*, (Auckland, NZ, 1898), 523-5.

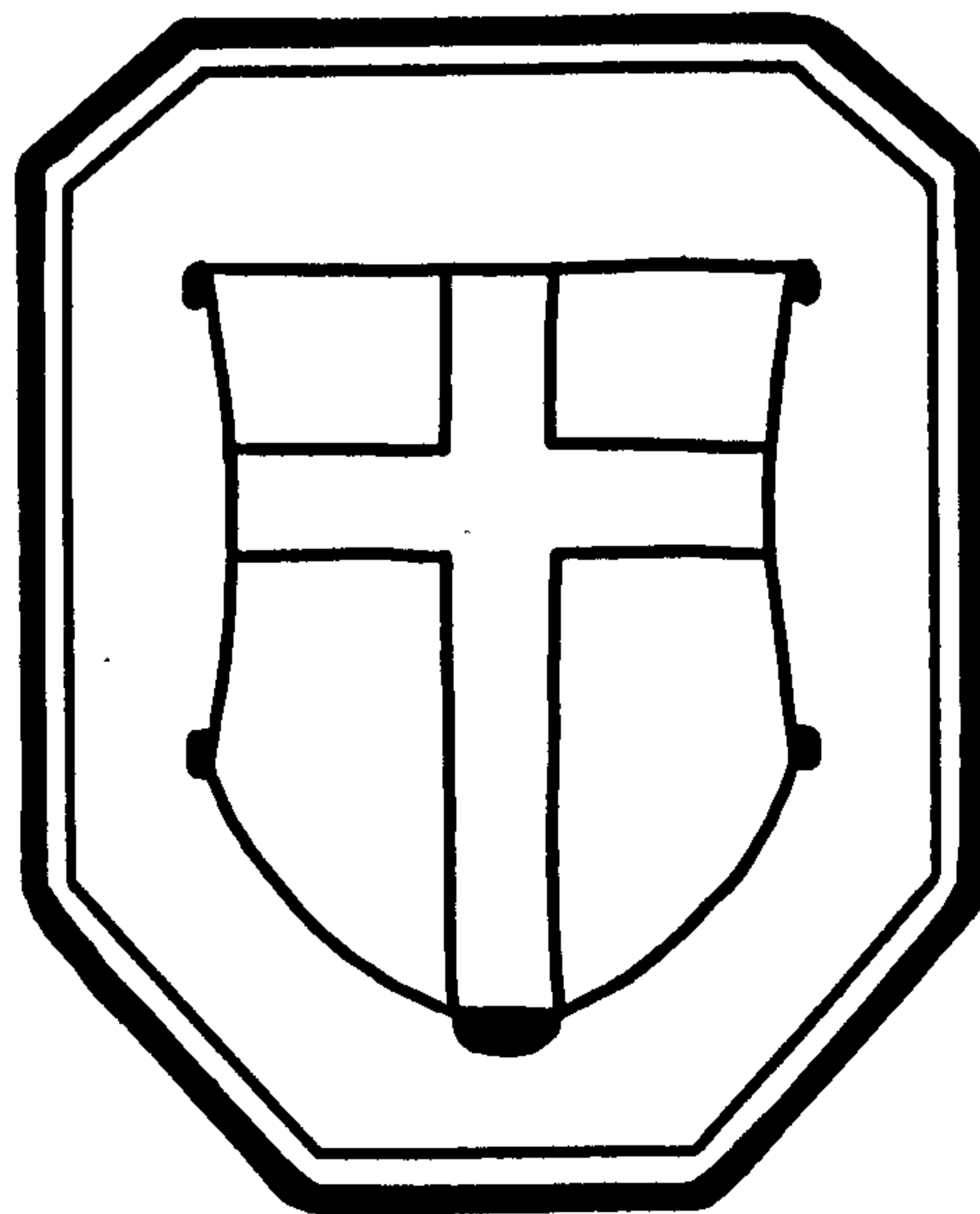
176. Rigsarkiv, Rentekammer, Udgift Conto I.a., Klædekammer regnskaber, 1622/23; 1624/25; 1632/33; 1636/37.





**Fig. 8.1.a. David Balfour's Seal**

Source: Letter to Tobia Lautterbach, 25 February 1611, Rigsarkiv, TKIA A145, Akter vedr. skibsbyggerne David Balfour og Peter Michelsen.



**Fig. 8.1.b. Daniel Sinclair's Seal**

Source: Receipt for Payment, 17 August 1629, Rigsarkiv, Danske Kancelli, B223, III, Litra S.

**Figure 8.1. Seals of Balfour and Sinclair**

### 8.3. Why Scottish Shipwrights?

The reason that Christian IV used Scottish shipwrights is not really that peculiar. He came to the throne at a time when there was a great flourishing of relations between Scotland and Denmark, arising principally from the marriage of James VI and Princess Anne in 1589. The 1590s saw many diplomatic exchanges between the two countries, and religious, educational, and trading links were also particularly strong at this time<sup>177</sup>.

Although Frederik II had used English shipwrights, as we have seen, a significant number of Scots served as skippers and officers in the Danish navy. Relations with England at this time were particularly strained, arising from numerous disputes over fishing and trading rights. If relations with Scotland were so much friendlier, and the Scots had proved to be competent seamen, why then should Christian IV not look to Scotland for his shipwrights?

A more interesting question is how these Scottish shipwrights were in a position to build these great warships in Denmark. Scotland had no permanent navy, and there was no great tradition of warship building in the country. James IV did establish a Scottish state navy in the late 15th and early 16th centuries but he had to rely mainly on French shipbuilders for their expertise<sup>178</sup>. Some Scots certainly learnt from this ex-

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177. Relations between Scotland and Denmark at this time have been thoroughly investigated. Some of the most important literature is as follows: Harald Ilsøe, 'Gesantskaber som kulturformidlende faktor. Forbindelser mellem Danmark og England-Skotland 1570-1607', *Historisk Tidsskrift*, 11 Rk. IV (1960-2); James Dow, 'Skotter in Sixteenth-Century Scania', *Scottish Historical Review*, 44 (1965), 34-51.; Thorkild Lyby Christensen, 'Scoto-Danish relations in the sixteenth century', *Scottish Historical Review*, 48 (1969), 80-97.; and 'Scots in Denmark in the sixteenth century', *Scottish Historical Review*, 49 (1970), 125-45.; Allan Tønnesen, *Helsingørs udenlandske borgere og indbyggere ca. 1550-1600*, (Ringe, 1985), 20-108.; David Stevenson, *Scotland's Last Royal Wedding: James VI and Anne of Denmark*, (Edinburgh, 1996); and above all Thomas Riis's remarkable survey *Should Auld Acquaintance be forgot: Scottish-Danish relations c.1450-1707*, (Odense, 1986).

178. James Grant (ed.), *The Old Scots Navy From 1689 to 1710*, Navy Records Society, XLIV (1912), x-xvi; Norman Macdougall, 'The Greatest Scheip that ewer Saillit in Ingland or France: James IV's Great Michael', in N. Macdougall (ed.), *Scotland and War*, (Edinburgh, 1991).



perience, and one, Robert Barton, who assisted James IV in shipbuilding matters, even served as an officer in the Danish navy for a time in the 1510s, although not apparently as a shipwright<sup>179</sup>.

However, all this was long before Christian IV's time, by which time the Scottish navy had long since been sold off, and any warship-building skills had long died out. Scotland relied solely on hiring armed merchantmen for her naval requirements, even on such occasions as when James VI sailed to Denmark to wed Anna. This does, however, show that there was a strong tradition of merchant shipbuilding, and that the ships must have been of some considerable size if they were considered suitable for such a task<sup>180</sup>.

Scottish merchant shipbuilders were not unknown in Denmark-Norway either, even though it was illegal for them to export ships. The Norwegian Christopher Dall was fined in 1604 for letting 'nogle skotter' (some Scots)<sup>181</sup> build ships on his grounds<sup>182</sup>, and in 1605 two small ships were confiscated from Richard Waddell and James Clark who had built them illegally in Lister *len*<sup>183</sup>. In 1606 James I/VI petitioned on behalf of another two Scots, Richard Wood and William Duncan, both of whom had built ships in Norway which were confiscated as soon as they were ready for sea<sup>184</sup>.

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179. Riis, *Should Auld Acquaintance be forgot*, I, 106.

180. Some Scottish privateers even served on the Danish side in the Northern Seven Years War. (Barfod, *Christian 3.s flåde*, 166).

181. These Scots were probably Andrew Forret and David Lermond, whom James I/VI petitioned on behalf of in 1605. Letter from James I to Christian IV, 26 January 1605, *The Letters of King James I to King Christian IV 1603-1625*.

182. Letter to Laurits Krus, 24 July 1604, *Norske Rigs-registranter*, III, 79.

183. Letter to Styning Boel, 3 August 1605, *Norske Rigs-registranter*, III, 123.

184. Letters from James I to Christian IV, 3 March and 4 April 1606, *The Letters of King James I to King Christian IV 1603-1625*.

All of these cases occur after the arrival of Petersen and Balfour, but would suggest that the practice of Scottish shipwrights building ships in Denmark-Norway was not uncommon. It is therefore not entirely surprising that Scottish shipwrights should be chosen to build the Danish navy's ships.

However, although the Scots were clearly talented merchant shipwrights this would not equip them to be builders of large warships. We know that Balfour went 'abroad' to study mathematics, but judging by his ship designs he probably learnt his shipbuilding skills in England<sup>185</sup>. Where the other shipwrights learnt their trade, though, is not known. It was not just in Denmark that Scottish master shipwrights appear at this time either, as in Sweden Jakob Clerck (James Clark)<sup>186</sup> built a number of ships in the 1600s, and in Poland James Murray built Sigismund's war fleet in the 1620s<sup>187</sup>. That these Scots were able to build such large warships is an enigma, and the subject of early modern Scottish shipbuilding clearly deserves much greater attention<sup>188</sup>.

The skills of these Scottish shipwrights were certainly very well-regarded and in 1602 Christian IV wrote to James VI asking him to send some more 'fabros lignarios, qui navibus struendis eruditam' (carpenters who are skilled in the art of shipbuilding)<sup>189</sup>, although it appears that none were actually sent.

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185. See Chapter 11. for a discussion of Balfour's design techniques.

186. Possibly the same James Clark whose ship was confiscated in Norway in 1605, or possibly Richard Clark, an Admiral in the Swedish navy 1606-1625. Jonas Berg & Bo Lagercrantz, *Scots in Sweden*, (Stockholm, 1962), 52.

187. Michael Roberts, *Gustavus Adolphus: A History of Sweden 1611-1632*, II, (London, 1958), 281-2.

188. Other than the interest shown in James IV's navy little has been published on the subject apart from Grant's sketchy introduction to *The Old Scots Navy From 1689 to 1710* in 1912.

189. Letter to James VI, 9 March 1602, Rigsarkiv, TKUA Alm. del 1 No.9: Latina 1600-15, p.23.



Another interesting question is that if Balfour and Sinclair had managed to achieve such dominance in naval shipbuilding why did they not go on to establish a shipbuilding dynasty in the same way as the Petts did on the Thames? Shipbuilding was traditionally a protected skill, passed from father to son. The two men were related by marriage and both had many children, so it would seem only natural that they would have wished to perpetuate for their families their privileged positions as shipbuilders to the Danish navy.

Balfour did actually have a son, Henry, who wished to learn the art of shipbuilding, but it seems that he preferred to train under Phineas Pett in London than under his own father<sup>190</sup>. He also had a step-son, Willum Haffuersack, who worked for him in transporting timber<sup>191</sup>, but not in actual shipbuilding.

The influence of Scottish shipbuilding in the Danish navy therefore died out as suddenly as it had begun. In the 40 years between the arrival of Petersen and the death of Sinclair the Scotsmen's contribution to the Danish navy was remarkable. Virtually all the large-scale ships of the navy were built by them, as well as numerous smaller vessels. All this<sup>was</sup> at a time when Scotland did not have a warship building tradition and English and Dutch shipwrights were considered to be the greatest in the world.

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190. Letter to English Lord High Admiral, 25 November 1616, Rigsarkiv, TKUA Alm. del 1 No.10: Latina 1616-31, f.15-16.

191. Letter from Balfour to Christian IV, concerning his step-son's ship, carrying timber for royal shipbuilding requirements, which had been siezed by the customs official in Danzig, 7 January 1631, Rigsarkiv, Danske Kancelli, B160; Pass for Willum Hafversack to collect timber from Pommerania, *Kancelliets Brevbøger*, 10 April 1631.

## 9. Royal Master Shipwrights After the Scots

During the period that Balfour and Sinclair were employed there were few other shipwrights in state service. Peter Madsen (Hans Madsen's son?<sup>1</sup>) is listed in 1607/08 as the sole master shipwright in the *klædekammer* accounts<sup>2</sup>, but with wages of just 100 Dlr. he could not have been of any great importance. Details of his short career are scant but he seems to have been involved mainly with the construction of small boats at Bremerholm. By 1613 he was admitted to hospital and nothing further is heard of him<sup>3</sup>.

The only other state shipwright of any significance to serve at the same time as Balfour and Sinclair was Klaus Jansen. He originally lived in Oslo<sup>4</sup>, but in May 1608 he was granted permission to settle in Copenhagen and practice his craft, despite complaints from the carpenters' and shipwrights' guilds that he was not a member<sup>5</sup>. This indicates that he was a private shipbuilder and not a state employee, since membership of a guild would not have precluded him from working in the royal dockyard.

The king had attested to Jansen's abilities when he moved to Copenhagen and in October 1609 he was given the contract to rebuild the large 52 gun ship *Josaphat* of 1589 at Bremerholm, as a private contractor. This rebuilding consisted of fitting the ship with a new skin, wales, forecastle, figure-head, rudder and masts. This was quite a considerable

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1. Although patronymics were used in Denmark Madsen was English and it is possible that his surname was also carried by his son.

2. Rigsarkiv, Rentekammer Udgift Conto I.a., Klædekammer regnskaber, 1607/08, f.74.

3. H.D. Lind, *Kong Kristian den Fjerde og hans mænd paa Bremerholm*, (Copenhagen, 1889), 371; Missive to Helsingør Hospital, *Kancelliets Brevbøger*, 27 May 1613.

4. The Norwegian *stadtholder* recieved a letter concerning a dispute between Jansen and the Oslo town council in 1609, *Norske Rigs-registeranter*, IV, 331.

5. Open letter, *Kancelliets Brevbøger*, 21 May 1608.



job as essentially only the framing and internal structure of the vessel was kept, and it kept Jansen busy until the end of 1611. He was initially granted 1000 Dlr. for this work but he actually received a little more<sup>6</sup>.

When work on the *Josaphat* was completed Jansen was sent to Kolding to inspect a model of a galley that Christian IV had designed, and the timber that had been gathered to construct the actual ship<sup>7</sup>. In October 1611 he was awarded the contract to build this galley in Kolding for which he was to receive 1200 Dlr. plus 50 barrels each of malt and rye and three barrels of butter<sup>8</sup>.

This was not a very successful contract for Jansen, though, as after the ship was launched in April 1612 the Kolding *lensmand* wrote to the *Kongens kansler* to say that the the ship was 'omueldt paa siden och ligger nu løbben fuld aff vand' (overturned on its side and now lies running full of water)<sup>9</sup>. This does not say much for either Christian IV's design or for Jansen's ability as a shipwright. However, the ship was rescued and was ready to sail again by June<sup>10</sup>.

There is no record of Jansen ever having been given a formal commission as a royal shipwright, but in 1617 he was referred to as 'vor skibbygger' (our shipwright), suggesting that he was actually a shipwright in royal service<sup>11</sup>. It was certainly not unusual, though, for shipwrights to work for a time before actually being issued with a formal commission.

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6. Jansen's Contract 12 October 1609 and payments 15 November, 18 December 1609, 21 January, 24 February, 25 March, 7 May, 17 June 1610, 15 March, 16 April, 28 September 1611, and 30 April 1612, Rigsarkiv, Rentemesterregnskaber, 1609/10, f.406-9; 1610/11, f.458; and 1611/12, f.528. A total of 1234 Dlr. was paid.

7. Missive to Casper Markdanner, *Kancelliets Brevbøger*, 28 September 1611. See also Chapter 11.

8. Missive to Casper Markdanner, *Kancelliets Brevbøger*, 18 October 1611.

9. Letter from Casper Markdanner, 17 April 1612, Rigsarkiv, Danske Kancelli, B160, Indlæg til registre og tegnelser....

10. Missive to Casper Markdanner, *Kancelliets Brevbøger*, 29 May 1612.

11. Letter to Envold Kruse, 15 April 1617, *Norske Rigs-registeranter*, IV, 624-5.

Although no records exist to confirm it, it is possible that Jansen was the shipwright at Bremerholm whilst Balfour was imprisoned. This thesis is corroborated to some extent by the fact that shortly after Jansen went to Norway in 1617 Balfour and Sinclair received their commissions as royal master shipwrights<sup>12</sup>, but the evidence is purely circumstantial.

In Norway Jansen was involved in the rebuilding of the 32 gun *Raphael* of 1582. This was to be rebuilt in Tunsberg *len*, and work was completed on it by 1620<sup>13</sup>. However, this is the last that we hear of Jansen who either died or else was totally eclipsed thereafter by Balfour and Sinclair.

During the 1620s and early 1630s Balfour and Sinclair were really the only shipwrights of any consequence, so when they died within 2½ years of each other it left a huge vacuum in Danish naval shipbuilding. It was initially filled by the Danes Svend Andersen and Johan Brandt, who were promoted from the junior ranks.

### 9.1. Svend Andersen

Svend Andersen started his career simply as a shipcarpenter. He originally came from Båhus in Norway, but was working at Bremerholm from at least 1619<sup>14</sup>, and by 1621 he had been promoted to *mestersvend for tømmermændene*<sup>15</sup>. He gained further promotion when he went to Slotø to assist Sinclair in the building of *Store Sophia*, when he was referred to as an *underskibsbygmester* (junior master shipwright).

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12. See Chapter 8.

13. H.D. Lind, 'Om Kong Christian den Fjerdes Orlogsflaade', *Tidskrift for Søvæsen*, (Copenhagen, 1890), 443.

14. List of carpenters working at Bremerholm 14-21 November 1619. Rigsarkiv, Danske kancelli, B164, Diverse, IX, læg 18, pk. 07.

15. His wages were 50½ Dlr. Rigsarkivet, Rentekammer, Udgift Conto I.a., Klædekammer regnskaber, 1621/22, f39.



Despite this rise through the ranks Andersen was far from being a model employee, and for some unknown reason in April 1626 he was clapped in irons at Slotø<sup>16</sup>. The case was brought before Prince Christian (V) at Bremerholm some months later<sup>17</sup>, when the case against him was upheld. Andersen then remained 'in Bremerholm's iron' until November 1627 when he was set free on condition that he leave the country but not enter any foreign service.

Strangely though, he was granted his previous wage once more and an open letter was issued stating that the case against him was not to tarnish his good name and honour<sup>18</sup>. Not long after this case we find Andersen back at Bremerholm, and in the Klædekammer accounts for 1629/30 he is referred to as a *skibbiuger* (shipwright) receiving 200 Kdlr. in wages<sup>19</sup>. In 1631 he received a formal commission as 'Schibbygmaster' (master shipwright), effective from Michaelmas 1629, with his wages confirmed at 200 Kdlr.<sup>20</sup>

It is likely that Andersen spent these years at Bremerholm, while Sinclair was occupied at Slotø and Balfour was building the 2 *Løver* and 3 *Løver* at Christianshavn. However, sometime around 1632 he went to Norway to build a warship for Christoffer Gjøe<sup>21</sup>. This ship was nearly finished by the summer of 1633, and was given the name *Delmenhorst*<sup>22</sup>.

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16. Rigsarkiv, Rentekammer Udgift Konto I.d., Regnskaber for skibsbyggeriet paa Slotsøen ved Nakskov, B.3. Muster books of personnel.

17. Missive to Stalder Kaas, *Kancelliets Brevbøger*, 15 August 1626.

18. Open Letter, *Kancelliets Brevbøger*, 24 November 1627.

19. Rigsarkivet, Rentekammer Udgift Konto I.a., Klædekammer regnskaber, 1629/30.

20. Andersen's commission, 25 January 1631, Rigsarkiv, Danske Kancelli B54, Sjællandske Registre 18, f.549-50.

21. See Chapter 10 for further details of ships built by Andersen for Gjoe.

22. Letter to Palle Rosenkrands, 19 June 1633, *Norske Rigs-registranter*, VI, 552.

Before this ship was complete though, Andersen had already started on another ship for Gjøe. This was a copy of Balfour's 3 *Løver*, which was to be completed by August 1634<sup>23</sup>, and was probably the *Sorte Rytter*.

Andersen remained in Norway at least until October 1634, when he was ordered to survey two ships at Christiania<sup>24</sup>, and it is likely that he was also the shipwright for another ship contracted to Gjøe in 1635. No details are known of this ship but it may well have been the small 16 gun *Snarensvend*, which first entered active service in 1637.

In 1637, though, Andersen was back at Bremerholm and was given a new commission as master shipwright. His wages were now increased to 400 Kdlr.<sup>25</sup>, and it is clear that he was seen as the inheritor of Balfour and Sinclair's position as the leading naval shipwright.

However, Andersen was not nearly in the same class as the two Scotsmen. Both *Delmenhorst* and *Sorte Rytter* turned out to vary greatly from the specified dimensions<sup>26</sup> and *Delmenhorst* required modification after it had been delivered. After receiving his new commission the only vessels that Andersen is mentioned in connection with were small ships and boats<sup>27</sup>.

His contract stated that he should carry out his duties 'huor och naar dett hannom bliffuer befalett' (wherever and whenever he is ordered), but appears to have acted simply as the staff shipwright at Bremerholm. This no doubt acted against him since at this time very few

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23. Contract with Cristopher Gjøe, 25 April 1633, *Norske Rigs-registranter*, VI, 535-6.

24. Letter to Steen Villumsen and Sigvard Gabrielsen, 4 October 1634, *Norske Rigs-registranter*, VI, 696.

25. Svend Andersen's Commission 22 May 1637, Rigsarkiv, Danske Kancelli, B54, Sjællandske Registre 1632-37, f.504-5.

26. Letter from Gjøe, undated but listed under c.1639-44, Rigsarkiv, Danske Kancelli, B160, Indlæg til registre og koncepter.

27. Letters to Corfitz Ulfeldt, 17 September 1639, 4 February 1643, & 4 January 1648, *C4 Breve*, IV, 260, V, 294-5, & VIII, 406-7.



of the navy's ships were being built at Bremerholm, but were increasingly being built elsewhere under private contract. As the senior shipwright at Bremerholm he did build the two large barges designed by Christian IV in 1640<sup>28</sup> which were given the rather unimaginative names *Første Pram* (First Barge) and *Anden Pram* (Second Barge)<sup>29</sup>. As well as undertaking shipbuilding and repair work at Bremerholm Andersen was also used to survey woods for suitable ships timbers, and in 1646 he conducted one such survey in Allerup woods in Scania<sup>30</sup>.

Andersen's new contract also stated that he was to teach a certain number of apprentices and a missive a few days afterwards confirmed that he was to teach 12 apprentices in a four year course of ships carpentry, with the best of these being further instructed in the art of shipwrighttry<sup>31</sup>. This instruction was identical to Balfour and Sinclair's instructions of 1625, and Andersen was similarly to receive extra victuals and 4 Rdlr. for every ship carpenter who completed his course.

Although Andersen was undoubtedly a reasonably skilled shipwright, it could not be said that he had made any great impact on Danish naval shipbuilding. By the time of his death in 1648<sup>32</sup>, he had built at most only three ships of any size, and at least one of these was a copy of one of Balfour's ships.

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28. Letters to Corfitz Ulfeldt, 22 November 1640, 23 January 1641, & 8 February 1641, *C4 Breve*, IV, 421, & V, 11 & 17. A plan of these barges exists in the Rigsarkiv: Søetatens Kort og Tegning samling, Des. E. nr. 1. See also Chapter 11.

29. Rigsarkiv, Marinearkivet før 1655, 14. Bremerholms Proviantskrivers regnskab, 1642/43.

30. Andersen's report of survey, 14 November 1646, Rigsarkiv, Danske kancelli, B179e; Missive to *rentemestrene*, *Kancelliets Brevbøger*, 27 November 1646.

31. Missive to *Rentemestrene*, *Kancelliets Brevbøger*, 27 May 1637.

32. The remainder of his wages were paid to his surviving relatives on 12 October 1648. Rigsarkiv, Rentekammer, Udgift Conto I.a., Klædekammer regnskaber, 1647/48, f.61.

## 9.2. Johan Brandt

Like Svend Andersen, Johan Brandt was promoted from the ranks of the *mestersvende for tømmermændene*. He must have been a reasonably experienced shipbuilder before he arrived at Bremerholm on 24 March 1636<sup>33</sup>, though, since he was immediately involved in the construction of the small 6 gun *Jomfru Svenden* and the 6 gun galley *Linden*<sup>34</sup>.

His work on these vessels must have impressed his masters as on 29 August 1636, Brandt was engaged as a shipwright with wages of 200 Kdlr.<sup>35</sup> The following year he received a new commission, shortly after, and identical to Andersen's commission, with his wages now set at 400 Kdlr., and with the same requirement to teach apprentices<sup>36</sup>.

One of his first jobs as a master shipwright was to survey the ship timber left after the death of the private contractor Peter Michelsen, at his shipyard at Itzehøe in Holstein<sup>37</sup>. In 1638, though, he was sent to Norway to build a ship for Gjøe. This was a relatively large ship with a keel length of 47½ alen (29.8m) and was to be completed by Whitsun 1640<sup>38</sup>. The ship was almost certainly the new 46 gun *Tre Løver*<sup>39</sup>, which was considerably bigger than Balfour's ship of the same name, which had been lost in 1637.

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33. Rigsarkiv, Rentekammer, Udgift Conto I.a., Klædekammer regnskaber, 1636/37, f.51.

34. Rigsarkiv, Marinearkivet for 1655, 24. Materialskriver regnskaber 1635/36.

35. Rigsarkiv, Danske Kancelli, B54, Sjællandske Registre 1632-37, f.430-1.

36. Johan Brandt's Commission 26 May 1637, Rigsarkiv, Danske Kancelli, B54, Sjællandske Registre 1632-37, f.504-5.

37. Letter to Henrik Müller, 14 December 1637, C.F. Bricka & J.A. Fredericia (eds.), *Kong Christian den Fjerdes egenhændige Breve*, IV, 168. See also Chapter 10.

38. Contract with Christoffer Gjøe, 22 August 1638, *Norske Rigs-registranter*, VII, 427-8.

39. The new *Tre Løver* was mentioned as having been supplied by Gjøe, and as all the other ships he supplied were exactly the same size as Balfour's *Tre Løver*, this must have been the ship that Brandt built. The new *Tre Løver* appears in the materials accounts from 1639/40.



A further contract was given to Gjølø in 1639 for another vessel, this time exactly the same size as Balfour's *Tre Løver*, for which Brandt was again to be the shipwright. This new ship was to be completed by Whitsun 1641<sup>40</sup>. Although the name of this ship is not known for certain it is likely that it was the *Fenix*. This ship carried the same number of cannon as *Tre Løver*, is known to have been built in Norway, and entered service in 1642<sup>41</sup>.

Another vessel was built by Brandt in Norway in 1643, referred to in the materials accounts as 'Det mindske ny schib i Norge' (the smallest new ship in Norway), and was at first given the name *Papegoien* but when it entered active service in 1644 it had changed to *Stormarr*<sup>42</sup>. In fact the ship was not that small, carrying 32 guns, and may well have been yet another copy of Balfour's *Tre Løver*.

After building this ship Brandt probably returned to Bremerholm and he continues to appear in the *Klædekammer* accounts until 1648<sup>43</sup>, although he is not mentioned in connection with the construction of any specific ships during this time. Like Andersen, Brandt was no doubt a competent shipwright but apart from the three warships he built in Norway he did not have much of an opportunity to demonstrate his skills.

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40. Contract with Christoffer Gjølø, 8 June 1639, *Norske Rigs-registranter*, VII, 579-80.

41. The length of *Fenix*, given in 1653 in connection with the Dutch alliance, is noted as 57½ alen between stem and stern, which is easily commensurate with a keel length of 42 alen. (Preben Holck, 'Flaadelister omkring Krigsaarene 1644-45', *Tidskrift for Søværnen*, 114 (1943), 560.

42. Rigsarkiv, Marinearkivet for 1655, 26. Materialskriver regnskaber, 1643/44; 1644/45.

43. His last payment was made on 3 May 1648, Rigsarkiv, Rentekammer, Udgift Conto I.a., Klædekammer regnskaber 1647/48, f.61.

### 9.3. James Robbins and Son

Although Andersen and Brandt were clearly competent shipwrights they were obviously not seen by Christian IV as fitting replacements for the talents of Balfour and Sinclair. In 1641 he wrote to Charles I requesting 'from the land that gives birth to an abundance of powerful shipwrights' one such expert craftsman 'to alleviate the penury of our country'<sup>44</sup>.

Even though James I/VI had prohibited any English shipwright from seeking employment abroad<sup>45</sup> and Charles I himself had reiterated this and ordered all shipwrights and shipcarpenters to immediately return to England<sup>46</sup>, he wrote back to his uncle on 5 August saying that he agreeably conceded to a craftsman experienced in shipbuilding and belonging to the court being sent<sup>47</sup>. Christian IV's family connections obviously paid dividends as the shipwright, James Robbins, actually began work in Denmark on 30 July<sup>48</sup>, before Charles I's reply was even sent.

Robbins started his career as a seagoing ship's carpenter, and by 1626 he was being recommended for promotion from the *Garland* to the larger *Triumph*<sup>49</sup>. He gained further promotion and by 1635 he held the post of H.M. purveyor of timber in Hampshire<sup>50</sup>.

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44. *Laboramo inopia eorum artificum, qui navium fabricandarum pertia valent, Sitem vero V:ram eorum affluentissimam esse novimus, Eapropter Amanter ab Eadem petimus, ut ex sua abundantia nostræ hac in parte penuriæ succurrere et aliquem ejus artificij probe gnarum et in eo expertum ad nos transmittere velit.* Letter to Charles I, 13 April 1641. Rigsarkiv, TKUA Alm. Del. I, Latina 1632-51, No.11, p182-3.

45. A Proclamation for better furnishing the Navy and Shipping of the Realme with able and skilfull Mariners, 6 August 1622, *Rymer's Foedera*, 17, 399.

46. A Proclamation requiring all Seafaring Men, Ship Wrights, Ship-Carpenters, &c., being the king's Subjects, and in the Service of any Foreign Prince, to return home within a time limited, 5 May 1634. *Rymer's Foedera*, 19, 549-50.

47. *Iubenter concessimus, vt peritus in fabricandis navibus axtifex cum vesto Aulico transiret.* Letter to Christian IV, 5 August 1641, Rigsarkiv, TKUA, Speciel del, England, I.A. 3.

48. His commission of 12 March 1642 was made effective from 30 July 1641. Rigsarkiv, Danske Kancelli, B54, Sjællanske Registre, 1641-48, f.109.

49. Wm Burrell to Nicholas, 12 & 14 August 1626, *Calendar of State Papers (Domestic)*, 1625-26, 402.

50. Officers of Navy to Lords of Admiralty, 31 March 1635, *Calendar of State Papers (Domestic)*, 1634-35, 606.



This was to prove a troublesome post for Robbins, though, and in 1637 he was first contradicted by the master shipwright of Portsmouth over the cost of repairing a ship<sup>51</sup>, and then became involved in two lengthy disputes over the supply of timber.

Robert Rigge, a timber supplier in Fareham, was considered to be obstructing the delivery of 1000 loads of timber that he had been contracted to supply to the royal dockyards. Robbins therefore requested that the Lords of the Admiralty take action against Rigge<sup>52</sup>, who was arrested and his payments frozen. Rigge in turn complained that Robbins had acted incorrectly and that he had been falsely arrested<sup>53</sup>. The case was heard in the assize court in Hampshire, and was found in Rigge's favour<sup>54</sup>.

In the other case the Justices of the Peace for Wiltshire had been requested to take directions from Robbins in 1636 for the supply of 500 loads of timber<sup>55</sup>. When they failed to act accordingly Robbins petitioned against them and the case was heard in the Privy Council. In this instance, though, the court found in Robbins' favour<sup>56</sup>.

Robbins route to becoming a master shipwright was so far fairly conventional<sup>57</sup>. However, the Thames master shipwrights held a virtual strangle-hold over naval shipbuilding and until 1637 it was they who took

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51. Officers of Navy to Nicholas, 6 March 1637, *Calendar of State Papers (Domestic)*, 1636-37, 485.

52. Robbins to Kendrick Edisbury, 26 June 1637, *Calendar of State Papers (Domestic)*, 1637, 251.

53. Petition of Robert Rigge, 8 July 1637, *Calendar of State Papers (Domestic)*, 1637, 295.

54. Certificate of J.P.s of Hampshire, 13 October 1637, *Calendar of State Papers (Domestic)*, 1637, 474.

55. Council to J.P.s of Wiltshire, 22 May 1637, *Calendar of State Papers (Domestic)*, 1637, 137-8.

56. Privy Council to Lord Chief Justice Finch, 31 May 1631, *Privy Council Registers*, (Facsimile), (London, 1967), III, f.117.; J.P.s of Hampshire to Lord Chief Justice Finch, 31 May 1638, *Calendar of State Papers (Domestic)*, 1637-38, 480.

57. He was by no means the first ship's carpenter to achieve the rank, (C. Knight, "'Carpenter" Master Shipwrights', *Mariner's Mirror*, 18 (1932), 411-22), and a term as purveyor of ships timber was not unknown among master shipwrights.

turns in presiding over the increasingly important Portsmouth dockyard. From January 1638 one of the master shipwrights was ordered to reside there permanently<sup>58</sup>, which effectively blocked any hopes Robbins may have had in gaining promotion there.

With his role as purveyor of timber proving so troublesome, and with his chances of promotion apparently dashed, it was little wonder that Robbins agreed to serve Christian IV. Robbins was also a logical choice for Charles I if he did not want to lose one of his better, more experienced shipwrights. There must be some doubt, though, about whether Robbins was indeed such a skilled shipwright as Charles I had implied.

Robbins undoubtedly made the correct decision, for when he received his commission from Christian IV on 12 March 1642 he was awarded an extremely generous wage of 960 Rdlr. This sum is truly remarkable for someone who was essentially an untried and untested craftsman. It was more than double what any previous shipwright had earned and only six other government employees received a higher wage than Robbins<sup>59</sup>.

Apart from the wages, Robbins' commission<sup>60</sup> was essentially the same as Andersen and Brandt's commissions of 1637. In it he agreed to provide diligent and true service as a shipwright, wherever and whenever he was commanded, and to teach a certain number of apprentices every year.

One of the first tasks that we know Robbins was charged with was the rebuilding of *Trefoldighed*. This ship had been built at Neustadt by the contractors Berns & Marselis<sup>61</sup>, but when the ship was delivered in

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58. Michael Oppenheim, *A History of the Administration of the Royal Navy 1509-1660*, (1896, London), 296-7.

59. Rigsarkiv, Rentemesterregnskaber, 1641/42.

60. Rigsarkiv, Danske Kancelli, B54, Sjællandske Registre, 1641-48, f.109

61. See Chapter 10.



1642 Christian IV found that it had not been built according to the agreed model. The ship was to be careened so that its keel length could be measured and the king ordered that:

skall den Engelske biggemeister Riffue den fortyning deraff, som nu derpa Er, Och gørre skiibiit Epther Skabelunen, som Ieg dertil ordnit haffuer

the English shipwright shall tear off the top-timbers as they now stand, and make the ship according to the model as I ordered.<sup>62</sup>

He was later given further orders to alter the shape of the fore- and after-castles, and to enlarge the gun ports<sup>63</sup>.

Once this work was completed Robbins probably assisted with the general work at Bremerholm<sup>64</sup>, including the mobilisation of the fleet in 1644, which required further alterations to *Trefoldighed*<sup>65</sup>. Then in 1645 he was ordered to Norway to construct a ship at Christiania using Hannibal Sehested's timber<sup>66</sup>. This ship was to be 'af saadan Størrelse, Styrke og Facon, at det kan passere for et ret Hoved- Orlog- Kongeskib' (of such a size, strength and design that it can pass for a true royal prestige warship)<sup>67</sup>. This it undoubtedly was, with a length of 70½ alen

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62. Letters to Corfitz Ulfeldt, 8 June 1642, *egenhændige Breve*, VIII, 183-5.

63. Letter to Corfitz Ulfeldt?, 18 July 1642, *egenhændige Breve*, VIII, 201.

64. He received regular payments from the *rentekammer* from his engagement until April 1645. Rigsarkiv, Rentemesterregnskaber, 1642/43; 1643/44; 1644/45.

65. Letters to Corfitz Ulfeldt, 7 January 1644, *egenhændige Breve*, V, 432-4.

66. Letter to Hannibal Sehested, 11 May 1645, *Norske Rigs-registranter*, VIII, 365. See also Chapter 10.

67. Letter December 1645, Chr. Lange (ed.), 'Stadtholder Hannibal Sehesteds Copiebog for Aaret 1645', *Samlinger til det Norske Folks Sprog og Historie*, V (1838), 449.

(44.3m) between the stem and stern posts and capable of carrying 60 guns. When it was completed in the summer of 1647 it was named *Hannibal* in Sehested's honour.

Whilst building this ship Robbins' son, James Robbins Jr., also worked as his assistant<sup>68</sup>, and once the ship was completed he was rewarded with a commission as an *underskibbygger* (junior shipwright), with an annual wage of 300 Rdlr.<sup>69</sup>

After the completion of *Hannibal* in 1647 the Robbins were ordered to build a further two large ships at Christiania by Hannibal Sehested. The 100 gun *Sofie Amalie*, was the biggest ship yet built for the Danish navy, and the 91 gun *Prins Christian* was beaten in size only by the 96 gun *Frederik* of 1649<sup>70</sup>. These were not completed until 1651, well after the death of Christian IV, so the only new ship that the Robbins' can be said to have contributed to Christian IV's navy was the *Hannibal*.

James Robbins Jr. went on to build the 58 gun ship *Lindormen* in Lübeck in 1652, but required his father to assist with its launch<sup>71</sup>. He received a commission as a master shipwright in his own right in 1654, with wages of 600 Rdlr.<sup>72</sup>, and thereafter worked at Bremerholm, building the 65 gun *Tre Løver* in 1656. For some reason, though, he was discharged from naval service, on good terms, only four years later in 1658<sup>73</sup>, and he died sometime before 1661<sup>74</sup>.

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68. He had also worked alongside his father at Bremerholm before 1645. Open letter, 22 March 1652, *Norske Rigs-registranter*, IX, 406.

69. James Robbins Jr.'s commission, 9 June 1647, Rigsarkiv, Danske Kancelli, B54, Sjællanske Registre 1641-48, f.670.

70. See Chapter 10.

71. Letter from James Robbins, n.d., (dated as received 1653), Rigsarkiv, Danske Kancelli, B160.

72. James Robbins Jr.'s commission, 13 November 1654, Rigsarkiv, Danske Kancelli, B54, Sjællanske Registre, f.577-8.

73. James Robbins Jr.'s discharge, 3 May 1658, Rigsarkiv, Danske Kancelli, B150, Kopibog for Bestallinger 1657-60, f.168.

74. His father received his outstanding wages on his behalf on 20 July 1661. Rigsarkiv, Rentekammer, 216.209, Afregninger, III, 118, Litra R.



James Robbins Sr. remained in naval service after his son, carrying out various duties at Bremerholm<sup>75</sup> until around 1661, when he was described as 'Kong: Ma: førige Skibs Bygmester' (H.M.'s previous master shipwright)<sup>76</sup>. The marriage of his daughter to the son of the Admiralty councillor Cornelius Kruse in 1663<sup>77</sup> may have worked in his favour, though, as he is mentioned that year as again working at Bremerholm. However, the Dutch admiral Cort Adeler was appointed to the post of *Generaladmiral* in the Danish navy in 1663, and he naturally favoured Dutch shipbuilding methods over English and hired two Dutch master shipwrights. Robbins naturally did not agree with this trend and consequently became marginalised by the new naval administration.

With many thousands of rigsdaler also owing to him from the Danish state, Robbins was strongly tempted by an offer from the Swedish *rik-sadmiral* to move to Landskrona<sup>78</sup>. Nothing came of this offer in the end, but in 1667 he was described as having been cashiered from Bremerholm two years previously<sup>79</sup>, so perhaps news of his apparent disloyalty had become known.

He remained in Copenhagen though<sup>80</sup>, and in 1668 he was once again taken into naval service, but paid only a *per diem* rate of 1 Rdlr. for work 'hos de smaa Fartøjs' (with the small vessels)<sup>81</sup>. However, during

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75. Letter to Bertel Marske, 15 November 1659, O. Nielson (ed.), *Københavns diplomatarium*, (København, 1874), V, 676-7.

76. Account of James Robbins' outstanding wages, 20 July 1661, Rigsarkiv, Rentekammer, 216.209, Afregninger, III, 118, Litra R.

77. Thomas Riis, *Should Auld Acquaintance be forgot: Scottish-Danish relations c.1450-1707*, (Odense, 1986), II, 227-8.

78. Axel Liljefalk, 'Bidrag til Flaadens Historie i Tiden mellem Freden til København og den skaanske Krigs Udbrud', *Tidsskrift for Søværns*, (1912), 408-9.

79. P.W. Becker, *Samlinger til Danmarks Historie under Kong Frederik den Tredies Regiering*, (København, 1847), II, 197.

80. He was still resident in Copenhagen in 1666. *Københavns diplomatarium*, VI, 647.

81. H.D. Lind, *Kong Frederik den Tredjes Sømagt: Det dansk-norske søværns historie 1648-1670*, (København, 1896), 310.

the Scanian War (1675-79) the Dutch style Danish ships proved to be far inferior to the Swedish ships built in the English style. With Cort Adeler now dead, the Danish admiral Niels Juel favoured a return to English style ships, and in 1679 Robbins was once again granted a commission as a master shipwright. His wages this time were just 250 Rdlr., but this was undoubtedly an improvement on the *per diem* rate he had previously been getting<sup>82</sup>. He immediately began building the *Norske Løve* at Bremerholm, but he died on 26 March 1680, with the ship still incomplete<sup>83</sup>.

#### 9.4. A Changing Role?

We have seen that the royal master shipwrights taken on after the deaths of Balfour and Sinclair were nowhere nearly as prolific as the Scots. In the 12 years or so after their deaths we can identify only four ships of any size<sup>84</sup> that were built by the three master shipwrights who took their place. The role of the royal master shipwrights therefore appears to have changed.

With the growing financial crisis in the 1630s and 1640s fewer ships were being built directly using government funds. The trend was very much towards the use of private contractors and using the Norwegian *len* resources at source. The four ships built by Brandt and Robbins between 1638 and 1647 were significantly all built in Norway, with at least three of them for Norwegian *lensmænd*, who were to supply the ships in part payment of their *len* revenues. The master shipwrights work at Bremerholm now consisted principally of ship repair and rebuilding work as well as the construction of smaller vessels, such as the two barges

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82. Rigsarkiv, Søetaten, Bogholderi kontoret, Hovedbog over udbetalinger til søetatens betjente 1676-80, I, f.19.

83. Niels Probst, 'Nordeuropæisk spanteopslagning i 1500- og 1600-tallet', *Maritim Kontakt*, 16 (1993), 27-8.

84. Brandt's *Tre Løver*, *Fenix?*, and *Stormarn*, and Robbins' *Hannibal*.



built by Andersen in 1640/41. When the investigation in Corfitz Ulfeldt's embezzlement was being made it was stated, with probably just a little over-exaggeration, that not one ship was built at Bremerholm between 1642 and 1648<sup>85</sup>.

During Balfour and Sinclair's time the royal shipwrights were increasingly used as contractors themselves for the construction of the navy's larger ships. However, from the mid 1630s there was a greater emphasis on using private contractors outside the state system, and the royal shipwrights' role therefore became less important. Rather than being central to the navy's construction activity they instead acted more as 'consultants' to the *lensmænd* in Norway, and consequently became much more peripheral to the state's shipbuilding needs. The increasing roles of the private contractors and the Norwegian *lensmænd* are therefore discussed in the following chapter.

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85. H.D. Lind, 'Underslæb paa Bremerholm under Korfits Ulfeldts Finansstyrelse', *Historisk tidsskrift*, 6 Rk. V bd. (1895), 372-3.

## 10. Ships Built Under Contract or Acquired by Other Means

### 10.1. Private Contractors

For the purposes of this chapter a private shipbuilding contractor is understood to mean an individual or firm, outside of the state system, that built ships at their own shipyard, to a specific design and contract issued either personally from Christian IV or from the Danish state.

We have seen in previous chapters that many of the royal shipwrights built ships under private contract. However, these men could not really be considered as true private contractors. They may have received contracts for some of the ships they built but they still operated very much within the state system. Their wages were paid by the state and many of the ships built under contract were actually built in the navy's own dockyards at Bremerholm and Slotø, using timber supplied by the state.

When Balfour first started building ships for the Danish navy he acted as a private contractor, but he built these ships at state-owned sites, not at his own shipyard. When he did open a shipyard at Christianshavn in 1624 he still retained his commission as a royal shipwright and therefore could still not be considered as a private contractor in the true sense.

There were other shipbuilding contractors, though, working solely in the private sector, that were used by Christian IV.

#### 10.1.1. Peter Michelsen

The principal private shipbuilding contractor in Christian IV's earlier years was the Dutchman Peter Michelsen. He first appears on the scene in December 1613, just after Balfour had been imprisoned for the *Recompens*



affair. It seems likely therefore that Michelsen was used initially as a replacement for Balfour, especially as he also took on the Itzehøe yard that Balfour had used.

His first contract was for a medium sized warship that was to have a keel length of 45 wasser alen (24.8m)<sup>1</sup>. This contract was far more detailed than any previous shipbuilding contract and was initially drawn up by Christian IV himself, although it was altered slightly before being issued to Michelsen<sup>2</sup>. Balfour's contracts had simply detailed a few basic dimensions, the completion date and the contract price. In contrast Michelsen's contract was a highly detailed affair with, in addition to the principal dimensions of the hull, specifications for the arrangement of the decks and the dimensions of the structural timbers. In Christian IV's initial draft the dimensions of all the rigging and types of sail were also specified, but these were omitted in the final contract.

There must have been a reason for such a detailed contract to have been drawn up at this stage. Possibly the difficulties experienced with Balfour, with *Tre kroner* being built too large and *Recompens* foundering before even reaching the sea, had alerted the king to the necessity of stipulating much more precisely the dimensions of the ship. Also the fact that Michelsen was an untried shipwright probably also played a part, especially as being a Dutchman, Michelsen's method of shipbuilding would have been markedly different to what Christian IV had been used to with his English and Scottish shipwrights.

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1. Many shipbuilding measurements before around 1617 were in wasser alen (0.55m) Niels Probst, 'Wasser-alen: et hidtil overset længdemål fra Christian IV's tid', *Historisk tidsskrift*, 92 (1992), 288-300.

2. Contract with Michelsen, 14 December 1613; an additional rough copy 20 December and the final contract of 28 December 1613, Rigsarkiv, TKIA, A12, Registrerede koncepter til Patenter II, 1611-14. The contract of 14 December is published in C.F. Bricka & J.A. Fredericia (eds.), *Kong Christian den Fjerdes egenhændige Breve*, I, 77-81; and the contracts of 14 and 28 December are published in English translation in P. Holck, 'Danish Shipbuilding in 1613', *Mariner's Mirror*, 18 (1932), 81-6.

This concern over the new ship is reflected by the fact that Christian IV went to inspect it at Itzehøe just a few months later. What he found though was that, despite the detailed nature of the contract, the ship was being built slightly larger than stipulated. The length between the stem and sternposts was found to have been  $65\frac{3}{4}$  alen (36.2m) rather than the 62 alen (34.1m) it should have measured, and the breadth was also about one alen (0.6m) larger<sup>3</sup>.

Despite these differences in dimension the ship, *Fides*, turned out to be a very successful design. Michelsen had obviously shown his worth as a shipwright and in the following five years he received a spate of new orders, each with an equally detailed contract. In 1615 came an order for a smaller ship with a keel of 38 alen (20.9m)<sup>4</sup>, and in 1616 he was given another contract for an additional ship to the same design as *Fides*<sup>5</sup>, as well as one for a *jagt*<sup>6</sup>. In 1617 a contract was drawn up for a ship slightly larger than *Fides*<sup>7</sup>, which was subsequently called *Sorte Rytter*<sup>8</sup>.

These ships were followed by *Svanen*, a 24 gun ship for which no contract exists. It must have been ordered no later than 1623, though, since a Swedish spy stated that it had arrived in Copenhagen in December 1624. Michelsen was also in Copenhagen negotiating for his next contract but it was stated that:

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3. Diary entry 25 February 1614, Suhm (ed.), 'Kong Christian IVdes Skrivkalender for Aarene 1614 og 16', *Nye Samlinger*, 2 Bd., 91-114.

4. Contract dated 27 November 1615, Rigsarkiv, TKIA, A12, III, 1615-30.

5. Contract dated 13 December 1616, Rigsarkiv, TKIA, A145, Akter vedr. skibsbyggerne David Balfour og Peter Michelsen; and a copy of the same date wrongly filed in Rigsarkiv, TKIA, A12, II, 1611-14.

6. Contract dated 13 December 1616, Rigsarkiv, TKIA, A145.

7. Contract dated 11 November 1617, Rigsarkiv, TKIA, A145; and a sketch contract in Rigsarkiv, Danske Kancelli, B164, Diverse, IX, læg 17, Pk. 06.; an additional copy of this contract was issued on 18 September 1618, Rigsarkiv, TKIA, A12, III, 1615-30.

8. The identification as *Sorte Rytter* is given in Probst, 'Wasser-alen', 292.



det konungen will der wäll hafua någre flere schiep bygde. Men de kunna inthet accordere medh huar andre. Konungen ähr för knapp medh betalningen och hafuer inthet wäll contenterat be:te byg-gemestere för det, han alrede giort hafuer.

the king would like to have some more ships built there (Holstein), but they cannot agree with each other. The king has been niggardly with payments and has not paid the aforementioned shipwright for what he has already done.<sup>9</sup>

Christian IV had wanted a total of six copies of *Svanen* to be built<sup>10</sup>, but the result of the negotiations was that Michelsen was issued with a contract for just one ship<sup>11</sup>. When Christian IV went to Holstein just a few months later, to prepare for his campaign in the *Kejserkrig*, he naturally looked in at the yard to inspect his new ship, called *Lindormen*. It must have met with his satisfaction since no further comment was made in his diary other than that he had visited the yard<sup>12</sup>.

At the start of the war Michelsen played an important role in providing supplies for the ships based at Glückstadt, as well as two small smacks<sup>13</sup>. However, in 1627 Wallenstein invaded Jutland, and with only Glückstadt holding out against the Imperial forces, Michelsen's yard at Itzehøe fell into enemy hands. Whether any ship was under construction

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9. Letter dated 22 December 1624, Leo Tandrup, *Svensk agent ved Sundet*, (Århus, 1971), 525-6.

10. Tandrup, *Svensk agent ved Sundet*, 512.

11. Contract dated 24 December 1624, Rigsarkiv, TKIA, A145.

12. Diary entry 31 May 1625, R. Nyerup, *Kong Christian den Fjerdes Dagbøger for Aarene 1618, 1619, 1620, 1625, 1635, udgivne efter Originalerne*, (København, 1825), 130.

13. Missives to Jørgen Ulfeldt, *Kancelliets Brevbøger*, 31 October 1625, 29 April 1626, 24 & 27 May 1626.

at the time is not known, but it is unlikely, given that *Lindormen* was finished by 1626 and no other contracts exist from this date. Certainly no reference was made to any loss at Itzehøe.

Not long after the Peace of Lübeck Michelsen must have received another contract, as in June 1629 he was writing to say that the work on a 'grossen Orloch Schiff' (large warship) would be 'sterck wieder fuhr't' (greatly further progressed)<sup>14</sup> because of the possible further threat from Wallenstein. Despite these assertions the ship, *Tre kroner*<sup>15</sup>, was not completed until 1634. This was probably the last ship supplied by Michelsen, as by 1637 he was dead and the remaining ship timber at Itzehøe was being surveyed<sup>16</sup>. The ships known to have been built by Michelsen are shown in Table 10.1.

<u>Name</u>	<u>Type</u>	<u>Date Built</u>	<u>Contract Price</u>	<u>Lx</u>	<u>Breadth</u>	<u>Cannon</u>
<i>Fides</i>	Medium Warship	1613-15	6,000 Rdlr.	45*	15*	30
Not known	Small Warship	1615-17	7,500	38*	12*	?
<i>Neldebladet</i>	Medium Warship	1616-18	6,300	45*	15*	36
Not known	Jagt	1616-18	2,300	30*	10*	?
<i>Sorte Rytter</i>	Medium Warship	1617-19	8,800	50	15½	40
<i>Svanen</i>	Medium Warship	1622-24	?	50?	16?	24
<i>Lindormen</i>	Medium Warship	1624-26	4,500	50	16	40
<i>Tre kroner</i>	Large Warship	1629-34	9,500	?	?	50

Table 10.1. Ships Supplied by Peter Michelsen

\*Measured in wasser alen (0.55m), later ships measured in Sjællandske alen (0.628m)

Sources: Rigsarkiv, TKIA, A12, II & III; TKIA, A145; Tandrup, *Svensk agent ved Sundet*, (Århus, 1971); Probst, 'Wasser-alen', *Historisk tidsskrift*, 92 (1992), 288-300.

14. Letters from Michelsen 26 June 1629, and 2 December 1629, Rigsarkiv, TKIA, A145.

15. It is recorded in the materials accounts as '3 kroner wdi Icehow'. Rigsarkiv, Marinearkivet for 1655, 21 Bremerholmens Materialskrivets Regnskab, 1632 (Indtægt).

16. Letter to Henrik Müller, 14 December 1637, *egenhændige Breve*, IV, 168.



Michelsen was undoubtedly a very competent shipwright, with his ships proving to be so good that he was requested to build additional copies of them. Both *Neldebladet* and *Svanen* were described as being 'lemppelige orloffskiib' (easy warships), i.e. seaworthy and easily handled, and many of his ships remained in active service for many years. His ships were characterised by their shallow draught and the *Fides* and *Svanen* class of ships can be seen as precursors of Balfour's successful *Hummeren* design, and may well have influenced Balfour's design<sup>17</sup>. Whether he was quite as good a shipwright as Balfour, though, is debatable.

#### 10.1.2. Berns & Marselis

The firm of Berns and Marselis<sup>18</sup> was established when the young entrepreneur Albert Baltser Berns set up in partnership with the older well-established international merchant Gabriel Marselis, a Dutchman operating from Hamburg. Berns' family was part of the elite Dutch merchant community in Copenhagen and he himself had become a royal supplier there in 1625. With Berns' royal connections and Marselis' capital they made ideal partners, and they first joined forces during the *Kejserkrig* in a scheme to supply Glückstadt with victuals from Russia.

Although this venture was not a great success they continued to supply the town with victuals, weapons and ammunition. In 1629 Berns married Marselis' daughter and moved to Hamburg, and the two men then became the Danish crown's official factors in Hamburg, supplying all man-

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17. See Chapter 11.

18. The Marselis consortium has been extensively researched by John T. Lauridsen and the following has been taken from his 'Skibsbyggeri for den danske krone i Neustadt i 1640'erne', *Handels- og Søfartsmuseets Årbog*, (1982), 70-83; and *Marselis konsortiet: en studie over forholdet mellem handelskapital og kongemagt*, (Århus, 1987).

ner of goods. With the escalating financial crisis of the 1630s the Marselis consortium also became an increasingly important source of royal finance, with most goods being purchased on credit.

It is not surprising then, with shipbuilding becoming increasingly difficult to finance, to find Christian IV contracting Berns and Marselis to supply ships in addition to the military supplies they were also supplying on credit. They had established a shipyard in Neustadt in 1638 to exploit the extensive timber supplies in the area, but whether this was done with the explicit purpose of supplying warships is not known. Within a year, however, Christian IV had issued them their first contract for the supply of a ship, and over the next ten years they received many more contracts. Table 10.2. shows all the ships known to have been ordered from the Berns and Marselis shipyard in Neustadt.

<u>Name</u>	<u>Type</u>	<u>Date Built</u>	<u>Contract Price</u>	<u>Length</u>	<u>Breadth</u>	<u>Cannon</u>
Not known	?	1639	8,000 Rdlr.	?	?	?
<i>Sancte Maria</i>	Transport Boat	1639	13,500	?	?	?
<i>Sorte Bjørn</i>	Medium Warship	1640	(20,000)*	59	15	36
<i>Trefoldighed</i>	Large Warship	1640-42	(53,000)	71	18	60
<i>Grå Ulv</i>	Medium Warship	1642	(38,000)	58 <sup>3</sup> / <sub>4</sub>	14 <sup>1</sup> / <sub>4</sub>	36
<i>Pelicanen</i>	Medium Warship	1642	(38,000)	59	14 <sup>3</sup> / <sub>4</sub>	42
<i>Ørnen</i>	Medium Warship	1643-44	?	?	?	40
Not named	?	1644	?	?	?	?
<i>Victoria</i>	Large Warship	1646-47	52,350	70 <sup>1</sup> / <sub>2</sub>	17 <sup>1</sup> / <sub>2</sub>	56
<i>Frederik</i>	Large Warship	1647-49	75,000	74	20	94

Table 10.2. Ships Ordered from Berns & Marselis

Sources: John T Lauridsen, *Marselis konsortiet*, (Århus, 1987), 47.

\* Figures in parenthesis are the values placed on the ships in 1653 for the purposes of the Danish-Dutch alliance.

No contracts have survived for the building of these ships but Christian IV kept a close eye on the yard<sup>19</sup> and the design of the ships

19. He first visited on 28 June 1639, C.F. Bricka (ed.), 'Kong Christian IV's kalenderoptegnelser fra Aarene 1617, 1629 og 1639', *Danske Samlinger*, V (1869-70), 49-88.



was carefully monitored by the use of models. From 1640 there was also one of the navy's *mestersvende for tømmermændene* resident at the yard to monitor the work carried out there.

During the *Torstenssonkrig*, though, the yard was captured by the Swedes and both the ship that was nearing completion and one not long started were seized and the yard destroyed. Despite Danish attempts to blockade the port the Swedes managed to get the completed ship to sea, which they named *Ørnen*. Immediately after the war the yard was rebuilt and a further two large ships were built there.

By the time that *Frederik* was delivered in 1649 increasing concern was being expressed over the cost of the ships being ordered from Berns and Marselis. This alerted Frederik III to Corfitz Ulfeldt's corruption and led to the establishment of the commission to investigate his financial affairs<sup>20</sup>. With Berns and Marselis heavily implicated in this corruption no further contracts were placed with the Neustadt shipyard, and the yard was sold off shortly afterwards.

It was not just financial concerns which hastened the abandonment of Berns and Marselis as shipbuilding contractors, however, as the quality of their ships was not all it could have been. Christian IV was at first very pleased with the work carried out at the yard and when he inspected *Trefoldighed* in 1641 he stated that:

Ieg uar y disse dage hen huos dy Skiib, som biggis tyl Nyenstad, och befandt, att ded største er sa sterck aff tømmer, som ieg er uyss pa, at magen inted fyndis y Europa.

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20. See Chapter 3.

In these last days I was with the ships which are being built at Neustadt, and found that the largest is so strong of timber that I am sure that its match is not found in Europe<sup>21</sup>.

However, when the ship was delivered he complained that 'Ieg nu maa for myne Øien see, Samme skabelun y ingen made at uerre fuld' (I can now see with my own eyes that the model has not been followed in any way)<sup>22</sup> and, as we have seen<sup>23</sup>, the ship had to be rebuilt at Bremerholm by James Robbins. Even then it was noted that it 'seghlar intet wäll' (sails poorly)<sup>24</sup>

The main problem seems to have been that Berns and Marselis employed Dutch shipwrights, whose methods did not particularly suit the construction of large vessels. Christian IV was more used to the English style capital ships of Balfour and Sinclair, and there would therefore have been difficulties in transferring the design criteria from one method of construction to the other<sup>25</sup>.

In order to compare the relative merits of the two methods two large ships were ordered in 1647, one, *Frederik*, from Berns and Marselis, the other, *Sofie Amalie*, from James Robbins. Like *Trefoldighed*, though, *Frederik* was found to be a poor sailer. When Magnus Durrel made his report on the Danish fleet in 1653 he stated that the ship was 'obequämt' (unservicable) and that 'heela unnerste laghet af Styckarne intet

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21. Letter to Corfitz Ulfeldt, 23 January 1641, *egenhændige Breve*, V, 10.

22. Letter to Corfitz Ulfeldt, listed as 1640? but more likely 1642, *egenhændige Breve*, VII, 77.

23. See Chapter 9.

24. Christian Bruun, *Curt Sivertsen Adelaer*, (København, 1871), 420.

25. See Chapter 11 for a discussion of the different construction methods.



bruckes, ey häller wänner Skieppet wäll i stoer hool Siøe' (the whole lower row of cannon cannot be used, nor does the ship sail well in a heavy sea)<sup>26</sup>. The smaller ships built by Berns and Marselis, though, appear to have been much better, and much more suited to the Dutch style of building, with *Grå Ulv* in particular noted for being a good sailer<sup>27</sup>.

Despite the problems with the larger ships, the Berns and Marselis yard was undoubtedly very important for the Danish navy in the 1640s. However, its importance is overestimated to some extent by Lauridsen, who states that naval shipbuilding in the 1640s was predominantly in Berns and Marselis' hands<sup>28</sup>.

Because of the lack of complete and accurate records for the ordering of ships from Neustadt Table 10.2. is probably incomplete, and several more ships may have been built there. However, both Johan Brandt and James Robbins were also building large and medium sized warships in the 1640s and several other ships were purchased from other sources. In the final analysis Berns and Marselis are known to have been contracted to supply only eight ships, two of which never entered the Danish navy and two of which, *Trefoldighed* and *Frederik* were poorly constructed and sailed badly.

### 10.1.3. The Significance of Private Contractors

The use of private contractors was certainly not a new departure for the Danish navy<sup>29</sup> but Christian IV used them much more extensively than any previous monarch.

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26. Bruun, *Curt Sivertsen Adelaer*, 423.

27. H.D. Lind, 'Om Kong Christian den Fjerdes Orlogsflaade, III. Flaadeliste', *Tidskrift for Søvæsen*, (1890), 450.

28. Lauridsen, *Marselis konsortiet*, 49.

29. Jørgen H. Barfod, *Christian 3.s flåde*, (København, 1995), 208 & 264.

The common factor behind them was that they all operated in Holstein<sup>30</sup>. There were a number of reasons for this, not least because Holstein was at the time rich in shipbuilding timber. However, the main reason was most likely that because they were built outside the kingdom of Denmark-Norway, the *rigsråd* had no possible influence over the building of them. They were paid for principally from the king's own purse, and he could argue that they had cost the state not one daler<sup>31</sup>.

Although much of the capital costs of ships built by the royal shipwrights were also met by Christian IV, the fact that they were employed by the state meant that the *rigsråd* did have some say in the way they were used and the number of men employed. By going outside the state system altogether and using private contractors Christian IV was able to supplement the ships built by the royal shipwrights without any political interference.

The private contractors also built ships predominantly in the Dutch style. No firm conclusions, however, can be made as to whether it was a deliberate policy to build these types of ships. The range of duties performed by the navy certainly called for a mix of different styles of ship and the Dutch-style shallow draught vessels were ideally suited to in-shore coastal and riverine work. It may, however, simply have been a matter of availability, with Dutch shipwrights much more commonly available on the continent than English. Dutch-style ships were also generally cheaper than English-style ships and this may have been another significant factor, especially if Christian IV was paying for their construction himself.

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30. The only other ship known to have been built by private contractors was the small 20 gun ship, *Flensborg*, ordered in 1620 from two merchants in Flensburg, Jørgen Keelsen and Mattis Klausen. Open letter, *Kancelliets Brevbøger*, 25 February 1620.

31. Letter to *rigsråd*, 12 April 1633, *egenhændige Breve*, III, 102-3.



Another thing that the exclusive use of private contractors in Holstein would suggest is that there were no shipwrights or shipyards in Denmark itself that were considered capable of building warships. No records exist for any Danish commercial shipwright building warships for the navy. Even Rasmus Jensen Hellekande did not receive any warship orders, despite taking over Balfour's shipyard at Christianshavn<sup>32</sup>. This would tend to further strengthen the conclusions of Chapter 8, that the reason for foreign master shipwrights being employed was that there simply were not the skills available in Denmark.

#### 10.2. Norwegian *Lensmænd*

Whilst ships ordered from private contractors could be bought on credit the cost of the ships did eventually have to be paid. In the financially strained 1630s and 1640s another practice was developed that allowed ships to be supplied at no financial outlay whatsoever.

The *lensmænd* in Norway had long been required to keep a certain number of ships in reserve for the protection of the Norwegian coast. In the 16th century these could be used by the Danish navy when required but by the 17th century the differences between warships and merchant ships had widened so much that these ships were of little worth to the main fleet. The *defensionskibe* programme of 1630 encouraged the building of a larger breed of armed merchantmen, but these ships were again intended mainly to provide Norway with a better coastal protection force and were only to supplement the state navy in an emergency.

In the 1630s, though, a system was developed to exploit the wealth of shipbuilding timber in Norway to construct warships for the Danish navy. This was probably not an entirely new arrangement since we know that *lensmænd* had earlier been instructed to build vessels for the navy,

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32. Lauridsen, *Marselis konsortiet*, 49.

but the details of any contractual or financial arrangements remain obscure. The royal shipwrights had also built ships in Norway before, using timber from the *len*. However, what made the system in the 1630s different was that the *lensmænd* themselves acted as shipbuilding contractors. Contracts were issued to them rather than to the shipwright but the contract also specified which of the royal master shipwrights should be engaged. The costs of the ships' construction were also specified but instead of being issued with payments from the *rentekammer* they were simply to deduct these costs from the *len* revenues due from them.

There were not many *lensmænd* who had both the facilities and the resources to undertake these contracts, and so the number of ships provided in this way was not great. Details have survived of only two *lensmænd* who operated in this way, Christoffer Gjøe and Hannibal Sehested, but there may well have been others who supplied ships on a much smaller scale.

#### 10.2.1. Christoffer Gjøe

Christoffer Gjøe became the *lensmand* for Nedenæs *len* in 1619, and from 1628 he also became *lensmand* for Mandal and Lister *len*. The first evidence we have of his connection with the navy comes in 1624, when he was ordered to supply 24 ship's boats of the size prescribed by the master shipwright at Bremerholm, the costs of which were to be deducted from his *len* accounts<sup>33</sup>. Over the next three years he supplied at least another 30 boats, and in 1629 he also supplied five ship-loads of ship-building timber to Bremerholm<sup>34</sup>.

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33. Letter to Christoffer Gjøe, 30 October 1624, *Norske Rigs-registranter*, V, 448.

34. H.D. Lind, *Kong Kristian den Fjerde og hans Mænd paa Bremerholm*, (København, 1889), 377.



In 1631 he was given his first contract to build a warship. This ship was to be the same size as Balfour's *Tre Løver* and he was instructed to negotiate with Daniel Sinclair to build the ship. In return Gjølø was granted 6700 Rdlr. 'in specie' for the ship, which should be taken from the taxes collected from his three *len*<sup>35</sup>. Unfortunately this ship cannot be identified with any certainty.

It is clear from this contract that Gjølø did not yet have an established shipyard, as he was told to select a suitable site for the building of the ship and to erect a smithy there where the ironwork for the ship could be produced. It did not take long for him to realise the commercial possibilities, though, as later in 1631 we hear of a contract to supply the Ålborg merchant Jens Bang with a ship<sup>36</sup>.

The arrangement with Gjølø must have proved satisfactory as shortly after the first ship was delivered another warship was being built by him, but this time with Svend Andersen as the shipwright. The contract for this ship does not exist but it is likely that it was another copy of *Tre Løver*. This ship, *Delmenhorst*, carried a similar number of guns, but its length was considerably longer at 70½ alen (44.3m) between the posts. However, Gjølø stated that it had been built bigger than intended and that he was granted an additional 300 Rdlr. for it<sup>37</sup>. By June 1633 Andersen was fitting the masts and figure-head to the ship<sup>38</sup>, but the following year a fore-deck and forecastle had to be added<sup>39</sup>, most likely because the ship was much longer than intended.

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35. Contract with Christoffer Gjølø, *Kancelliets Brevbøger*, 23 March 1631.

36. Letter to Palle Rosenkrands, 7 July 1631, *Norske Rigs-registranter*, VI, 329.

37. Letter from Gjølø, undated but listed under c.1639-44, Rigsarkiv, Danske Kancelli, B160, Indlæg til registre og koncepter.

38. Letter to Palle Rosenkrands, 19 June 1633, *Norske Rigs-registranter*, VI, 552.

39. Lind, 'Om Kong Christian den Fjerdes Orlogsflaade', 420.

Before this ship was completed Gjølø was given a contract to build another ship, this time definitely another copy of *Tre Løver*. Svend Andersen was again to be the shipwright and it was to be completed by August 1634<sup>40</sup>. This ship was probably the new *Sorte Rytter*, which appeared in the materials accounts from 1635/36. Like *Delmenhorst* it was built bigger than the contract stipulated, and again Gjølø attempted to get an additional allowance for the extra expense<sup>41</sup>.

In the summer of 1635 Gjølø was contracted to build another warship. This contract has not survived but we know he was given 1000 Rdlr. to start the construction of a ship<sup>42</sup> and a clerk was appointed to oversee the shipbuilding accounts<sup>43</sup>. The ship cannot be identified with any certainty, but the only warship to enter the navy between 1636 and 1638 was the 16 gun *Snarensvend*, and it is likely that this was the ship built by Gjølø. The shipwright is also not known, but Andersen is the most likely as Sinclair was at that time in Copenhagen and Johan Brandt had not yet been appointed.

Johan Brandt, though, was to be the shipwright for a much larger ship, identified as the new *Tre Løver*<sup>44</sup>, to be built by Gjølø in 1638. Gjølø was to be paid 4000 Rdlr. from the Norwegian *Stadtholder*, and a further 10,000 Rdlr. was to be deducted from the *len* revenues due from him<sup>45</sup>. It was to be completed by Whitsun 1640.

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40. Contract with Gjølø, 25 April 1633, *Norske Rigs-registranter*, VI, 535.

41. Letter from Gjølø, undated but listed under c.1639-44, Rigsarkiv, Danske Kancelli, B160

42. Letter to Christoffer Urne, 14 July 1635, *Norske Rigs-registranter*, VII, 92.

43. Letter to Palle Rosenkrands, 18 June 1635, *Norske Rigs-registranter*, VII, 62.

44. See Chapter 9.

45. Contract with Gjølø, 22 August 1638, *Norske Rigs-registranter*, VII, 427-8.



Before this ship was completed Gjølle was given another contract, in June 1639, to build a ship the same size as Balfour's *To Løver*<sup>46</sup>. Brandt was again to be the shipwright, but additional shipcarpenters had to be recruited so that the two ships could be built simultaneously<sup>47</sup>. This second ship, which has been tentatively identified as *Fenix*<sup>48</sup>, was to be completed by Whitsun 1641.

The financing of this last ship was a little different from those previously built by Gjølle. This time he was to receive the total cost of 9000 Rdlr. in specie, but this was to be paid in three instalments from the toll revenues of the neighbouring 'Affdesiden' *len*<sup>49</sup>. Thus although Gjølle received cash payments for this ship the central administration in Copenhagen still did not have to pay any money directly for it. However, despite receiving cash for this ship Gjølle was experiencing financial difficulties<sup>50</sup> and this is the last ship that he is known to have supplied to the Danish navy<sup>51</sup>.

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46. This was identical to the *Tre Løver* specified in previous contracts, but this ship was lost in 1637, and to avoid any confusion with the new *Tre Løver* currently under construction, *To Løver* was specified.

47. Open letter, 6 June 1639, *Norske Rigs-registranter*, VII, 577-8.

48. See Chapter 9.

49. Contract with Gjølle, 8 June 1639, *Norske Rigs-registranter*, VII, 579-80.

50. He asked Christian IV for further payments in 1640, which the king refused to pay. Letter to Corfitz Ulfeldt, 6 July 1640, *egenhændige Breve*, IV, 365.

51. Johan Brandt built the *Stormarn* in Norway in 1643/44, which may have been built for Gjølle or possibly for another Norwegian *lensmand*. See Chapter 9.

<u>Name</u>	<u>Type</u>	<u>Date Built</u>	<u>Contract Price</u>	<u>Lr</u>	<u>Breadth</u>	<u>Cannon</u>
Not known	Medium Warship	1631-32	6,700 Rdlr.	42	13	?
<i>Delmenhorst</i>	Medium Warship	1632-33	?	42?	13?	34
<i>Sorte Rytter</i>	Medium Warship	1633-34	7,000	42	13	40
<i>Snarensvend?</i>	Small Warship	1635-36	?	?	?	16
<i>Tre Løver</i>	Medium Warship	1638-40	14,000	47½	15	46
<i>Fenix?</i>	Medium Warship	1642	9,000	42	13	34

**Table 10.3. Ships Supplied by Christoffer Gjøe**

Sources: *Norske Rigs-registranter*, Rigsarkiv, Danske Kancelli, B160; Marinearkivet før 1655, Bremerholmens Materialskriver regnskaber.

The fact that Gjøe's last two known contracts provided him with cash payments suggests that he was no longer able to finance the building of ships himself, and indeed he complained that he had been financially ruined by the venture<sup>52</sup>. These financial difficulties no doubt contributed to Gjøe being dropped as a shipbuilding contractor, especially as Berns and Marselis were now showing themselves capable of building ships on credit. Gjøe, however, still continued to supply ship timber to Bremerholm. Even when building the large *Tre Løver* he managed to supply large amounts of ship timber<sup>53</sup>, and in 1646 he was still supplying timber to Bremerholm<sup>54</sup>. Like the ships he built, the cost of this timber was deducted from his *len* revenues, and therefore was supplied at no outlay from Copenhagen.

#### 10.2.2. Hannibal Sehested

In 1642 the king's son-in-law Hannibal Sehested was appointed as Norwegian *Stadtholder* and *lensmand* in Akershus. Under his leadership there grew a separate Norwegian administration, and during the *Torstenssonkrig* he assumed control of the *defensionskibe* fleet.

52. Lind, *Kong Kristian og hans mænd*, 378.

53. Open letter, 31 May 1638, *Norske Rigs-registranter*, VII, 406-7.

54. Letter to Gjøe, 3 August 1646, *Norske Rigs-registranter*, VIII, 448.



After the loss of the Danish fleet in this war he was instructed to construct a large warship using the timber that he had lying at Christiania. James Robbins was instructed to go with Sehested to Norway to build the ship and Sehested was ordered to pay for his wages as well as for the rest of the workforce that would be required<sup>55</sup>.

This ship, named *Hannibal* in his honour, was completed by 1647 and he was then given further instructions to build another two large warships at Christiania, again with James Robbins as shipwright. The cost of these ships was to be met from Sehested's *len* revenues, but, unlike *Hannibal*, for which he paid only for the hull<sup>56</sup>, it appears that he was also expected to pay for the masts and rigging as well. Sehested complained, however, that he had already paid too much as *lensmand* and that it was therefore impossible to pay for the outfitting of the two ships<sup>57</sup>. Who eventually paid is not known but the two ships, *Sophie Amalie* and *Prins Christian* were completed by 1650.

These were to be the last ships built by Sehested as after the death of Christian IV his position became precarious. The ordinary *rigsråd* members turned against the sons-in-law faction to which Sehested belonged and an investigation into his financial administration was ordered. By 1651 Sehested had had to resign his position as Norwegian *Stadtholder* and was, for the time being, politically and financially ruined<sup>58</sup>.

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55. Letter to Sehested, 11 May 1645, *Norske Rigs-registranter*, VIII, 365.

56. Letter to Sehested, 30 July 1647, *Norske Rigs-registranter*, VIII, 552.

57. Thyra Sehested, *Hannibal Sehested*, (København, 1886), II, 366. Strangely both this book and Bøggild-Andersen's more comprehensive study mention Hannibal Sehested's shipbuilding activity only in passing, in relation to the enquiry into his financial administration. C.O. Bøggild Andersen, *Hannibal Sehested: En dansk statsmand*, I, (København, 1946), 119 & 133.

58. Steffen Heiberg, 'Hannibal Sehested', *Dansk biografisk leksikon*, 13, 320-6.

### 10.2.3. The Effectiveness of the System

The use of *len* revenues at source to provide warships for the navy was clearly very attractive to Christian IV, and as a method of acquiring ships it proved to be very effective. In total the navy gained at least nine ships between 1632 and 1650 at little cost other than their masting and rigging. As the costs of the ships' construction were deducted from the *len* revenues at source it meant that no real account was made of the cost of supplying these ships. The *lensmænd* simply deducted the cost of the ships from the *len* revenues due from them and, although the *rente-kammer* included these deductions in the *len* accounts, no reference was made of the expense of the ships to the navy. The ships therefore effectively resulted in a loss of revenue rather than being an expense in themselves.

These somewhat deceitful arrangements enabled Christian IV to further his case for a reform of the *len* system. He could argue that the Norwegian *len* revenues were falling, whilst covering himself against accusations of spending too much on the navy, as the true cost of building these ships was disguised.

This system could only work, however, if the *lensmænd* had sufficient revenue in the first place, as well as the necessary timber supplies and a suitable shipbuilding site. Both Gjøe and Sehested felt the effects of the great expense of building warships and experienced serious financial difficulties as a result. The Norwegian timber supplies were too valuable not to be exploited, though, and the practice of sending the royal shipwrights to Norway to build warships at the expense of the local administration was continued well after the reign of Christian IV<sup>59</sup>.

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59. Jørgen H. Barfod, 'Bygningen af orlogskibe i Norge i slutning af 1600-tallet', *Maritime Kontakt*, 13 (1989), 5-15.



Also, in addition to those ships that were specifically ordered from the *lensmænd*, there is also at least one instance where a *lensmand*, Gunde Lange, died owing money, and his own private ship was requisitioned in lieu of his outstanding *len* revenues<sup>60</sup>.

### 10.3. Other Methods of Procuring Ships

So far we have looked only at ships that were ordered directly for the navy to a specified design. However, because of the great expense of warship building not all of the ships of the navy could be acquired in this way. To supplement these ships the navy could also obtain ready-built ships by a variety of other means. Some were given as gifts, some were taken as prizes while others were simply purchased from merchants. These ships generally tended to be much smaller than those ordered specifically for the navy, and of lesser importance.

#### 10.3.1. Gifts

Gifts were the least significant means of acquiring ships. In 1604 some farmers in Bergen gave the king a gift of five small skerry boats, and the merchant Peter Nielsen had an armed merchantman built in France. This he found too large for his own ends and so gave it to Christian IV<sup>61</sup>.

Included among the smaller vessels of the navy are some named after people, such as *Peder Boringholms krejer* and *Laurids Christensens skib*, which may well have given over to the navy by them as gifts. However, the provenance of these ships is not at all clear. They were certainly not all gifts as, for example, *Gunde Langes Jagt* was seized as compensation for a shortfall in his *len* accounts.

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60. Victor Jensen, 'Om Kong Kristian den Fjerdes Orlogsskibe', *Under Dannebrog*, (1941), 59.

61. Lind, 'Om Kong Christian den Fjerdes Orlogsflaade', 331-2.

### 10.3.2. Prizes

Prize ships could either be those captured in war or else those confiscated from merchants who were attempting to evade tolls in Danish sovereign waters.

In Frederik II's time and in the early years of Christian IV's reign many English ships were taken as prizes for infringing toll regulations. Moryson noted that one of the navy's ships was English 'lately taken by the Danes in the more Northern parts beyond Norway for some offence in ffishing'<sup>62</sup> and another traveller in 1600 stated<sup>63</sup> that:

I Havnen ligge en halv snees Skibe, hvoraf nogle for rum tid siden ere tagne fra Engellænderne i Nordsøen

In the harbour lie about 10 ships, of which some were taken from the English in the North Sea, some time ago.

Many Dutch ships were also taken as prizes for evading tolls as we can see from their name such as *Hollands Priis Boiert* and *Forbrudte Hollander* (Confiscated Hollander). In the 1630s we can also see a dramatic increase in the number of Hamburg ships taken as prizes after the dispute over tolls on the Elbe.

As well as those ships caught evading tolls, merchant ships supplying the enemy with war goods could also legitimately be taken as prizes. This was particularly true during the *Kejserkrig* when many of the prize ships appear to have come from the Hanse ports.

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62. Fynes Moryson, *The fourth Part of an Itinerary: Of the Comonwealth of Denmark*, Booke II, Chap. II., Library of Corpus Christi College, Oxford, MS. C.C.C.94, f.242-3.

63. Suhm (ed.), 'Udtog af en Reise til Danmark Aar 1600', *Nye samlinger til den danske historie*, 3 bd., (København, 1794), 99.



These merchant ships were not very large and those that were taken into the Danish navy therefore tended to serve mainly as transport ships, although some of the larger armed merchantmen were able to serve as small warships. Most of these ships had also naturally been well used before being seized and it was exceptional for prize ships to serve in the navy for more than a few years.

Although Denmark managed to gain a significant number of small ships in this way, when it came to the capture of enemy warships in times of war she was not so fortunate. During the Kalmar War the Danish fleet managed to capture several Swedish ships, but the ships captured, apart from one or two exceptions, were all fairly small. Again during the *Torstenssonkrig* only a handful of small Swedish transport ships were captured, while Sweden on the other hand managed to take half the Danish main fleet as prize.

### 10.3.3. Purchases

Ships were purchased from many different sources. Some were purchased from foreign powers, such as the Scottish *Gilliflower* that was purchased in 1605 from James I/VI, who stated that:

Although we do not gladly allow ships of that type, whose structures are rather distinctive and most pleasing to us and to any other prince, to be distributed, nevertheless we have very willingly yielded that to Your Serene Highness<sup>64</sup>.

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64. James I to Christian IV, 29 May 1605, Ronald L. Meldrum (ed.), *The Letters of King James I to King Christian IV 1603-1625*, (Hassocks, 1976).

When the ship entered Danish service it was renamed *Angelibrandt*, and carried 16 guns. The smaller *Markatten* was also bought from England in the same year and several years later there was also talk of a ship being built for the Danish navy by Phineas Pett:

The King of Denmark having obtained from the state that Mr Pett may build him a ship here, desires the Company would lend him their dock at Deptford; to which the court readily condescended<sup>65</sup>.

However, it seems that no such ship was built, and this may simply have been a reference to the rebuilding of *Tre kroner* which was being discussed at the time<sup>66</sup>.

Several ships were also bought from the Netherlands, such as two unidentified ships bought in 1625 and the *Hollands Fregat* in 1640. Christian IV was not always successful in obtaining the ship he wanted, though, as the following account testifies:

The King of Denmark found a difficulty in purchasing a ship of about 1,000 tons in North Holland for which he pays 50,000 Florins, unless he would give caution to the value of 100,000 Florins that the ship should not be employed in the East Indies. This was represented to the States as an unreasonable condition and unfit for a friendly Prince, and is laid aside<sup>67</sup>.

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65. Court Minutes of the East India Co., 22 September 1624, Calendar of State Papers, (Colonial, East Indies), 1622-24, 411.

66. A Draught contract was drawn up for its repair sometime around 1624, *egenhændige Breve*, I, 398-9.

67. Letter Dudley Carleton to Sec. Nauton, 17 February 1620, Calendar of State Papers, (Colonial, East Indies), 1617-21, 351.



Closer to home, several ships were also purchased from Danish and Norwegian merchants. A ship was bought from the Oslo merchant Erik Olsen in 1603 for 4,000 Dlr., and another was bought from Willem Macker in Marstrand for 1,500 Dlr<sup>68</sup>. In 1608 Christian IV paid 2,350 Dlr. for another ship from Norway<sup>69</sup>. Frederik Bøyesen sold the small *Følgesvend* to the navy in 1634<sup>70</sup>, which he had built at his shipyard in Christiania. From the sums involved, though, these ships must have been fairly small.

Some larger ships were also purchased, such as the 20 gun *Forlorne Søn* which was sold to the navy in 1642 by Jacob Madtzen, a merchant from Christianshavn<sup>71</sup>. This ship, however, was originally an English ship which sank in the Sound and was subsequently recovered and repaired<sup>72</sup>.

The greatest number of ships purchased, though, seems to have been during the *Torstenssonkrig*, when many of the Norwegian *defensionskibe* and the Copenhagen *borgerskibe* were requisitioned into the main fleet and subsequently purchased from their original owners.

Some ships were also hired from merchants and contractors in time of crisis, particularly in the *Torstenssonkrig*, but these vessels served only for a limited time and could not be considered as belonging to the permanent Danish navy.

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68. Letter to Steen Maltessøn, 8 July 1603, *Norske Rigs-registranter*, III, 23.

69. Lind, 'Om Kong Christian den Fjerdes Orlogsflaade', 330-1.

70. Letter to Sten Villumsen, 4 October 1634, *Norske Rigs-registranter*, VI, 696.

71. Rigsarkiv, Rentemesterregnskaber, 1642/43.

72. Bruun, *Curt Sivertsen Adelaer*, 421.

#### 10.4. Conclusion

The increasing use of private contractors and *lensmænd* to build the navy's ships must be seen in the light of Christian IV's domestic politics and his power struggle with the *rigsråd*. The origins of this policy, though, probably owe a lot to chance, since it is more than likely that Peter Michelsen was used initially only as an interim measure after the imprisonment of David Balfour. However, having seen that it was possible to successfully build warships outside the state system it allowed Christian IV much greater independence in the development of the navy away from the interference of the *rigsråd*.

The decision to build ships in Schleswig and Holstein, however, had been taken much earlier, with Petersen and Balfour both building ships in the duchies. The king knew that this would provide him with a virtually unassailable position over who owned and controlled the navy, and the decision to use private contractors can be seen as a way of gaining even greater autonomy. In the period before the *Kejserkrig* this was definitely a policy driven by considerations of political power and foreign policy ambitions. Later he used the fact that he built so many warships in the duchies as a lever against the *rigsråd* in his attempt to gain further financial support for the navy.

In the period after the *Kejserkrig* financial considerations played a much more important role in the use of private contractors. The growing financial crisis also precipitated the use of Norwegian *lensmænd* as ship-building contractors. However, finance was not the only motive behind the adoption of this policy, and Christian IV's political manoeuvring to force a reform of the *len* system certainly played a part.

Table 10.4. shows the means by which large and medium warships were acquired during Christian IV's reign. Because the origin of so many of the smaller vessels remains unknown these have been omitted from the table.



	Royal <u>Shipwrights</u>	Private <u>Contractors</u>	Norwegian <u>Lensmænd</u>	Prizes & <u>Purchases</u>	<u>Not Known</u>
1596-1610	5	0	0	0	4
1611-1620	2	3	0	2	2
1621-1630	9	3	0	0	4
1631-1640	1	1	4	2	1
1641-1650	0	7	5	8	2

**Table 10.4. Method of Acquisition of Large and Medium Warships**

The most striking thing that this table shows is the dramatic change in the role of the royal master shipwrights. In the early part of the reign they built the majority of new warships, but after the *Kejserkrig* their role changed significantly. The ships they built thereafter were almost exclusively built for the Norwegian *lensmænd*, and the remainder of the warships were built by private contractors on credit.

In the 1642 budget estimate there was a provision of 18,000 Rdlr, for the construction of two warships annually, but in fact after around 1640 the building of larger warships directly financed by the *rentekammer* came to a complete standstill. Even after half the fleet was captured in the *Torstenssonkrig* the replacement ships were financed by the *lensmænd* or by private contractors' credit.

The sudden rise of purchases at the end of the reign can be explained by the fact that many of the *defensionskibe* and *borgerskibe* were purchased as short term replacements for those lost in the *Torstenssonkrig*, but whether their owners ever received full payment must remain doubtful.

We cannot draw such firm conclusions about the provision of the smaller ships and galleys of the navy since the origin of the majority of them remains unknown. However, from the information that we do have we

can see that the royal shipwrights continued building a fairly steady number of these vessels throughout the reign, while private contractors and *lensmænd* built only a handful of these smaller vessels.

This can be explained in a number of ways. The royal shipwrights were paid an annual wage and if they were at some stage not building a large warship it was logical to keep them occupied with the construction of smaller vessels, using the timber supplies that were readily to hand. Also, if private contractors were to be used, either because of financial or political reasons, it made sense for Christian IV to use them to build as large ships as possible. In this way both the benefits of using credit and the political weight of owning large warships were maximised. It was hardly worth negotiating with private contractors to build small ships if the royal shipwrights could build them in their slack periods or else simply be purchased ready-built from other sources.

The purchase of ships, though, appears to have become much less significant in Christian IV's time. During Christian III's and the early years of Frederik II's reign probably the majority of the navy's ships were purchased<sup>73</sup>. After the Northern Seven Years War, though, it became clear that the ships of the navy had to be of a much larger construction and these ships could only be built to order, not acquired randomly from merchants. By Christian IV's time it was only the smaller vessels of the navy that could be purchased ready-built.

In summary then we have seen that at the start of Christian IV's reign foreign master shipwrights were employed by the state to build the large warships that were needed both for the purposes of warfare and royal prestige. In the 1630s the financing of state shipbuilding became increasingly difficult and new ways had to be sought of financing the construction of warships. Private contractors were used to build ships on

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73. Barfod, *Christian 3.s flåde*.



credit and *lensmænd* were used to build ships from their *len* revenues. The role of the royal master shipwrights therefore changed from their previous position at the centre of naval construction to a much less significant position where they were used as 'consultant' shipwrights to the Norwegian *lensmænd* and as builders of small vessels at Bremerholm.

In Sweden the trend was also away from Crown shipwrights towards the use of private contractors, but here the contract was placed with a master shipwright who then worked at the royal dockyard and used the dockyard's workforce. Sweden also continued to purchase a large number of her warships<sup>74</sup>.

In England it became common practice for the Crown shipwrights to also run their own private yards and naval vessels were built both at the royal dockyards and at the private yards. A similar situation also occurred in Denmark with Balfour's private shipyard at Christianshavn, but this lasted only for a period of around 10 years.

Denmark was therefore not alone in changing the method by which warships were built, but in terms of later developments in Denmark, Christian IV's trend towards diversification of the means of warship construction turned out to be a bit of a false turn. After the introduction of absolutism in 1660 Bremerholm once again became the main centre for warship building and the royal master shipwrights regained their position at the centre of the navy. This trend back to centralised naval construction was so strong that by the end of the 17th century Bremerholm was no longer sufficient as the main naval shipbuilding yard and a new dockyard, called Nyholm, was built when the coastal defences around Copenhagen were improved. However, Christian IV was not to know this and the financial and political crises of his own day forced him to take the measures he did.

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74. Michael Roberts, *Gustavus Adolphus: A History of Sweden 1611-1632*, II, (London, 1958), 288-9.

This is not to say that private contractors and local government officials were not used by later regimes to construct warships, but the need for them was drastically reduced after the removal of the *rigsråd* and the reform of the *len* system. The navy then belonged unequivocally to the king and there was no constitutional argument over who paid for it or how it was used. Christian IV's difficulties with the *rigsråd* concerning the number and types of warships that he wished to build had forced him to diversify into other methods of warship construction. When absolutism was introduced this problem no longer existed and warship building returned to Bremerholm on a large scale.

Christian IV was also by no means the only European monarch to experience political difficulties over financing the construction of new warships. In England Charles I raised the 'ship money' to get around the problem of an unsupportive parliament. In many respects by by-passing parliament to raise additional finance for his navy Charles I was emulating what Christian IV had done with the Sound tolls. However, by the 1630s it was no longer possible for Christian IV to increase his income in order to finance the navy and to get around the political differences with the *rigsråd* he was forced instead to seek alternative ways of financing the construction of ships.



## 11. The Design of Danish Warships

Some elements of the process of designing and building ships have been hinted at in previous chapters. It is now time to look in more detail at how the ships of the Danish navy were designed, how these designs were transferred into actual ships, and how successful the end results were.

### 11.1. The Design Process

The process of designing a ship in the early 17th century depended very much on the nationality of the shipwright. Two distinct schools developed in Northern Europe, one in England and one in the Netherlands. The English method was adapted from Venetian practice and was based on the use of plans to represent the desired form of the ship in miniature<sup>1</sup>. Dutch Shipwrights on the other hand did not use detailed plans but instead relied on rule-of-thumb methods that enabled them to calculate the proportions of a ship simply from the desired length of keel<sup>2</sup>. Dutch ships were therefore built much more by eye than English ships, and Dutch shipwrights were more able to manipulate the form of a ship during the building process.

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1. The Venetians did not actually use plans but used geometrical rules to define the hull shape. Mathew Baker, who visited Venice in 1550, was the first shipwright to transfer these rules into a graphical representation of a ship: Sergio Bellabarba, 'The Ancient Method of Designing Hulls', *Mariner's Mirror*, 79 (1993), 274-92.

2. The two classic descriptions of 17th-century Dutch shipbuilding (Nicolaes Witsen, *Aeloude en Hedendaegse Scheepsbouw en Bestier*, (Amsterdam, 1671) and Cornelis van Yk, *De Nederlandse Scheepsbouwkonst opengesteld*, (Amsterdam, 1697)), make no reference to plans at all, but Rembrandt's painting of *The Shipbuilder and his Wife* (1633) clearly shows a shipwright with a rough sketch plan of a ship's keel and two sections of the ship. Rudimentary plans must therefore have been in use in the Netherlands, but they were obviously not as integral to the design process as in England. The painting is illustrated in J.H. Plumb & Huw Weldon, *Royal Heritage: The Story of Britain's Royal Builders and Collectors*, (London, 1977), 236.

The construction processes were also completely different. The English method of construction was to first erect the frames of the ship and then apply the outer skin. Two separate methods were in practice in the Netherlands. In the northern part of the country the hull planking was built up from the keel and stem and stern posts and the constituent timbers of the internal frames were inserted as construction progressed upwards. In the south four frames were erected on the keel, two at midships, and one each at the stem and stern. To these frames were then attached ribbands that defined the hull form. The remaining frames were then fashioned to fit this form and then the ribbands were successively replaced by the final outer planking<sup>3</sup>.

By the 17th century both English and Dutch shipwrights were building using the 'carvel' technique. This differed from the earlier 'clinker' construction in that the outer planks were laid edge to edge rather than overlapping. This meant that much larger timbers could be used for the outer shell, making the ships far stronger. In contrast Danish native shipbuilding was still heavily influenced by the viking tradition of clinker construction. This helps to explain why Danish merchant ships were so small and why foreign shipwrights were called in to build the larger ships needed by the navy.

#### 11.1.1. Models & Plans

Having seen in previous chapters how much Christian IV was obsessed by the details of his various projects and hated delegation, it comes as no surprise to find that the design of all warships were subject to his ap-

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3. Olof Hasslof, 'Carvel Construction Technique: Nature and Origin', *Folk-Liv*, 21-22 (1857-58), 49-60; R.W. Unger, 'Dutch Design Specialization and Building Methods in the Seventeenth Century', in C.O. Cederlund (ed.), *Postmedieval Boat and Ship Archaeology*, (Oxford, 1985), 153-64; A.J. Hoving, 'Dutch 17th-century Shipbuilding', *Model Shipwright*, 58 (1986), 28-36; Jeremy Green, 'The Planking-First Construction of the VOC Ship *Batavia*', in Reinder Reinders and Kees Paul (eds.), *Carvel Construction Technique*, (Oxford, 1991), 70-1; A.J. Hoving, 'A 17th-Century 42-Foot Long Dutch Pleasure Vessel: A research into original building techniques', in Reinders and Paul (eds.), *Carvel Construction Technique*, 77-80.



proval. He had a strong working knowledge of ship plans and is known to have designed some vessels himself. However, as both English and Dutch construction methods were used for Danish warships, plans could not be the sole means by which the design of vessels was judged, and three dimensional models were also used in the design process.

The term *skabelon* (model) is used to describe both a three dimensional model and a two dimensional model, i.e. a plan. The same term has also been used to describe construction templates used to define specific frames<sup>4</sup>. Some confusion is therefore inherent in any discussion of the use of plans and models and any differentiation must involve some element of guesswork.

Three dimensional models were certainly used for design approval before two dimensional plans. The first use of the term *skabelon* in Danish shipbuilding comes in 1555 when Christian III ordered that 'en skabelon af træ, hvorefter barken skal bygges' (a wooden model, after which the bark shall be built)<sup>5</sup> be sent to him. Frederik II also used ship models and ordered a ship model 2 alen (1.25m) to be built to the same design as *Fortuna*. This model, however, was built after the ship had been completed and could only have been used for reference or decorative purposes<sup>6</sup>.

Christian IV continued this model building tradition and in Balfour's contract for the *Tre kroner* it was stated that the ship was to be built 'effter thed Skabelun hand konng: Ma: der aff vnderdannigst haffuer Of-fuerantwordett' (after the model he has humbly delivered to H.M.)<sup>7</sup>. This may have been the same model for which he was issued timber to 'giøre

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4. Preben Holck, *Cort Adeler*, (København, 1934), 107.

5. Jørgen H. Barfod, *Christian III.s flåde*, (København, 1995), 108.

6. Barfod, *Christian III.s flåde*, 152.

7. Contract with Balfour, March 1602, Rigsarkiv, Rentemesterregnskaber 1601/02, f.602-5.

schabelon Vdaff' (make a model from) at the end of 1601<sup>8</sup>.

The most detailed account of the use of models in the design of ships, though, is given in the Koldinghus len accounts for 1610/11. In these accounts there is a heading that reads as follows:

Udgivet og bekostet på 1 skibsskabelon, som kgl. maj. selv har afridset og udkastet på den lange sal her på slottet, og straks udi hans maj. egen overværelse den har ladet hugge, høvle og forfærdige udaf fyrredeller, fyrrelægter og fyrrespir, så og andet jerntøj, spiger og søm med efterskrevne håndværksmænd, han dertil har brugt, som hans maj. med dem har i hans maj. nærværelse ladet rejse og opsætte nedenfor slottet udi staldgården, hvorefter hans maj. nådigst ville lade opsætte og bygge 1 skib her for Koldinghus udaf hans maj. skove her på lenet.

Issued and paid for one ship's model, which H.M. has himself traced out and sketched in the long room here in the castle, and which he in his own immediate presence has had carved, planed and finished from fir deals, laths and spars, and for the ironwork, spikes and nails, along with the undernamed craftsmen used on it, which H.M. has, in his own presence, let erect and set up outside the castle in the stableyard, after which H.M. will have set up and built here at Koldinghus one ship using H.M.'s woods here in the *len*.

The subsequent entries show that a total of 18 local shipwrights, joiners, carpenters and sawyers worked on the model for a total of 84 man-days, costing a total of 53½ Dlr. 1 Mk 14½ sk. The model used 16

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8. Entries dated November and December 1601, Rigsarkiv, Marinearkivet før 1655, 28. Bremerholms Tømmerregnskaber, 1601/02.



tylv. (dozen) timbers plus 64 alen (40m) of mast spars, 4000 iron spikes and nails and 90 iron screws, and 24 fathoms (60m approx.) of hemp cable<sup>9</sup>.

This was obviously a very large and sophisticated model that, judging from the materials used, must have been built as a complete miniature ship including all the framing, planking, masting and rigging, and not just a simple carved construction designed to show the basic form of the vessel. The model was then able to be used to estimate the timber required for the actual ship and the shipwright and his sawyers were subsequently instructed to fell a total of 5785 alen (3633m) of timber from the local woods.

The local shipwright who was employed to build the model was not used to build the full sized ship, and instead Claus Jansen was brought over from Copenhagen. This provides us with an important clue in the use of models by Christian IV. Clearly they were not simply built by the Crown shipwrights in order to gain approval from the king, and models were not specific to the shipwrights that built them. The king could also design his own models and then pass on the design to his shipwrights to construct the desired ship. However, this process could not be said to have been an unmitigated success as, as we have already seen<sup>10</sup>, the vessel in question capsized on launching. Whether this was a fault of the design or in the construction or interpretation of the design by Jansen will never be known but it does highlight the difficulties involved in the whole design process.

The greatest difficulty appears to have been experienced when models designed by Christian IV were issued to shipwrights. Apart from the case of the Kolding galley we can follow the consequences of this

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9. Birgitte Dedenroth-Schou, *Koldinghus lens regnskaber 1610-11*, (København, 1984), 254-57.

10. See Chapter 9.

method in the construction of *Trefoldighed*. Christian IV stated that the ship was to be built 'Epther den Skabelun, ieg derpa giordt haffde' (after the model I have made of it)<sup>11</sup>, but when the ship was delivered it was found that the shipwright had not followed his design and the ship had to be rebuilt by Robbins<sup>12</sup>. Part of the problem undoubtedly was that the Dutch shipwright was expected, using his own rule-of-thumb methods, to replicate Christian IV's design which was most likely first produced as a plan using English methods.

As the Koldinghus accounts show, Christian IV was experienced, if not exactly skilled, in the art of ship draughting. His design for two identical barges built in 1640 is still extant<sup>13</sup> and although the vessel depicted is fairly rudimentary it does show that he understood the basics of ship design. In this instance the plan was used in the same way as the models discussed above, to specify a design for a ship that was then passed on to a shipwright to construct.

Christian IV could not possibly have designed all of his ships and from the surviving evidence we would need to conclude that plans were more normally drawn up by the shipwrights themselves. Several of Balfour's plans have survived<sup>14</sup> and in 1618 Sinclair was issued with paper to 'bruge till at Affridtze schabeluner paa till Hans May: skiibe' (use to trace out plans of H.M. ships on), and in 1631 he also received two sheets of paper on which to draw the plans of *Norske Løve*<sup>15</sup>. However, the king still had the final say in the design and all plans or

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11. Letter to Corfitz Ulfeldt, listed as 1640? but more likely 1642, C.F. Bricka & J.A. Fredericia (eds.), *Kong Christian den Fjerdes egenhændige Breve*, VII, 77.

12. See Chapters 9 and 10.

13. See Appendix A.

14. See Appendix A.

15. Payments to book-binders, 5 September 1618 & 25 May 1631, Rigsarkiv, Rentemesterregnskaber 1618/19, p.800; 1631/32, f.204.



models had to be approved by him before any ship was built.

### 11.1.2. The Shipbuilding Contract

After a design was approved a formal contract was drawn up with the shipwright. There was no consistency in who actually issued the contract, the *Rentekammer*, *Danske kancelli* and the *Tyske kancelli* all issued contracts. Contracts were also only issued for those ships that were built either by private contractors or by the Crown shipwrights when they operated as contractors. There must also have been some agreement with the shipwrights building ships as state employees but no details of any such agreement have survived.

At first the contracts were vague and imprecise. They stipulated simply the keel length or tonnage and perhaps the arrangement of decks and masts<sup>16</sup>. Even for a ship the size of *Tre kroner* the contract simply stated that it was to be built in a similar way to *Argo*, or a little smaller, as per the agreed model<sup>17</sup>. No specific dimensions or proportions were given.

This changed in 1613 when Peter Michelsen was given his first contract. The background to this change was most likely that because Michelsen was Dutch and did not use plans in the way that Balfour did, Christian IV had to stipulate far more clearly the form and structure of the vessel in the actual contract. The fact that Christian IV was also ordering a ship from completely outwith the state system for probably the first time would also have had some influence on the style of contract. Much thought went into the wording of the contract and the details

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16. Details of contracts with Balfour, Rigsarkiv, Rentemesterregnskaber 1597/98, f.444-6; and 1601/02, f.602-5; *Kancelliets Brevbøger*, 20 December 1604.

17. See Chapter 8.

which it specified. Christian IV himself drew up the first draft on 14 December 1613, this was reworked on 20 December and the third and final version was issued on 28 December<sup>18</sup>.

The final contract specified the keel length, breadth and depth of the vessel, the rakes of the stem and stern posts and the width of the transom<sup>19</sup>. The arrangement of decks, cabins, masts, rudder and gun ports were also specified and the scantlings of the ships structure were all minutely detailed. For some reason the details of the sails and rigging which Christian IV specified in his original draft did not make it into the final contract.

Preben Holck states that Christian IV consulted Balfour on the final form of the contract<sup>20</sup>, but as Balfour was in prison at this time this would seem unlikely. It is difficult to believe, however, that the king did not consult an experienced shipwright before issuing the contract and perhaps Jansen was involved in the process. The fact that the initial draft is in the king's hand, though, and that the final version contained only minor changes to his own dimensions, clearly shows that Christian IV fully understood the process and technicalities of shipbuilding and design.

From this time on the contracts issued to the Crown shipwrights also became much more detailed. To begin with they were not quite as sophisticated or as precise as the contracts with Michelsen, but they gradually increased in complexity until they were comparable to the 1613 contract. With Balfour's contract for *Hummeren* in 1623 there came another

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18. Contract with Michelsen, 14 December 1613; an additional rough copy 20 December and the final contract of 28 December 1613, Rigsarkiv, TKIA, A12, Registrerede koncepter til Patenter II, 1611-14. The contract of 14 December is published in *egenhændige Breve*, I, 77-81; and the contracts of 14 and 28 December are published in English translation in P. Holck, 'Danish Shipbuilding in 1613', *Mariner's Mirror*, XVIII (1932), 81-6.

19. The transverse timber immediately above the stern post.

20. Holck, 'Danish Shipbuilding in 1613', 84.



significant change in that the contract specified the draught of the completed ship. This was a notoriously difficult measurement to predict and along with a vessel's tonnage, was surrounded by a certain element of mystery and mystique. An outline draft of the contract exists, which may be in Balfour's own hand<sup>21</sup>, and if this is so it shows that he must have had an almost unheard of faith in his abilities. A shipwright would not have introduced such an onerous condition into a contract of his own volition unless he was absolutely sure of what he was doing.

It has been widely assumed that Anthony Deane in England was the first shipwright to devise a method of predicting the draught of a vessel before launching. In fact the method may have been in existence for some time before Deane first described it in his *Doctrine of Naval Architecture* of 1670. Deane's method was actually very simple. An approximate area was calculated for every third frame using either an average radius or a network of triangles. These were multiplied by the distance between three frames to give a volume. The sum of these volumes along the length of the ship then provided the total volume of displacement, which when multiplied by the density of water gave the tonnage displacement<sup>22</sup>. By calculating the weight of the ship the draught could then be calculated. Whether this was the method used by Balfour will never be known, but given his knowledge of mathematics the computation of areas and volumes would have presented him with little difficulty.

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21. Balfour's handwriting cannot be identified with certainty but one sentence is written in the first person. However, elsewhere 'M: Davidt' is referred to in the third person. The contract price and delivery date have been added by another hand at the end of the contract, and on the reverse, in yet another hand, is written 'Steen Willomsens fortægnelse paa it schib som schall bygge' (Sten Villomsen's outline of a ship which shall be built). An explanation may be that Balfour wrote the contract, passed it on to the *Holmens admiral*, who then passed it on to the *Danske kancelli* for official sanction. The final contract contained exactly the same information but in a slightly different word order, and written entirely in the third person. Rigsarkiv, Danske kancelli, B164, IX, pk. 06, læg 17.

22. Brian Lavery, *Deane's Doctrine of Naval Architecture*, (London, 1981), 22-5 & 71-3.

The *Hummeren* contract therefore represents a highly significant moment in shipbuilding history, being the earliest evidence that a calculation for displacement was in existence long before Deane. As it is also the first known example of a vessel's draught being stipulated at the design stage it is worth quoting the contract in its entirety<sup>23</sup>:

Skibet skal være 40 Al. langt i Kølen, Bjælkerne 13 Al. lange, Faldet fra Stavnen 11½ Al., Faldet fra Skudstavnen 2 Al., Bredden af Hidsbjælkerne 7 Al. 3 Kv., Skøringen agter 4 Al., imellem Overløbet og Overkanten af Kobryggebjælkerne 3 Al., Dybden mellem Foringen og den nedre Kant paa Overløbsbjælkerne skal være 3 Al., Bredden af Flagen 11 Al.; Indholterne i Skibet skulle være først 11 Tommer og siden opad 10, 9, 8, 7, 6 og 5 Tommer. Mester David skal anordne Master, Stænger, Raaer, Skibsbaad med dens Tilbehør samt Køjer og Kahytter, saaledes som Fortingningen kan taale, saa Køjer og Kahytter blive vel udpaneledede med godt Snedkerværk, som det sig bør, med Borde, Bænke, Køjer og andet, som behøves i Kahytter. Endvidere skal han lave Arkeliet, Kabyssen, Butteriet, Kabelrum, Sejlkammer, Krudtkammer, Hovedsmandskælder og andre Skillerum og Kammerser, som et Orlogsskib behøver, med alt andet, som Økse, Nav og Høvl udkræver, intet undtaget i nogen Maade. Ligeledes skal han lave Gallionen vel stafferet og udskaaret med Snedker- og Billedskærerværk og Kongens og Kronens Vaaben bag paa Skibet. Naar Skibet er færdigt, skal det stikke 5 Wateralen. Mester David skal selv skaffe sig Folk til at løfte, lette, slæbe og bære, medens Skibet staar paa Bænkestokken, og skal selv skaffe sig de nødvendige Savskærerarbejde, Driften og Digten, saa det kan være fuldstændig færdigt til St. Laurits Dag 1624. Han skal herfor have

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23. Contract with Balfour, *Kancelliets Brevbøger*, 2 October 1623.



3500 Dlr. in Specie, Daleren beregnet til 6 Mk., at udbetale ham i Rentekammeret i 4 Terminer, den første straks paa Haanden, den anden naar Skibet er et Barkholt højt, den tredje, naar Skibet kommer i Vandet, og den fjerde, naar Skibet er helt færdigt. Kongen vil skaffe Mester David Jærnværket, Tømmer, og andet, som behøves til Skibsbygningen. Endvidere har Kongen bevilget, at Mester David maa faa Folk, Blokker, Tov og andet, som behøves til at skyde Skibet af Bænkestokken i Søen, naar det er færdigt.

The ship shall be 40 alen (25.1m) long in the keel, the beams 13 alen (8.2m) long, the rake forward  $11\frac{1}{2}$  alen (7.2m), the rake aft 2 alen (1.3m), the breadth of the transom  $7\frac{3}{4}$  alen (4.9m), the rising line aft<sup>24</sup> 4 alen (2.5m), between the main deck and the beam of the half-deck<sup>25</sup> 3 alen (1.9m), the depth between the ceiling<sup>26</sup> and the lower edge of the main deck beams<sup>27</sup> shall be 3 alen (1.9m), the breadth of floor 11 alen (6.9m)<sup>28</sup>; the ceiling timbers of the ship shall be first 11 tommer (inches) and then upwards to 10, 9, 8, 7, 6, and 5 tommer (287–130mm). Master David will arrange the masts, topmasts, yards, ship's boat with its fittings, as well as berths and cabins, such that the fore- and aftercastles<sup>29</sup> require, berths and cabins are to be well panelled with good joinery work as they

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24. The height of deadwood above the keel.

25. Free deck height.

26. Internal planking.

27. Depth in hold.

28. This measurement is actually incorrect, and the plan of *Hummeren*, shows a more realistic width of floor of 8 alen (5m). This mistake, however, was continued in all subsequent contracts based on the *Hummeren* design.

29. From the Dutch *vertuining*. (*Kancelliets Brevbøger*, 13 March 1631, note 4).

should be, with tables, benches, bunks and other things needed in the cabins. In addition he shall make the magazine, the galley, the cellar<sup>30</sup>, cable tier, sail room, powder room, boatswain's store and other bulkheads and compartments that a warship requires, with everything else which requires axe, auger and plane, with no exceptions. Likewise he shall make the figure-head well ornamented and carved with joinery and carving work and the king's and the crown's coats of arms on the stern of the ship. When the ship is completed it will draw 5 wasser alen (2.75m). Master David will himself hire men to lift, drag and carry while the ship stands on the stocks, and shall himself provide the necessary sawyer work and caulking, so that it can be completely finished by St. Lawrence Day (10 August) 1624. For this he shall have 3500 Dlr. in specie, the Daler reckoned at 6 Mk., to be paid to him from the *Rentekammer* in four instalments, the first immediately in hand, the second when the ship is a wale<sup>31</sup> high, the third when the ship is launched and the fourth when the ship is completely finished. The king will provide Master David with the ironwork, timber, and everything that is required for building the ship. In addition the king has granted that Master David may have men, blocks, tackle and anything else required to push the ship off the stocks into the sea when it is complete.

All subsequent shipbuilding contracts issued to the Crown shipwrights and Christoffer Gjøe were essentially the same as this with minor variations, depending on the particular circumstances relating to who was to build the ship, where it was to be built, and how it was to

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30. The editor of *Kancelliets Brevbøger* suggests bottle store, from the Dutch *botteliet*.

31. A longitudinal strengthening timber attached to the outside of the frames.



be paid for. The thing that varied most was the amount of materials provided. Some contracts, such as the one above, provided everything needed to build the ship except the manpower, others might provide just the ironwork and masts, and some provided nothing at all, with the contractor expected to procure everything from the private sector.

From 1628 the second instalment was usually paid, not when construction reached the first wale, but when 'Køl, Stavn, Spænderne, Bordstokkene og Kølsvinene er lagt og Plankerne udenpaa slaaet paa' (keel, stem and stern posts, frames, floors and keelson are laid and the planking fixed to the outside)<sup>32</sup>. Apart from one or two exceptions<sup>33</sup>, the degree of technical specification was similar to that contained in the *Hummeren* contract, and all stipulated the draught of the vessel. Another innovation came in Sinclair's contract for *Norske Løve* in 1631 when the draught was specified both at amidships and at the stern. This is therefore the first contract known to specify a vessel's trim<sup>34</sup>.

### 11.1.3. The Finished Ship

Despite all the care and attention paid to drawing up detailed contracts the ships that were built from them nearly always varied from the specified dimensions. Most were built larger than the contract dimensions, such as Balfour's *Tre kroner*<sup>35</sup> and Michelsen's *Fides*<sup>36</sup>, but some were also built smaller. The wide variation in dimensions can be seen if we look at the series of ships built to the same contract as *Tre Løver*. We know the finished dimensions of four of these vessels. *To Løver* and *Sorte*

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32. Contract with Sinclair, *Kancelliets Brevbøger*, 7 February 1628.

33. For example Balfour's contract for two copies of *Postillionen*, *Kancelliets Brevbøger*, 25 January 1625.

34. Contract with Daniel Sinclair, *Kancelliets Brevbøger*, 13 March 1631.

35. See Chapter 8.

36. See Chapter 10.

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35. See Chapter 8.

36. See Chapter 10.



*Rytter* were measured at Bremerholm in connection with Gjøl's application for additional payments and *Delmenhorst* and *Fenix* were measured for the Dutch alliance of 1653. The dimensions are given in Table 11.1.

	<u>Shipwright</u>	<u>Contract Date</u>	<u>Length Btwn Posts</u>	<u>Breadth</u>	<u>Depth in Hold</u>
Contract Dimensions		1628	55½	13	3
<i>To Løver</i>	Balfour	1628	52½	12	3¾
<i>Delmenhorst</i>	Andersen/Gjøl	1632	62½	14	5¾
<i>Sorte Rytter</i>	Andersen/Gjøl	1633	61	14¾	4½
<i>Fenix</i>	Brandt/Gjøl	1639	57½	14¾	5¾

Table 11.1. Dimensions of *Tre Løver* Class Ships

Sources: Letter from Gjøl, c.1639-44, Rigsarkiv, Danske Kancelli, B160, Indlæg til registre og koncepter; Preben Holck, 'Flaadelister omkring Krigsaarene 1644-45', *Tidsskrift for Søvesen*, 114 (1943), 560-1.

Not one of the ships as built matches the specified dimensions. The *To Løver* was a little smaller than the contract, while the rest were larger. The length was exceeded by as much as 12.5%, and the breadth by 13.5%, but the widest variations were found in the depth in hold, which varied by as much as 90%.

There were a number of reasons for these variations. Each shipwright would have his own idiosyncrasies and rules of thumb that were used in the construction. The suitability and availability of timber may also have played a part but it was most likely the anticipation of additional payments that encouraged shipwrights to build their ships larger.

In contrast to England, where contractors were paid on a pound per ton basis, the Danish contracts stated the total contract price at the outset. Thus the shipwrights were not guaranteed any extra money if they produced a larger ship, but in some cases additional payments were paid, such as the 300 Rdlr. awarded to Gjøl for the construction of *Delmenhorst*<sup>37</sup>.

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37. See Chapter 10.

Therefore despite Christian IV's efforts to regulate the design of his ships through the use of plans, models and contracts, he was not guaranteed to actually receive a ship that matched his expectations. However, apart from one or two instances, this does not seem to have been too much of a problem, so long as he received a seaworthy ship of roughly the right size and proportion. The most notable exception was the *Trefoldighed*, which was ordered to be significantly rebuilt<sup>38</sup>, but on the whole the ships were accepted and the shipwrights paid their full contract price, even if the ship delivered did not exactly match the contract specifications.

## 11.2. Design Analysis

Balfour's plans<sup>39</sup>, illustrated in Appendix A, are the earliest known working ships drawings in existence, and as such they deserve comparison with the theoretical treatises on shipbuilding that began to appear at the end of the 16th and beginning of the 17th century.

The first theoretical treatises on shipbuilding came out of Venice in the 15th and 16th centuries. These were far from clear demonstrations of the shipwright's art and were probably more in the form of *aide memoires* containing certain methods, rules and proportions used in the Venetian Arsenal. By the end of the 16th century Iberian shipwrights were also beginning to outline their methods of construction and both Italian and Iberian treatises continued to appear in the early years of the 17th century<sup>40</sup>. However, Balfour's plans are so obviously different to the ships contained in these treatises that any comparison would be pointless.

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38. See Chapters 9 and 10.

39. Rigsarkiv, Sjøetatens kort- og tegningssamling, Des. E.1-9.

40. R.C. Anderson, 'Early Books on Shipbuilding and Rigging', *Mariner's Mirror*, 10 (1924), 53-64; John E. Dotson, 'Treatises on Shipbuilding before 1650', in R.W. Unger (ed.), *Cogs, Caravels and Galleons*, (London, 1994), 160-8.



It is therefore to English treatises that we must turn for comparison.

A number of manuscript treatises on shipbuilding were produced in England in the late 16th and early 17th century. The earliest is the manuscript attributed to Mathew Baker and commonly called *Fragments of Ancient English Shipwrightry*<sup>41</sup>. This dates from the 1580s and consists of a number of drawings and mathematical examples. The text is far from clear and is of little use; the drawings, however, are of great value. The design drawing of a ship of around 1000 tons has been used in the following comparison.

Around 1600 another two treatises appeared. Both were written by unknown authors, and both contain essentially the same details. The first, known as the Scott Manuscript<sup>42</sup>, has been dated to between 1590–1605, and the second, now known as the Newton Manuscript<sup>43</sup>, to 1599–1603. In contrast to the Baker MS, these treatises contain no drawings but instead give a series of general rules and proportions for the construction of a ship's lines and the mathematical calculations needed to draw them.

A more complex treatise was written by the mathematician Thomas Harriot around 1608–10<sup>44</sup>, but despite taking a much more mathematical

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41. The manuscript is in the Pepysian Library, Magdelene College, Cambridge (MS PL 2820) and has never been published in full. The drawings, though, have been published extensively, for example in: Frank Howard, *Sailing Ships of War 1400–1860*, (London, 1979).

42. The MS is in the library of the Royal Institution of Naval Architects (RINA No. 798). Although it has never been published it is discussed in: William A. Baker, 'Early Seventeenth-Century ship Design', *American Neptune*, 14 (1954), 262–77; and J.F. Coates, 'The Authorship of a Manuscript on Shipbuilding c.1600–1620', *Mariner's Mirror*, 67 (1981), 285–6. Coates refutes an earlier claim that the author was George Waymouth and Baker suggests that it may in fact be a translation of a Venetian document.

43. It exists only as a copy taken by Isaac Newton around 1700. The MS is in Cambridge University Library (MSS Add. 4005, Part 12) and has been published in: Richard Barker, 'A Manuscript on Shipbuilding, Circa 1600, Copied by Newton', *Mariner's Mirror*, 80 (1994), 16–29.

44. Jon V. Pepper, 'Harriot's Manuscript on Shipbuilding and Rigging (ca. 1608–10)', in *Five Hundred Years of Nautical Science*, (London, 1981), 204–15.

approach to ship design, his results remain remarkably similar to the empirical methods used in the earlier treatises. A fifth treatise was written by another unknown author around 1620<sup>45</sup>. This follows the same basic method of the Scott and Newton MSS in giving certain basic rules and proportions for the building of ships, followed by a step by step guide to creating the plan for a ship of 550 tons, with all the mathematical calculations involved.

All of these design methods were based on the 'whole-moulding' process of construction, which was derived from Venetian practice in the mid 16th century. By this method the midship section is the key to the form of the ship and much of the content of the treatises is concerned with its design using various arcs of circles. The frames forward and aft are then created by using the same basic shape but raising and narrowing it according to the rising lines shown on the profile, and the narrowing lines, shown on the plan.

With these five treatises, and the plans derived from them by their commentators, we are able to understand the process of early 17th century English shipbuilding in great detail. Armed with this information we can now look at how Balfour's methods compare to English theoretical practice.

The first thing that one observes is that Balfour's plans are drawn almost exactly in accordance with the English whole-moulding technique. The midship sections are constructed in a similar manner, starting with a flat floor and then using four arcs of circles. Certain stylistic variations exist, though, such as showing the port side of the plan elevation rather

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45. The MS is in the Admiralty papers in the PRO (Ms. 9: Orders and Instructions of the Duke of York, 1660). It has been published in: W. Salisbury and R.C. Anderson (eds.), *A Treatise on Shipbuilding and a Treatise on Rigging written about 1620-25*, Society for Nautical Research Occasional Publication No.6, (London, 1958); and reprinted in: Peter Kirsch, *The Galleon*, (London, 1990), 165-203. The author has been cited as probably John Wells the mathematician and Clerk and Storekeeper at Deptford: Richard Barker, 'Design in the Dockyards about 1600', in Reinders and Paul (eds.), *Carvel Construction Technique*, (Oxford, 1991), 61-69.

than the starboard side, or both sides, which seemed to be preferred in England. On some plans the midships section is missing, but the presence of rising and narrowing lines show that they must have existed on a separate sheet.

Although the same basic design principles were used there are marked differences in the actual forms of Balfour's vessels. This was not simply a stylistic variation on Balfour's part, but an answer to a very real problem. The English method produced ships with a deep draught, however, the Baltic coastline is considerably shallower than English coastal waters which meant that ships of a shallower draught were needed. To complicate matters, the water in the Baltic is also brackish, rather than the fully salt water of the North Sea or Atlantic. As the water is less dense it supports a lesser weight, with the result that ships sink deeper in the Baltic. Therefore the use of an unaltered English design would have been doubly inappropriate.

Balfour solves this problem by designing a much fuller underwater hull form, providing a far greater buoyancy for a given tonnage than the English methods produce. The differences in design are shown in Figure 11.1.

As with English practice, Balfour uses four arcs of circles to create his midship sections, but his designs are less neat and geometrically formal than the English method. However, there was no logical reason to design the curves of a ship with the centres and radii of the arcs forming a neat geometrical pattern, apart from theoretical simplicity. Balfour was clearly not afraid to deviate from accepted theoretical dogma and shows a certain ingenuity and a willingness to innovate. He does not have one set method either but instead adapts his hull forms for each individual ship.



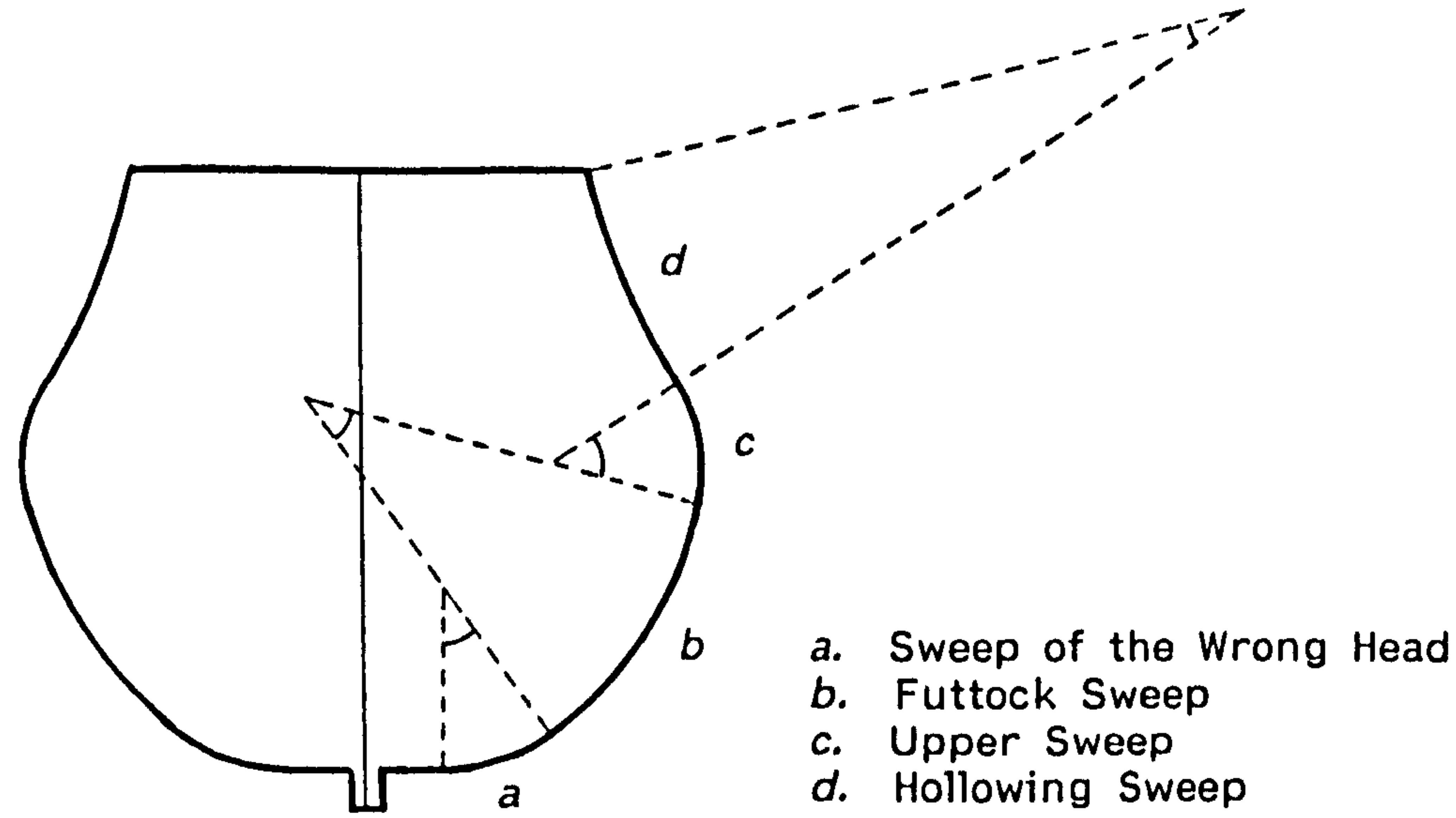


Fig. 11.11.a. Theoretical English Midship Section

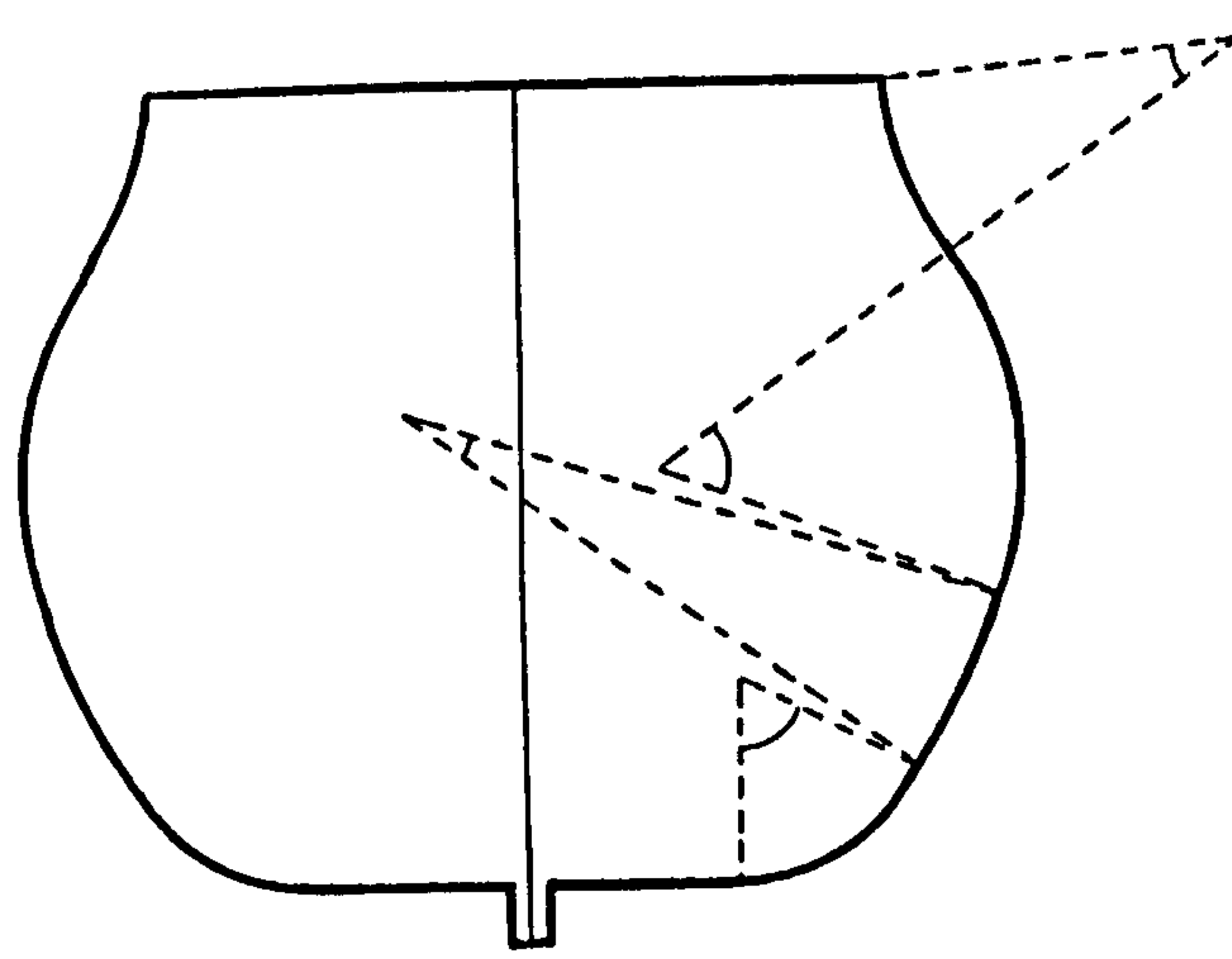


Fig. 11.1.b. Small Warship (Des. E.7.)

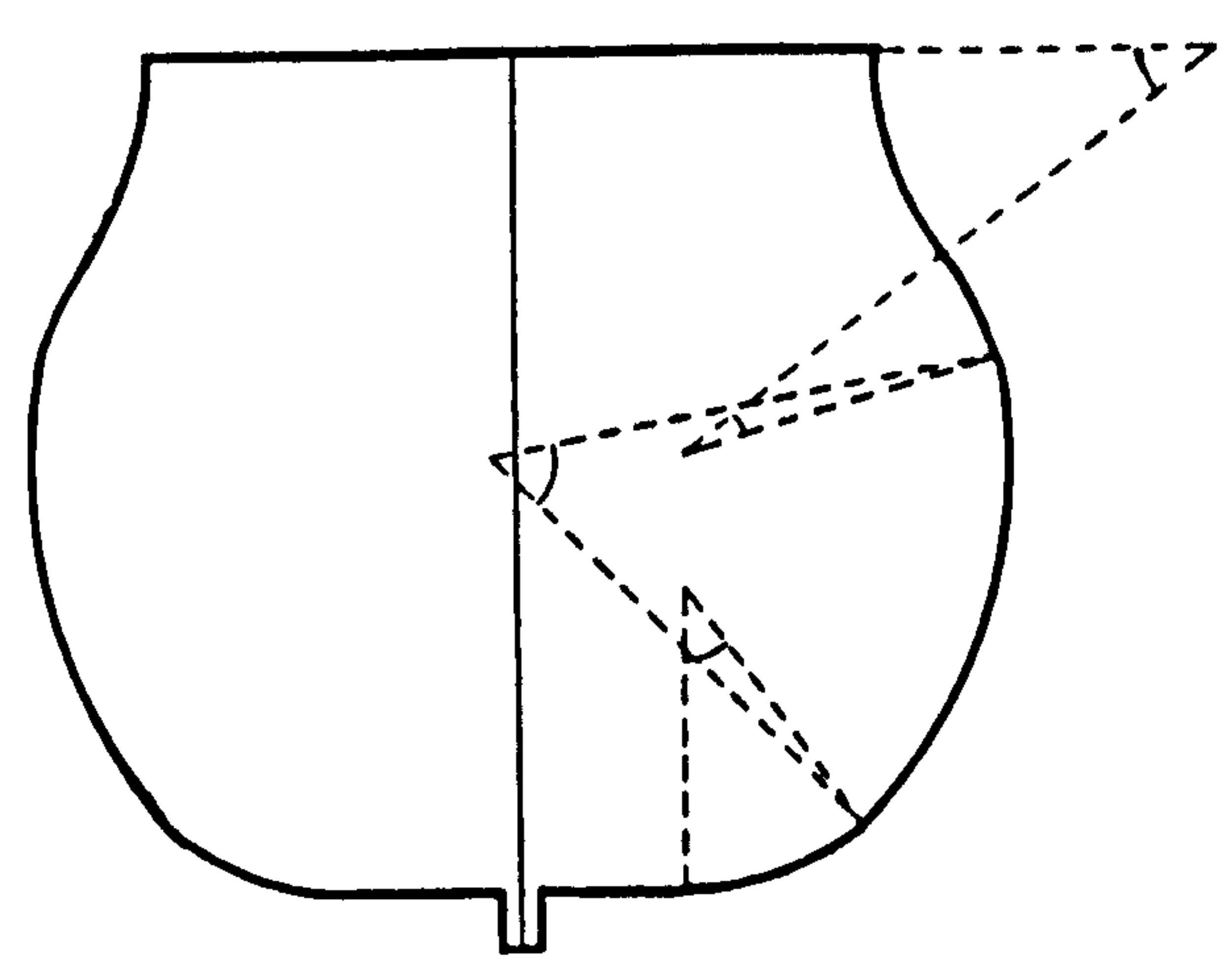


Fig. 11.1.c. *Tre Kroner*

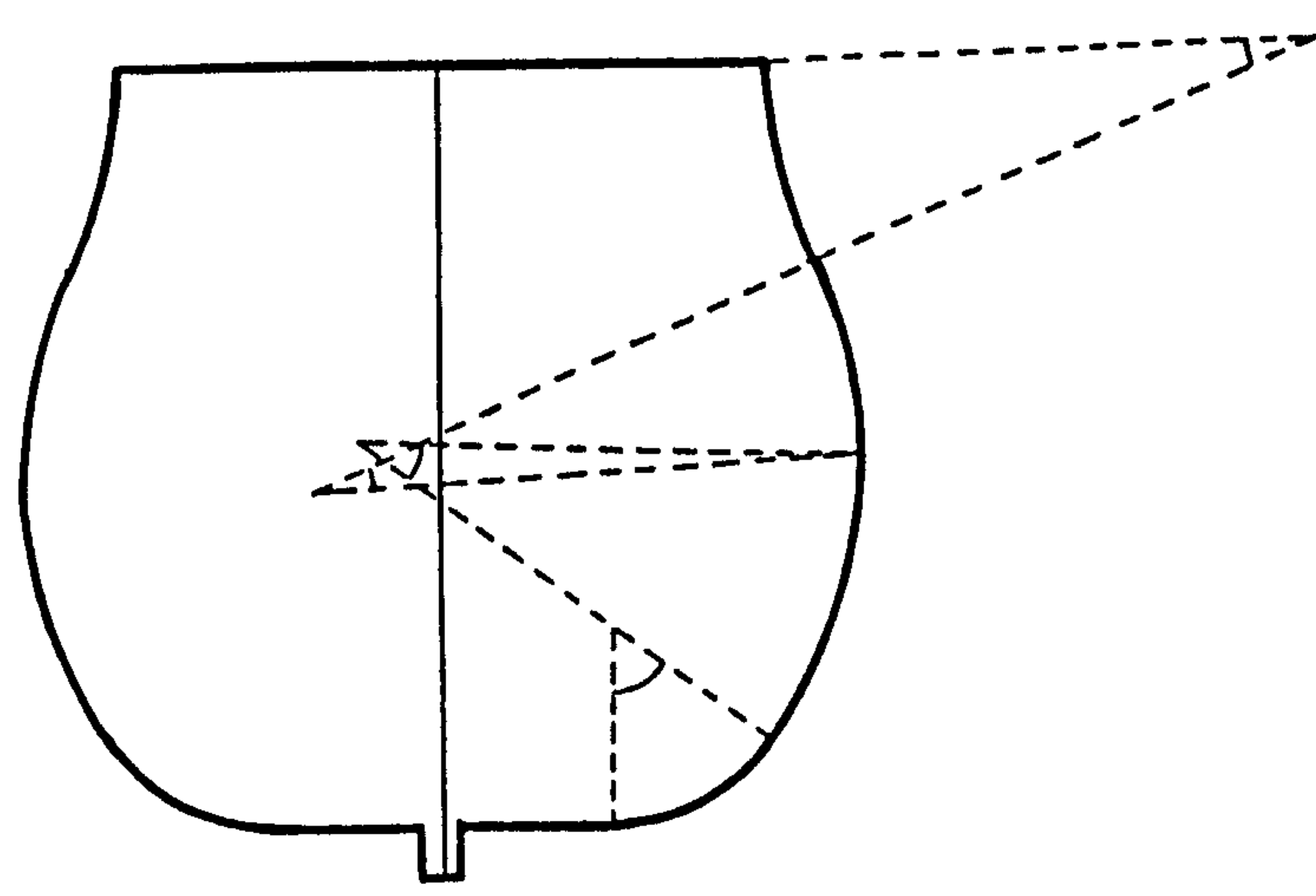


Fig. 11.1.d. Medium Warship (Des. E.7.)

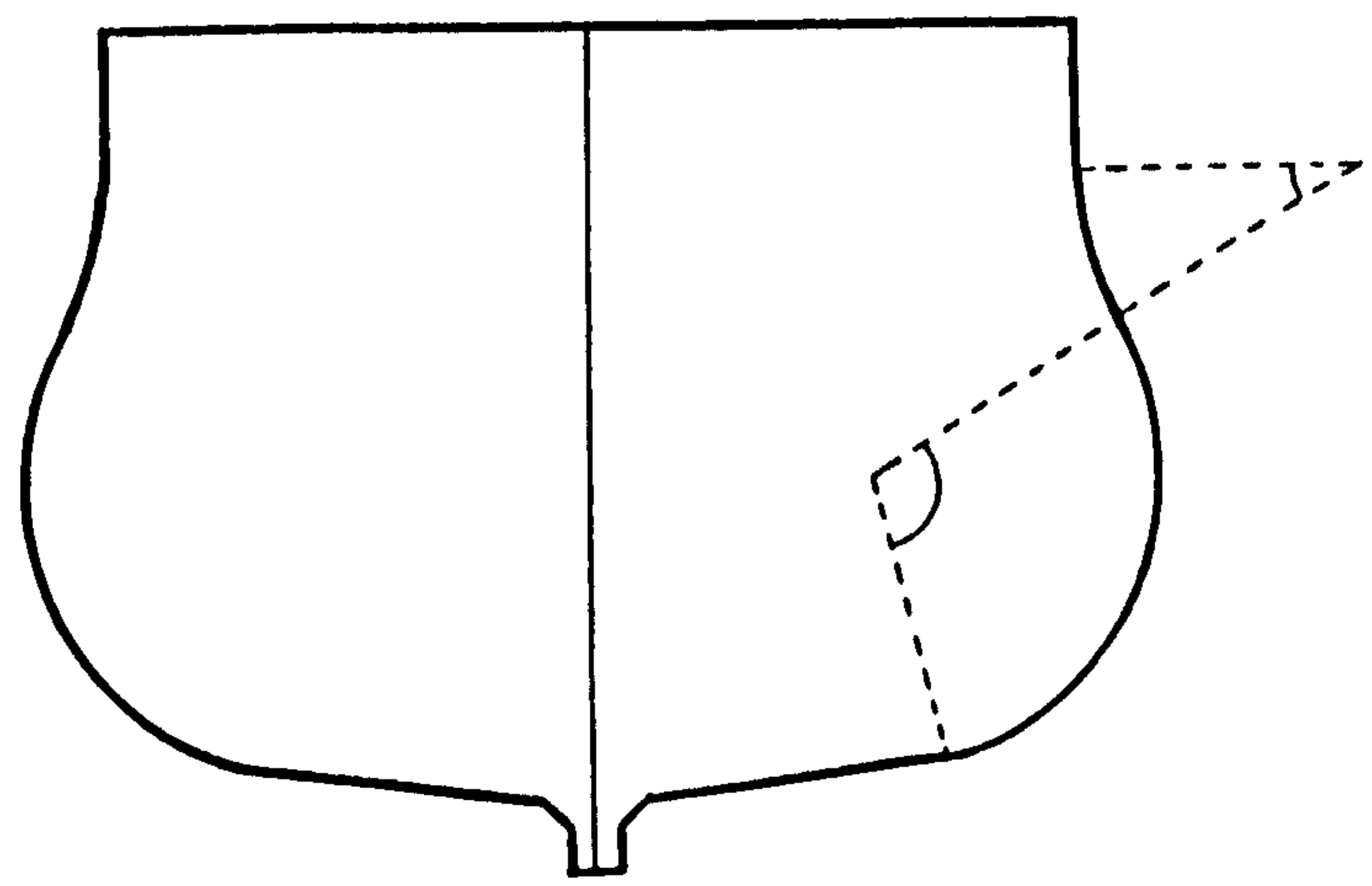


Fig. 11.1.e. *Hummeren*

Figure 11.1. Midship Section Designs

If we look first at the small warship (Des. E.7.) we see that this is the ship that nearest resembles the English method. There are a number of differences, however, the most important being that it has a greater width of floor, and the first curve, known as the 'sweep of the wrong head' is much sharper, giving a much fuller hull.

*Tre kroner* is also similar to the English designs. Its width of floor is fairly narrow, and the 'sweep of the wrong head' has a similar radius as the English ships. The second curve, however, known as the 'futtock sweep' has a sharper radius and so gives a fuller hull. This line also continues above the line of maximum breadth which is highly unusual. The third curve, known as the 'upper sweep', therefore lies above the maximum breadth and has the effect of curving the tumble home much tighter inwards. In common with all of Balfour's designs the fourth curve, known as the 'hollowing sweep', has the same radius as the 'upper sweep', and is therefore much smaller than English practice, where the radius was in some cases as much as the full breadth of the ship.

The medium sized warship (Des. E.7.) is similarly constructed using four arcs but has a fuller section than either the small warship or *Tre kroner*. This is achieved by using a greater width of floor and a sharper 'sweep of the wrong head', as well as bringing the futtock sweep up to the maximum breadth. The 'upper sweep' also has a much larger radius than English practice but by having the centre of the arc below the line of maximum breadth the tumblehome is significantly increased.

When we look at *Hummeren*, however, we see that its design bears no relation to English practice whatsoever. There is no flat bottom. Instead the floor timbers rise at an angle, and make up nearly two thirds the width of the ship. The curvature is then made of just two arcs of equal radius. This is very much influenced by Dutch design methods. The

precise design methods used by the Dutch to create the midship section is not known, but we do know that their full hull forms were created by having a wide floor, frequently also with a deadrise<sup>46</sup>, and a sharp turn of bilge. What Balfour has done with *Hummeren* is create a Dutch style ship using English design methods, which gives further credence to the assertion that the design was based initially on Peter Michelsen's *Fides*<sup>47</sup>.

If we turn now from the midship section to the general proportions of the vessels we can see that there are again certain similarities with the English design methods, but also some crucial differences. To examine these certain basic proportions have been extracted from the English treatises and compared with measurements taken from Balfour's plans. The results are shown in tables 11.2. and 11.3.

The treatises frequently use different rules for the same design feature. For example some take a proportion of the breadth for a certain measurement while others use the depth. In order to make useful comparisons, all these proportions have been rationalised. Certain ratios and proportions would also naturally vary according to the size and function of the vessel, and since the theoretical treatises tended to base their design criteria on medium to large sized warships some caution must be exercised when comparing them with Balfour's smaller ships.

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46. The angle the floor timbers rise from the flat.

47. See Chapter 8.



	<u>Baker</u>	<u>Newton</u>	<u>Harriot</u>	<u>Treatise c.1620</u>
Keel Length/Breadth	2.6	2 - 3	2 - 3	2 - 3
Depth in Hold/Breadth	0.46	0.5 - 0.33	0.38	0.5 - 0.33
Depth in Hold/Keel Length	0.18	0.11 - 0.25	0.13 - 0.19	0.15
Maximum Breadth	0.33 L <sub>k</sub> aft	0.5 - 0.25 L <sub>k</sub> aft	0.33 L <sub>k</sub> aft	0.33 L <sub>k</sub> aft
Width of Floor/Breadth	0.2	0.33 - 0.5	0.31	0.25 - 0.33
Radius of Fwd rake	0.72 B	0.58 - 1.25 B	1 B	0.75 - 1 B
Rake of Stern Post	20°	18 - 22½°	22½°	18 - 22°
Breadth of Transom	0.28 B	0.5 - 0.57 B	-	0.53 B
Tumblehome	0.13 B	0.16 B	0.24 B	0.17 B

Table 11.2. Proportions of English Theoretical Ships

	<u>Tre kroner</u>	<u>Argo</u>	<u>Hummeren</u>	<u>Medium Ship</u> <u>(Des. E.7.)</u>	<u>Small Ship</u> <u>(Des. E.7.)</u>
Keel Length/Breadth	2.56	3.24	3.12	3.19	3.21
Depth in Hold/Breadth	0.46	0.44	0.30	0.49	0.43
Depth in Hold/Keel Length	0.18	0.14	0.10	0.15	0.14
Maximum Breadth	0.33 L <sub>k</sub> aft	0.31 L <sub>k</sub> aft	0.33 L <sub>k</sub> aft	?	?
Width of Floor/Breadth	0.31	0.45	0.63	0.42	0.44
Forward Rake	0.79 B	1 B	0.9 B	0.88 B	1.35 B
Rake of Stern Post	?	16°	14½°	17°	23°
Breadth of Transom	?	0.67 B	0.66 B	?	?
Tumblehome	0.22 B	?	0.14 B	0.35 B	0.24 B

Table 11.3. Proportions of Balfour's Ships

The length to breadth ratio in all but *Tre kroner* is considerably larger than that recommended by the English treatises. This was most likely to compensate for the increase in the hull's fullness, since a greater length to breadth ratio helps to reduce a vessel's resistance, while a fuller hull form will increase its resistance. The fuller hull form also has an effect on the depth to breadth and the depth to length ratios. If an English hull form were used an increase in length to breadth ratio would require compensatory changes in these ratios to achieve the same buoyancy. By using a fuller hull form, however, the additional buoyancy is gained without altering the other ratios, which remain more or less within the limits suggested by the treatises.

The position of the maximum breadth, at one third of the keel length aft of the forefoot<sup>48</sup>, is also the same as English practice. This placed the 'midship' section slightly forward of amidships, which provided greater buoyancy forward to counteract the force of the sails. It also provided a good run in to the rudder, which was needed for good manoeuvrability.

The forward rake initially seems the same as that stipulated in the English treatises, equal to slightly more or less than the vessels breadth. Balfour also uses the English style rake, consisting of a single arc tangential to the keel. This was an unsatisfactory design feature in that it resulted in the forward end of the ship having very little buoyancy. This had two disadvantages. Firstly cannon could not be placed too far forward, as there was nothing to support their weight, and secondly it also meant that the ship was prone to violent pitching motions. However, in Balfour's designs the breadth is proportionately less and so the ratio of rake to keel length is lower, which would help to alleviate these problems to some extent.

The angle of the stern post in Balfour's designs was generally less than in the treatises. The angle of the rudder actually had little effect on its efficiency but a smaller angle had certain advantages in that it was easier to install the rudder in the first place, it placed less stress on the rudder fixings once in place, and was easier to operate.

The width of the transom on Balfour's ships was much greater than in the early English treatises. This had the advantage of creating much more space at the stern of the ship, both for comfort and for the positioning of cannon. These features show that Balfour was anticipating

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48. The forward end of the keel.

English developments by several decades and it is interesting that Deane not only uses a similar angle of stern post but also uses the same transom as Balfour, of two thirds the breadth.

The width of floor to breadth ratio is approximately double that which was recommended in the English treatises, but this is hardly surprising since increasing the flat part of the hull was the easiest way of increasing the vessel's fullness. Balfour also uses a slightly larger tumblehome. This meant that the structure was more difficult to construct but it had the advantage of increasing stability since the weight of both the structure of the upperworks and the cannon were nearer the centreline. It also meant that in battle the ship would be more difficult to board.

As we have already seen there was also a significant Dutch influence on Balfour's designs, but as there are no Dutch treatises on ship design from the early 17th century we are unable to make as detailed a comparison with Dutch design methods. However, we do know that Dutch ships were characterised by having a fuller hull form, incorporating a greater sheer<sup>49</sup> and a larger tumblehome than English ships, and all these characteristics can be found in Balfour's ships to some extent.

As stated above, *Hummeren* is the warship that most embodies Dutch design principles, but the Dutch influence can also be seen markedly in the *defensionskib* (Des. E.8.) which, since it was primarily a merchantman, bears little relation to the warship designs. With its bluff bows and rounded stern, and a keel length to breadth ratio of 4:1, it bears a remarkable similarity to the Dutch *fluit*<sup>50</sup>. The midship section is very full, providing a large cargo space with a low centre of buoyancy and shallow draught. However, whereas the *fluit* was solely a cargo ship, with

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49. The curvature of the upper deck.

50. R.W. Unger, 'Dutch Ship Design in the 15th and 16th Centuries', *Viator*, 4 (1973), 387-411;



perhaps one or two guns mounted on the upper deck, Balfour adapted the design to create an armed merchantman with a full gun deck above the cargo hold.

What then was the overall effect of all these design variations?

English vessels were built for the high seas with a deep draught for keeping the seas, but this meant that their lower gun ports could be opened only in calm weather. Their slender hulls were good in terms of speed, but also made them prone to crankness and it was not uncommon for English ships to need additional timbers added to the hull along the waterline to increase stability and seaworthiness.

Dutch vessels on the other hand were designed for shallow draught to enable them to negotiate their shallow home waters, which had the advantage that their lower gun ports were well out of the water. However, while their fuller hulls provided a stable gun platform in calm weather, heavy seas could lead to violent rolling<sup>51</sup>. Their flat bottoms also gave them the tendency to drift off course and hampered their weatherliness<sup>52</sup>.

The design of Balfour's ships would not only have benefitted from the increased overall stability of the Dutch designs, gained from the increased buoyancy, but by adapting English midship sections his ships would have been more seaworthy in heavy weather. The relatively smaller forward rake and more vertical sternposts would also have reduced the tendency to pitch, if only slightly. Where Balfour uses a Dutch style midship section, as in *Hummeren*, he introduces a considerable deadrise which was beneficial for both the vessel's speed and its weatherliness, and considerably reduced its tendency to drift.

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51. R.W. Unger, 'Design and Construction of European Warships in the 17th and 18th centuries', in Martine Acerra, José Merino and Jean Meyer (eds.), *Les Marines de guerre européennes, XVIIe-XVIIIe siècles*, (Paris, 1985), 21-34.

52. The ability to sail close to the wind.

If we look at the uses to which Danish warships were put this hybrid form of ship design makes complete sense. Great strength and seaworthiness were needed in vessels sailing the treacherous northern seas, but shallow draught and manoeuvrability were needed for vessels sailing the shallow waters of the Baltic coast and the Elbe estuary. Rather than having two separate specialised fleets for these markedly different roles, Balfour designed ships which were able to accomplish both functions. Judging from the success of his vessels, the result should not be seen as a compromise but as an innovative synthesis of Dutch and English design methods which created ships incorporating the best features from both traditions.

### **11.3. Danish Ship Design in a European Context**

The pivotal role that Christian IV played in the design of his country's warships was not unique in early modern Europe, but it was exceedingly rare, with perhaps Henry VIII and Frederik the Great being the only other monarchs with quite as much influence. The system required a monarch with a very detailed knowledge of ship design and construction, and with Christian IV's love of ships and obsession with minor details he was ideally placed to be the ultimate authority for approving designs. However, having such a strong willed monarch who thought he always knew best did not always produce the best results, as we have seen with the Kolding galley and *Trefoldighed*.

In other countries where the naval bureaucracy was more mature the role of the king in ship design was minimal. The monarch may have had a personal interest in certain ships, particularly the prestige ships, but in general the naval administrations ordered ships to their own specifications from shipwrights who then designed and built these ships



from this specification. When the Danish Admiralty College was established in 1655 it too took over the function of checking and ratifying designs for new ships<sup>53</sup>.

That Christian IV knew the fundamentals of ship design is undisputed but whether he was really competent to either design or assess the designs of the increasingly larger and more complex warships is debatable. From the one plan which we can definitely attribute to him (Des. E.1.) it would appear that his design skill was certainly limited, even for small craft. Using this limited knowledge to design the model for *Trefoldighed*, the largest ship in the navy at the time, must be called into question. It cost around 50,000 Rdlr. to build in the first place, needed substantial rebuilding once delivered, and was noted for being a particularly poor sailer. Christian IV could of course simply argue that the shipwright had not carried out his instructions properly.

Despite the fact that the naval bureaucracy in Denmark was so rudimentary, certain developments in ship design were very advanced. Ship models were used in Venice and Spain in the 16th century, but their use as a design tool in Denmark was very advanced for northern Europe. The first known use of a model in the design process in England is Phineas Pett's model of the *Prince Royal*, which he presented for approval to the Lord High Admiral in 1607<sup>54</sup>, but their use did not become standard in England until the later half of the 17th century. The practice of the king himself building models, which his shipwrights then turned into ships, is certainly unique, but probably displays Christian IV's own inability to delegate rather more than a real advance in the ship design process.

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53. Commission for Admiralty College member concerned with shipbuilding, 8 June 1656, published in: Bruun, *Cort Adeler*, 394.

54. Richard Barker originally suggested that Mathew Baker used models, citing evidence from his will, but he later revised his opinion on this and now suggests that the 'models' were in fact plans: Barker, 'Design in the Dockyards', 61-69.



Danish shipbuilding contracts were also relatively advanced for their day. From the scant information we have on shipbuilding contracts from other countries at this time we can see that the Dutch navy issued contracts to private contractors in the 16th century, but the earliest known contract for an English naval ship comes as late as 1649<sup>55</sup>.

In terms of the content of the contracts it would appear that Michelsen's contract of 1613 was roughly similar to Dutch practice. A Dutch contract issued to a private contractor in 1583 follows the same basic format, giving the basic dimensions of the ship and outlining the internal scantlings in some detail<sup>56</sup>, although Michelsen's contract contains even more detail. The English contract of 1649 strikes a middle line between the specifications given in Michelsen's contracts and those given to the Danish Crown shipwrights. However it is much more wordy and legal sounding than any of the Dutch or Danish contracts. It stipulates the principal dimensions, the internal arrangement, and the scantlings, but in slightly less detail than in Michelsen's contract. Neither the Dutch nor the English contract specifies the vessel's draught, and even an English contract as late as 1695 makes no mention of the ship's draught<sup>57</sup>.

If we turn now to the actual design of the ships we can see that Danish naval architecture was also very advanced. English ship design was to some extent bogged down in theoretical dogma, seen to dramatic effect in the ten 'whelps' built in 1627, which were a particularly unsuccessful attempt to use large warship theory to build small vessels, resulting effectively in miniature warships which were particularly noted for their poor sailing qualities<sup>58</sup>. In the Netherlands the craft tradition

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55. R.C. Anderson, 'A Collection of Shipbuilding Contracts', *Mariner's Mirror*, 41 (1955), 47-52.

56. W. Voorbeytel Cannenburg & R.C. Anderson, 'Details of a Dutch Ship of 1583', *Mariner's Mirror*, 13 (1927), 272-4.

57. Contract for the *Yarmouth* published in: Brian Lavery, *The Ship of the Line*, (London, 1984), II, 165-7.

58. Michael Oppenheim, *A History of the Administration of the Royal Navy 1509-1660*, (1896, London), 254-6.

produced some highly innovative merchant ship designs, but the mercantile base of Dutch shipbuilding meant that warships were heavily influenced by merchant ship designs, and many of the Dutch warships were in fact simply armed merchantmen. The Dutch craft-based design methods also hampered the development of effective large warships to some extent.

This is shown to dramatic effect in Sweden where the large 64 gun *Vasa*, built by Dutch shipwrights in 1628, sank on its maiden voyage. In Sweden both British and Dutch shipwrights were employed but there is no evidence to suggest that they adapted their design methods in the way that Balfour did in Denmark.

Balfour managed to incorporate the best features of both traditions to build a navy that answered the particular needs of Christian IV in maintaining sovereignty in both the Baltic and northern seas. Balfour of course did not build the entire navy, but he had a major influence on the other shipwrights and the large number of ships built to his designs bears testimony to his success as a ship designer.

With the lack of any concrete evidence we cannot really assess the abilities of Christian IV's other master shipwrights in any detail<sup>59</sup>. Sinclair was certainly very talented and his *Store Sophie* drew particular praise, and Robbins, as well, was also highly skilled in the construction of large vessels. Quite how highly they rank in a wider European context though is hard to judge.

Balfour must certainly rank as a man of great genius and talent and deserves to stand alongside Mathew Baker, Phineas Pett and Anthony Deane as one of the foremost shipwrights of his day. His designs show a

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59. No plans or models by the other shipwrights have survived and only one contract survives for a ship designed by Sinclair, (*Norske Løve*). None of Robbins' contracts have survived, and those that have survived for the other state shipwrights are for copies of ships designed by Balfour. The use of contemporary illustrations in assessing ship design is unsatisfactory since the underwater hull forms remain hidden and in many cases the ships have been rebuilt between the time they were built and when they were drawn. (Niels Probst, 'Van de Velde portrætter af danske orlogsskibe', *Marinehistorisk Tidsskrift*, 1/1981, 6-15; 'Samtidige illustrationer af danske 1600-tals orlogsskibe: Van de Velde tegninger II', *Marinehistorisk Tidsskrift*, 3/1984, 9-29).



remarkable degree of ingenuity and foresight and his ability to predict a vessel's draught deserves great credit. Although both English and Dutch shipwrights were employed in Denmark to build ships in their own style after his death, it was the synthesis of styles, initially developed by Balfour, that formed the basis of the Danish school of naval architecture in the late 17th and early 18th centuries<sup>60</sup>.

Therefore, despite Christian IV's great enthusiasm for ship design it was to the Danish navy's great advantage that he did not design all of its ships and employed much more accomplished shipwrights to create the majority of a fleet that was, in design terms, highly innovative and successful.

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60. Niels Probst, 'Nordeuropæisk spanteopslagning i 1500- og 1600-tallet', *Maritim Kontakt*, 16 (1993), 7-42.



## Conclusions

The one over-riding factor that has dominated this investigation of the Danish navy is the overwhelming influence of the king. Christian IV was involved at all levels of the functioning of the navy: he formulated the policies which determined the uses to which the navy was put; he dictated the number of ships to be built and closely monitored their design and construction; he supervised the development of the dockyard; he took overall control of its administration and attempted to do the same with its finances; and he personally commanded the ships in battle. Few, if any, other monarchs in the early modern period had such an overwhelming influence over their navy.

With Christian IV's driving ambition there is little wonder, therefore, that the Danish navy under his control grew to be one of the greatest state-owned navies in Europe. In part the size of the navy was determined by geography. The fact that the seas to which Denmark-Norway claimed sovereignty over were separate meant that in effect the navy had to be double the size. However, there can be no doubt that Christian IV's views of his own prestige and royal reputation played a huge part in the development of the navy.

The Danish navy played a significant role in European power politics. Undoubtedly its greatest influence was in the Baltic and here it helped to prevent Poland and the Empire from building any significant maritime power. The other major power in the Baltic in the 17th century was Sweden and here Christian IV met his match. No matter how hard he might try he simply could not eclipse the power of Sweden and through a mixture of bad diplomacy, bad judgement and bad luck he ultimately lost most of Denmark's influence in the Baltic to his neighbour.

The Baltic was not the Danish navy's only sphere of influence, however. By controlling the Sound, the White Sea route and, for much of Christian IV's reign, the Elbe as well, the Danish navy controlled virtually all imports and exports to northern Germany, Poland, Sweden, and Russia. With the economies of England and the Netherlands relying so heavily on Baltic trade it was therefore inevitable that the strength of the Danish navy would play a significant part in the formulation of English and Dutch foreign policy in eastern Europe. The strong naval presence in the Danish East India Company and other trading companies also meant Denmark's influence lay well beyond the confines of northern Europe.

The strength of the Danish navy also put Christian IV in a strong negotiating position on the European stage. In many respects it was the control of the Sound rather than the navy itself that was the major factor, but by having such a strong navy Denmark could demonstrate that this control was inviolable. All the northern European maritime powers respected this control whilst the Danish navy remained powerful. Only after Danish naval strength was decimated during the *Torstenssonkrig* did the Dutch dare to risk evading toll payments.

Despite this position of strength Christian IV was unable to secure any defensive alliance with any of the other European maritime powers. In part this was due to his own impatience in negotiating but, more importantly, his heavy handed Sound toll policies created more enemies than friends. However, during the English civil war it was probably only the outbreak of the *Torstenssonkrig* that prevented Danish ships from supporting Christian IV's nephew, Charles I.

It is likely that without such a powerful navy Denmark would have remained on the periphery of European politics. With the navy Christian IV could force other powers to take note of Danish interests. It would be



pointless, however, to argue that Denmark was one of *the* great powers in early modern Europe, but without his navy Christian IV's political weight in Europe would have been greatly diminished.

The Danish navy under Christian IV was therefore of great European significance, but how good a navy was it?

In terms of hardware and infrastructure the Danish navy was one of the best in Europe. The best available shipwrights and dockyard engineers were brought to Denmark to create a navy whose ships were well designed and whose dockyard provided for their every need. David Balfour is the shipwright who had the greatest influence on the Danish navy and we have seen in Chapter 11 that he was one of the most innovative and forward thinking shipwrights of his day. The other foreign shipwrights were not as accomplished as Balfour but still highly skilled. The ships they created were among the largest in Europe and it is to their credit that the majority of them were considered good sailers and effective warships.

To service these ships Christian IV hired skilled Dutch harbour engineers and architects to create one of the finest integrated dockyards in Europe whose match could only be found in the Venetian Arsenal. The concentration of facilities at Copenhagen made the construction and maintenance of the navy highly efficient, in early modern terms at least, and reduced the need to duplicate resources, as in England.

The development of these ships and facilities was no accident as this is where Christian IV's real strengths lay. His sense of grandeur, love of detail and obsessive nature found their natural expression in building works that could be seen and admired. His mind was more attuned to concrete things that he could see and manipulate, and he took a great deal of pride and satisfaction in the impressive constructions that were produced in his name. This can be seen by the fact that he designed both buildings and ships himself. However, he knew that he



could not produce everything himself and, partly to suite his own vanity, and partly in his effort to impress the rest of Europe, he recruited the best engineers, craftsmen and artists that he could find.

Christian IV's love of detail and obsessiveness also found its expression in the development of a detailed administrative structure for the lower levels of the civil and military sides of his navy. The contracts of employment and the regulations governing the working of the dockyard and the navy at sea are highly impressive for an early modern state and pre-date similar arrangements in other navies by several decades. In practise these arrangements did little more than formalise the existing structure rather than provide an innovative new administration, but given that so few problems seem to have been experienced at this level, both in the civil and military sides of the navy, then perhaps this was all that was needed.

Where reform really was needed was in the higher levels of administration and control. At the heart of the problem was the dyarchic system of government where political control of the navy became a highly contentious issue between the two heads of government. The *rigsråd* recognised the need for a strong navy but wanted it to remain a purely defensive force. In contrast Christian IV saw the navy not as a form of state defence, but as his own personal possession which he could use as the means of foreign expansion and of furthering his own influence. To maintain control of the navy in the face of *rigsråd* opposition Christian IV therefore had to circumvent the constitution by ignoring the fact that he should have kept a *rigshofmester* and a *rigsadmiral* in place at all times, who would have provided the *rigsråd* with influence over both the civil and military sides of the navy.

Christian IV's belief that the navy was his own possession, rather than an instrument of the state, was reinforced by the confused nature of naval finance. The cost of construction of many of the ships was met

from the king's own purse. However, as we saw in Chapter 3, Christian IV had engineered the situation whereby the Sound tolls in their entirety were paid into his own account, rather than simply any surplus. This placed the king in a much better financial position than ever before and gave him increased power over the *rigsråd*, whose financial control was thereby weakened.

It was the wrangling over naval finance that proved to be the real threat to the effective running of the navy. The problem was that naval finance became an emotive issue in the struggle between king and *rigsråd* over the need to reform the Danish economy from a domain state to a tax state. Christian IV exploited his financial position to try and force through a reform of the *len* system but the *rigsråd*, with their privileges seriously threatened, desperately fought to retain the status quo. Ironically it was the semi-feudal nature of Danish society that kept the navy going in the years of deep financial crisis, with victuals, men, building materials and eventually whole ships being supplied from the *len* at no financial outlay from the state.

It was most likely the climate of antagonism and hostility engendered by this constitutional struggle that led to Christian IV's extreme distrust of delegation. He simply could not bear to think that he was losing control of any area of government. In terms of the navy this not only meant that the posts of *rigshofmester* and *rigsadmiral* remained vacant for long periods but also meant that there was no effective administration to run the dockyard. With the greatly increased size of the navy and the dockyard the posts of *Holmens admiral* and *proviantskriver* had become impossible tasks for just one man. However, Christian IV either could not see the need for administrative reform or simply ignored the need. What was needed was a system of delegation so that the man at the top could maintain control while his junior managers saw to the more mundane aspects of the job, but with Christian IV's fear of delegation



this was simply not possible. He made his own position in the running of the navy indispensable so that there was no possibility of losing any political control, but as a result he created a system that could not cope effectively in his absence.

This fear of delegation can also be seen in the military control of the navy. Christian IV failed to appreciate the need to train his officers until it was too late, nor did he introduce any effective system of command for the navy when it went to sea. It is not surprising therefore to find that he was one of the last monarchs to personally command his fleet at sea. He simply could not bear anyone else to take control from his own hands, even if it meant that in his absence the navy proved highly ineffective. He, apparently deliberately, appointed men to the post of *rigsadmiral* who knew little of naval matters so that they would pose no threat to his own authority.

The failure to reform the navy's higher administration also reflects Christian IV's failings in political skill. He could very easily put his ideas about shipbuilding and dockyard construction into practice by force, but it was not possible to push through contentious political reform this way. He lacked the guile and diplomacy that were required to achieve any form of effective administrative reform, added to which he also lost interest if he was unable to achieve his ends quickly. Even if he did want to reform the navy's higher administration it is unlikely that he would have had the skill or the patience to accomplish it.

Christian IV liked to think of himself as a warrior king who could personally save the nation from any threat. In practice his strategic and tactical thinking was poor, and the blame for the navy's defeat in the *Torstenssonkrig* can be placed firmly on his shoulders. He could of course blame his subordinate officers, but it was he who failed to train them properly, and it <sup>was</sup> he who formulated the strategies that they were expected to follow.



We therefore come to the strange paradox that Christian IV not only built up the Danish navy to an impressive and unprecedented strength but that he was also ultimately responsible for its humiliating defeat. This was due to his character traits that meant that he spent nearly all his time and energy concentrating on concrete matters that he could see, such as ships and dockyards, but failed to take into consideration any abstract concepts, such as administration and command structures, which might be needed to make these things work effectively. He also devoted too much time on the minor details of things rather than looking at the bigger picture. He spent vast amounts of time considering the duties of minor craftsmen and on things like the messing arrangements of ordinary seamen while failing to address the fact that his officers lacked any basic knowledge of seamanship or military training.

If Christian IV had abided by his *rigsråd's* wishes the Danish navy would have remained simply a powerful regional force, and most likely would have suffered defeat at the hands of Sweden even earlier. Despite the opposition of his council Christian IV managed to built up a navy that, in terms of the size and design of its ships and dockyard facilities, was the envy of Europe. However, there were serious flaws in the navy that he created. It was far larger than the economy of Denmark-Norway could sustain and very nearly bankrupted the state. Its administration was inefficient and outmoded, and its leadership lay in the hands of a monarch who was politically and strategically naive.

In conclusion we can say that the Danish navy was Christian IV's own creation, and in many ways it reflected his own character. It was large, it was impressive, and it consumed vast amounts of money, but ultimately it proved to be ineffectual and ended in humiliating defeat.

## Appendix A.

### The Rigsarkiv Ship Drawing Collection

In 1832 a collection of nine architectural and ships plans was discovered in the loft of Rosenborg palace, and subsequently placed in the Danish state archives<sup>1</sup>. All are drawn in ink on stiff card. They vary in quality from rough sketch plans to highly accomplished working drawings, and because Christian IV's handwriting was found on one of them they were all initially thought to have been drawn by the king.

In the 1960s Preben Holck identified, incorrectly as it turns out, two of the plans as Sinclair's *Store Sophie* and Robbins' *Sophie Amalie*<sup>2</sup>. In the 1970s H.C. Bjerg stated rather vaguely that they dated from the 1640s or earlier and that some may have had a connection with Balfour and Sinclair<sup>3</sup>. However, the latest research by Niels Probst has shown that some were in fact drawn by Christian IV, and others can be identified definitively as the work of Balfour<sup>4</sup>.

The majority of these plans are not elaborate theoretical plans or presentation drawings but genuine working drawings displaying the art of shipwrihty as practised by Balfour, and as attempted by Christian IV. The drawings abound with tracing marks, pin pricks and construction lines, showing that they were used to take measurements from during the

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1. Rigsarkiv, Sætatsens kort- og tegningssamling, Des. E.1-9.

2. P. Holck, 'Orlogsskibet Sancte Sophia's Konstruktionstegning (1624)', *Tidsskrift for Søvæsen*, 1960, 151-9; 'Skibsmodellen Sophia Amalia', *Tidsskrift for Søvæsen*, 1964, 517-33.

3. H.C. Bjerg, 'Sætatsens kort- og tegningssamling: En proveniensoversigt', *Arkiv*, 4/4 (1973), 209-31; 'Træk af skibskonstruktionstegningens historie' *Convivium*, (1977), 8-23.

4. Niels Probst, 'Wasser-alen: et hidtil overset længdemål fra Christian IV's tid', *Historisk tidsskrift*, 92 (1992), 288-300; 'Nordeuropæisk spanteopslagning i 1500- og 1600-tallet', *Maritim Kontakt*, 16 (1993), 7-42.



construction process or copied to provide other shipwrights with copies of the plans. These plans are therefore the earliest known working ships drawings in existence.

The provenance of the plans is something of a mystery. The shipwright's art was traditionally a trade secret to be disclosed only to one's peers or apprentices. Ships plans at this time were also considered to be the private property of the shipwright, regardless of the client<sup>5</sup>. How then did Balfour's plans end up in the hands of the king?

The *Recompens* affair<sup>6</sup> may provide some clues. This ship may have been intended as a copy of *Argo*, as *Tre kroner* was supposed to have been. In the course of the enquiry the plans of these two ships, and possibly also the rudder detail, may have been submitted as evidence. However, this does not explain the presence of any of the other later ships plans. When Svend Andersen died his widow apparently offered the king the plans of a number of ships<sup>7</sup> and it may be that the king acquired Balfour's plans in a similar way.

The contents of the collection are as follows:

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5. James Robbins refused to hand over the plans of a ship to the king in 1664, as did Francis Sheldon in 1691. Preben Holck, *Cort Adeler*, (København, 1934), 108 & 125.

6. See Chapter 8.

7. H.D. Lind, *Kong Frederik den Tredjes Sømagt: Det dansk-norske søværns historie 1648-1670*, (København, 1896), 38.



Des. E.1.

Side 1. (Figure A.1.)

A cross section of a barge drawn by Christian IV. It bears the inscription 'Denne Skalun Er giordt tiill thuende Pramme, Som y wynter paa Bremmerholmen skall opsettis, Och Er affdelingen der paa giordt Epther tommer. Køben: Slott den 23 Octo: Anno 1640' (this model is made for two barges which shall be built at Bremerholm this winter, and the section done according to the timber)<sup>8</sup>.

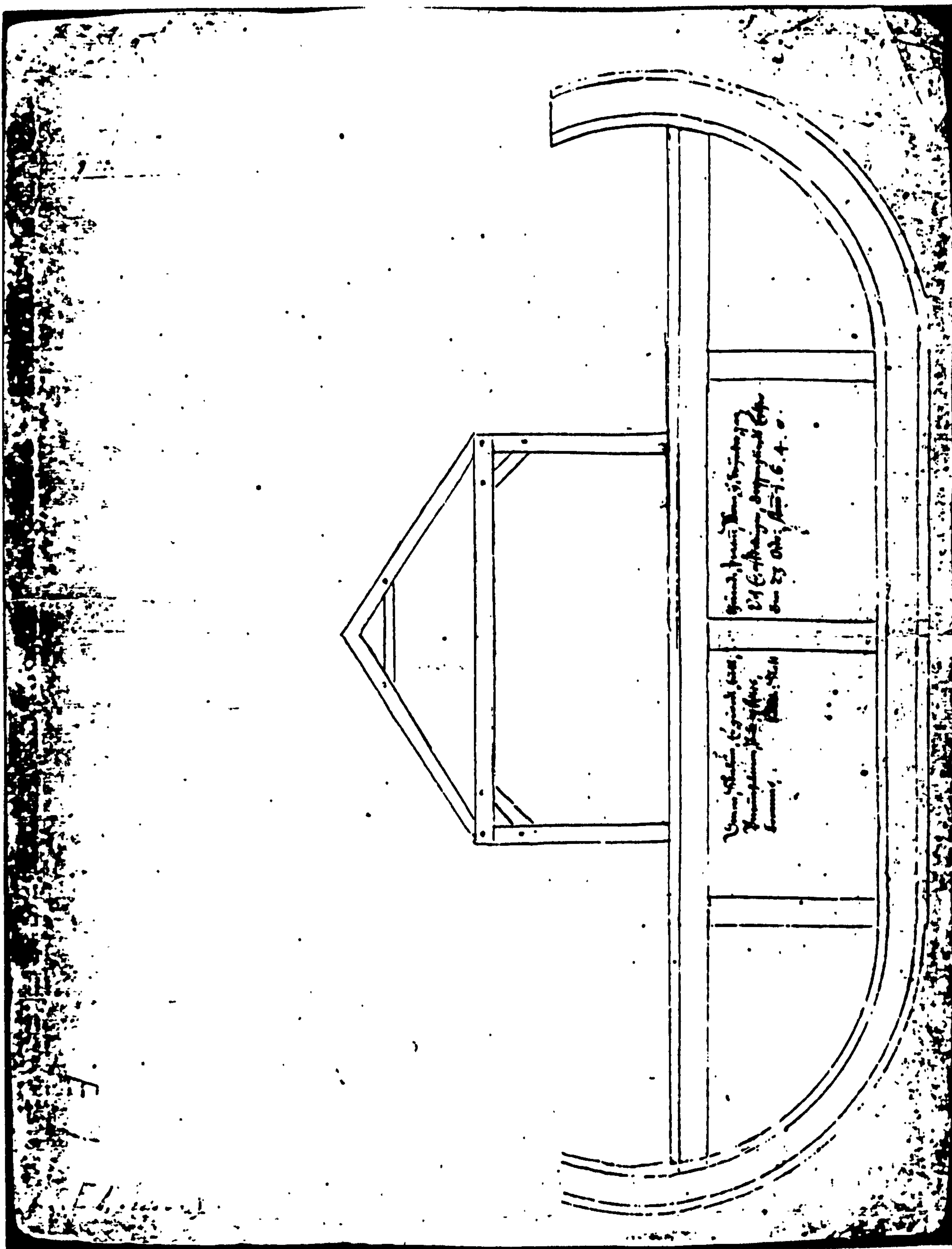
This plan is rather crudely drawn and shows a very simplistic construction. The hull cross section is composed simply of two quarter arcs joined by a flat bottom. There is no keel. The deck is completely flat but is supported by pillars. The deck house is of a very light construction.

Side 2. (Not illustrated)

Detail of the architectural decorations showing the motto, C4 monogram and date for the Round Tower. This shows the date 1640, whereas the actual tower bears the date 1642.

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8. Inscription on plan dated 23 October 1640, *C4 Breve*, IV, 416.



**Figure A.1. Sjøetatens kort- og tegningssamling, Des. E.1.**

Des. E.2.

Side 1. (Figure A.2.)

The forward profile, plan and midship section of a large three-decked warship. This has become separated from the middle portion of the plan (Des. E.7.), and the after portion, which is lost. This ship is now identified as Balfour's *Tre kroner* of 1604.

Side 2. (Figure A.3.)

The aft profile and plan of a large three-decked vessel. It has become separated from the forward portion of the plan (Des. E.3.). This ship is now identified as Balfour's *Argo* of 1601.

Des. E.3.

Side 1. (Figure A.3.)

The forward profile and plan of *Argo*.

Side 2. (Figure A.4.)

The midship section of a galley. The section shows a classic mediterranean-style galley and may be connected with the galleys built by Balfour on his arrival in Denmark in the late 1590s. This plan also contains a faint impression of another identical galley section and the working drawings of the stern frames for two ships, which Probst links to *Argo* and *Tre kroner*. At the side of the stern frame workings is written 'Gud fader verre loffuett och hands Kierre Sønn' (Father God be praised and his dear son).



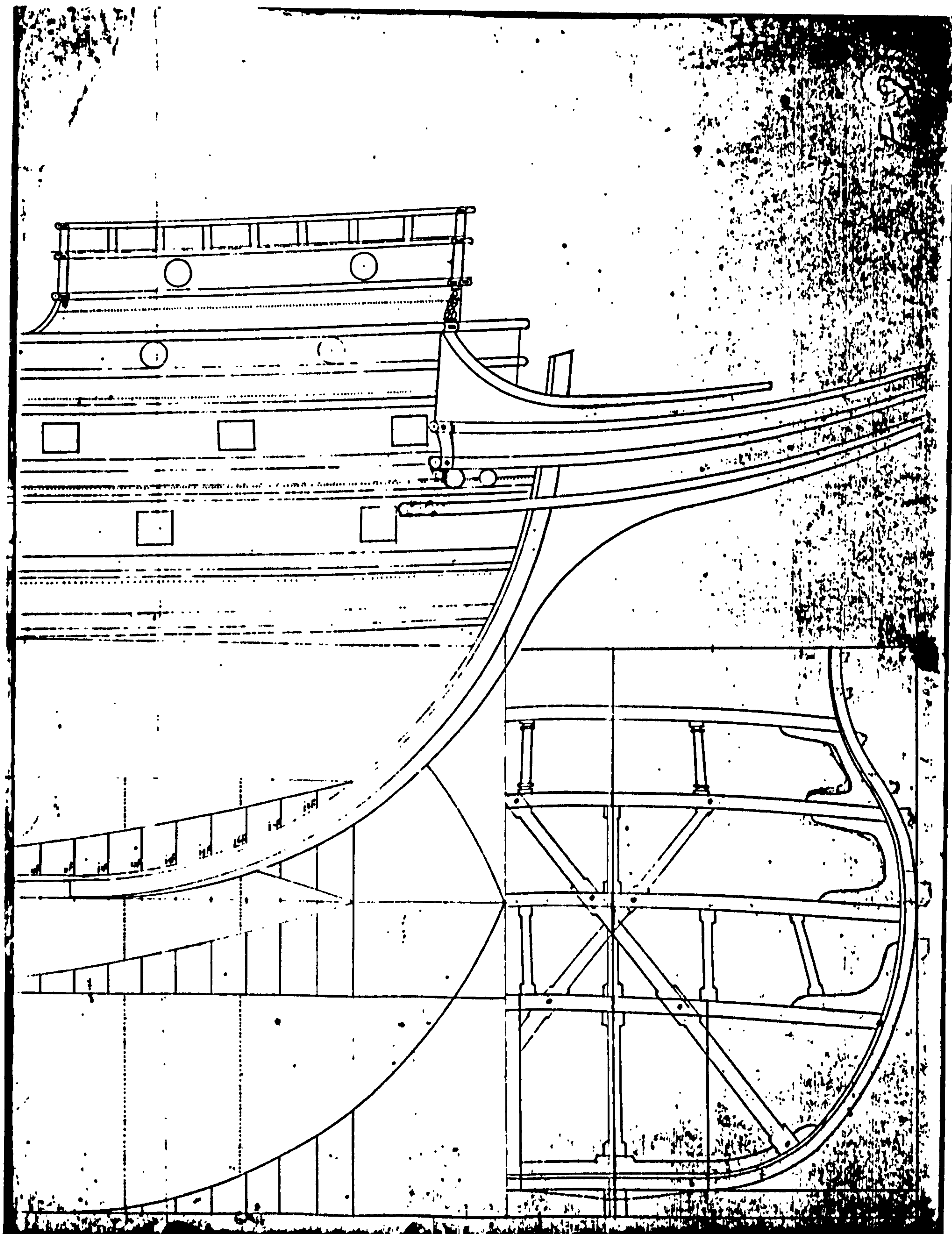


Figure A.2. Sjøetatens kort- og tegningssamling, Des. E.2.

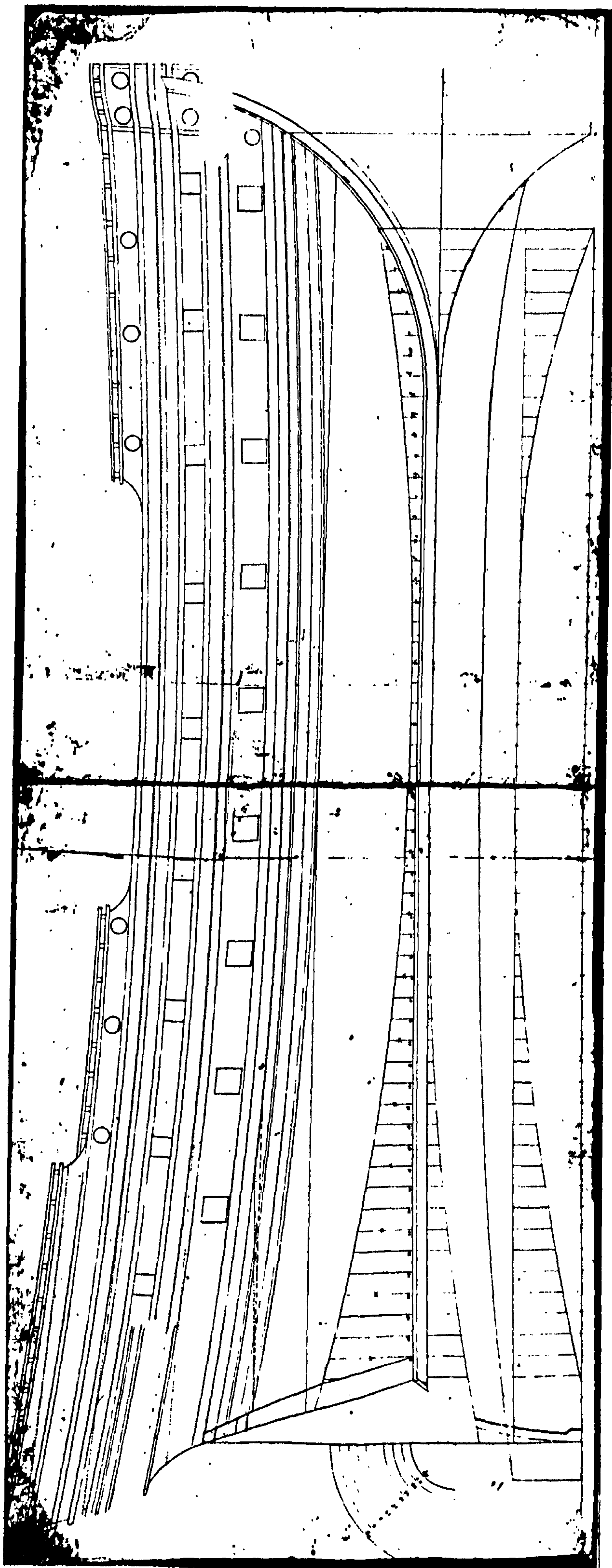


Figure A.3. Sjøetatens kort- og tegningssamling, Des. E.2. & E.3.



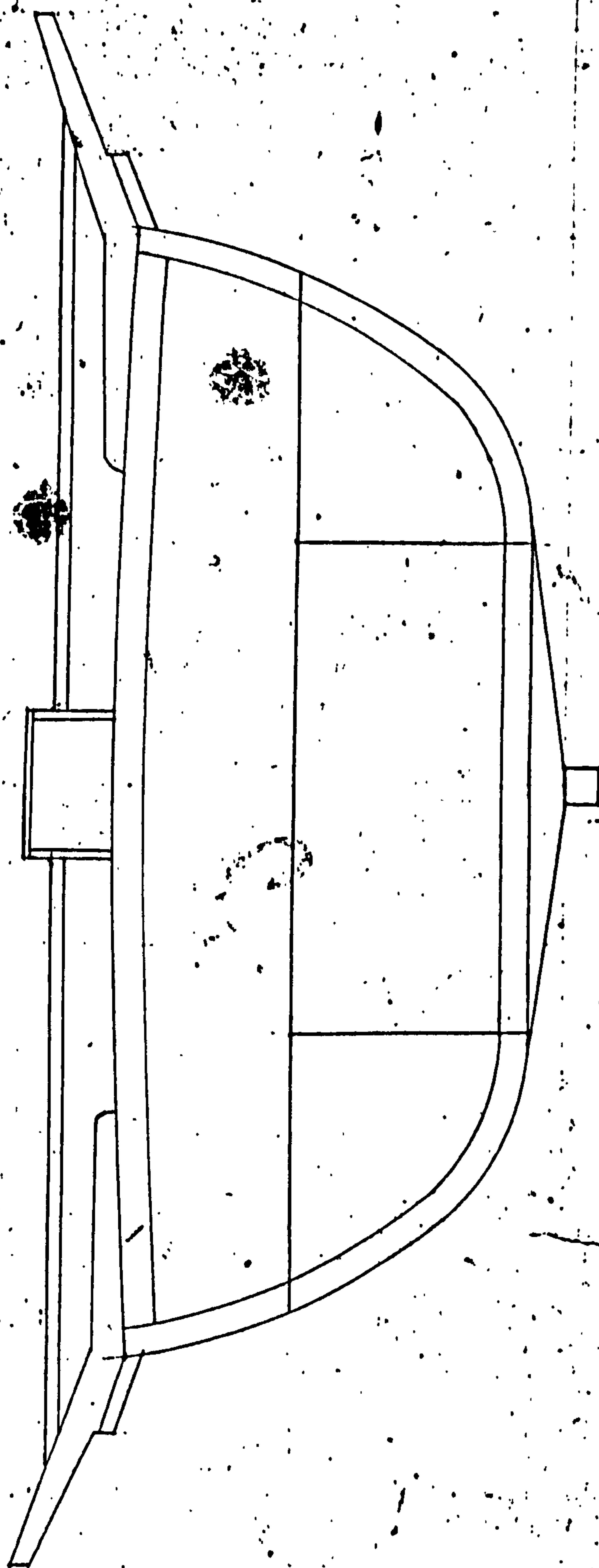


Figure A.4. Sætens kort- og tegningssamling, Des. E.3. (Detail)



Des E.4.

Side 1. (Figure A.5.)

A crudely drawn midship section of a one decked warship. Certain features distinguish this from a professional shipwright's drawing. Firstly the deck beams have been drawn to the outer edge of the ribs, rather than the conventional inside edge. Secondly there is a very pronounced kink in the curvature above the main deck. In a number of places the author of the sketch has obviously had difficulty in obtaining the correct curvature and there is evidence of a large degree of re-drawing of arcs. In many places the lines also do not match up. Given these facts it is possible that this plan was also drawn by Christian IV.

This plan has been speculatively linked with Michelsen's *Fides*<sup>9</sup> and certainly bears some similarity with the contract specification<sup>10</sup>. On the plan are noted some of the scantlings, these are similar, though not identical, with those stipulated in the contract. The plan may therefore have been drawn as part of the process of ordering the ship from Michelsen. With Balfour, the only shipwright skilled in drawing plans in Denmark, in prison at this time it is not unlikely therefore that Christian IV would have tried his own hand at drawing the ship.

Side 2.: Blank

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9. Personal communication with Niels Probst.

10. See Chapter 10.

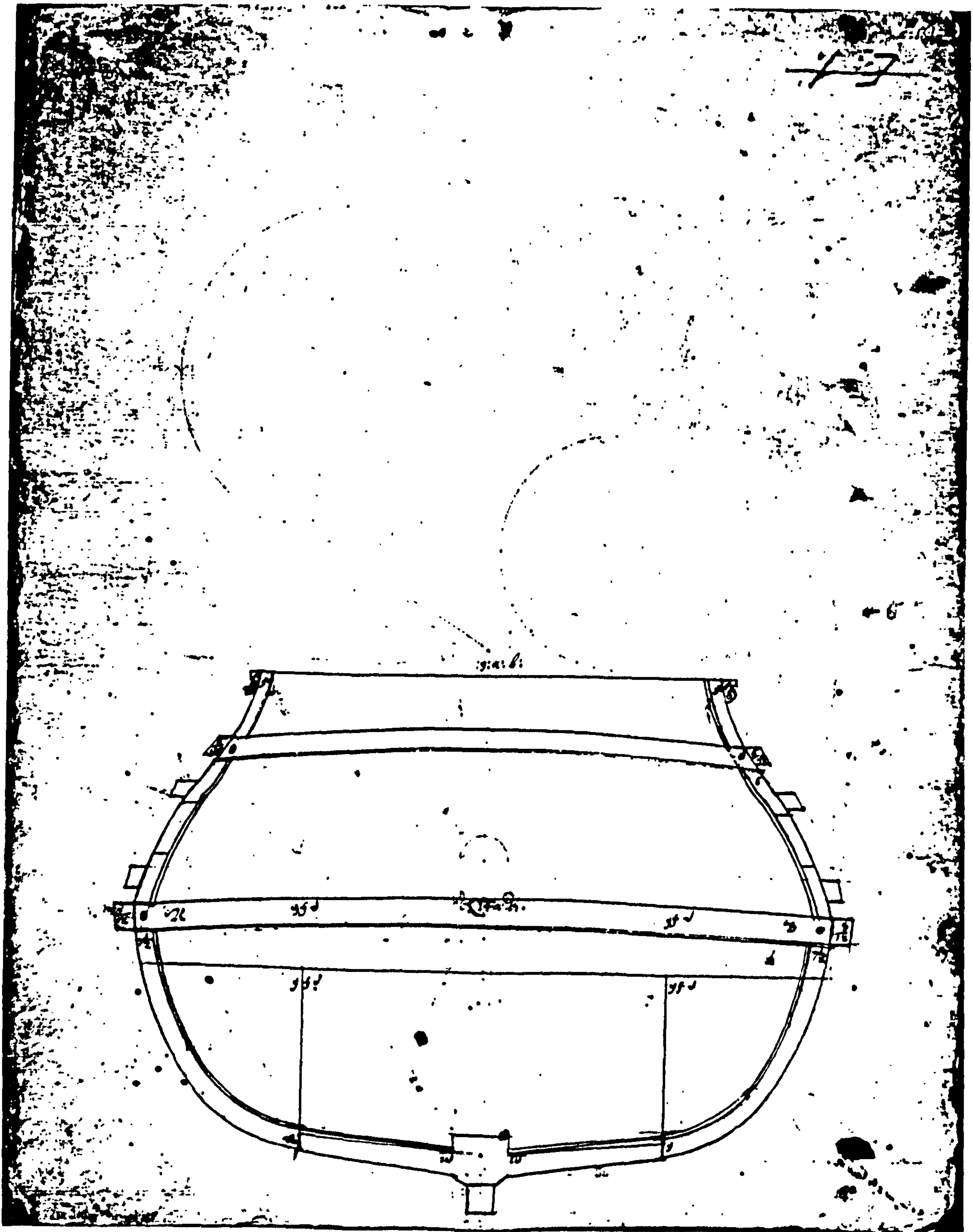


Figure A.5. Søetatens kort- og tegningssamling, Des. E.4.

**Des. E.5.**

Side 1. (Figure A.6.)

A crudely drawn midship section of a two decked ship. This plan is undoubtedly by the same hand that drew Des. E.4, and bears the same stylistic flaws and evidence of reworking. It also contains a small geometrical 'flower' as if drawn by someone doodling or practising the use of a compass. This drawing cannot be linked to any known ship.

Side 2.: Blank

**Des. E.6.**

Side 1. (Figure A.7.)

Forward profile and plan of a small one decked warship. This shows certain similarities to the plan of *Hummeren* (Des. E.9.) but is a little smaller and finer. The after part of the plan has been lost.

Side 2. (Not Illustrated)

A plan of a fantasy fortification.



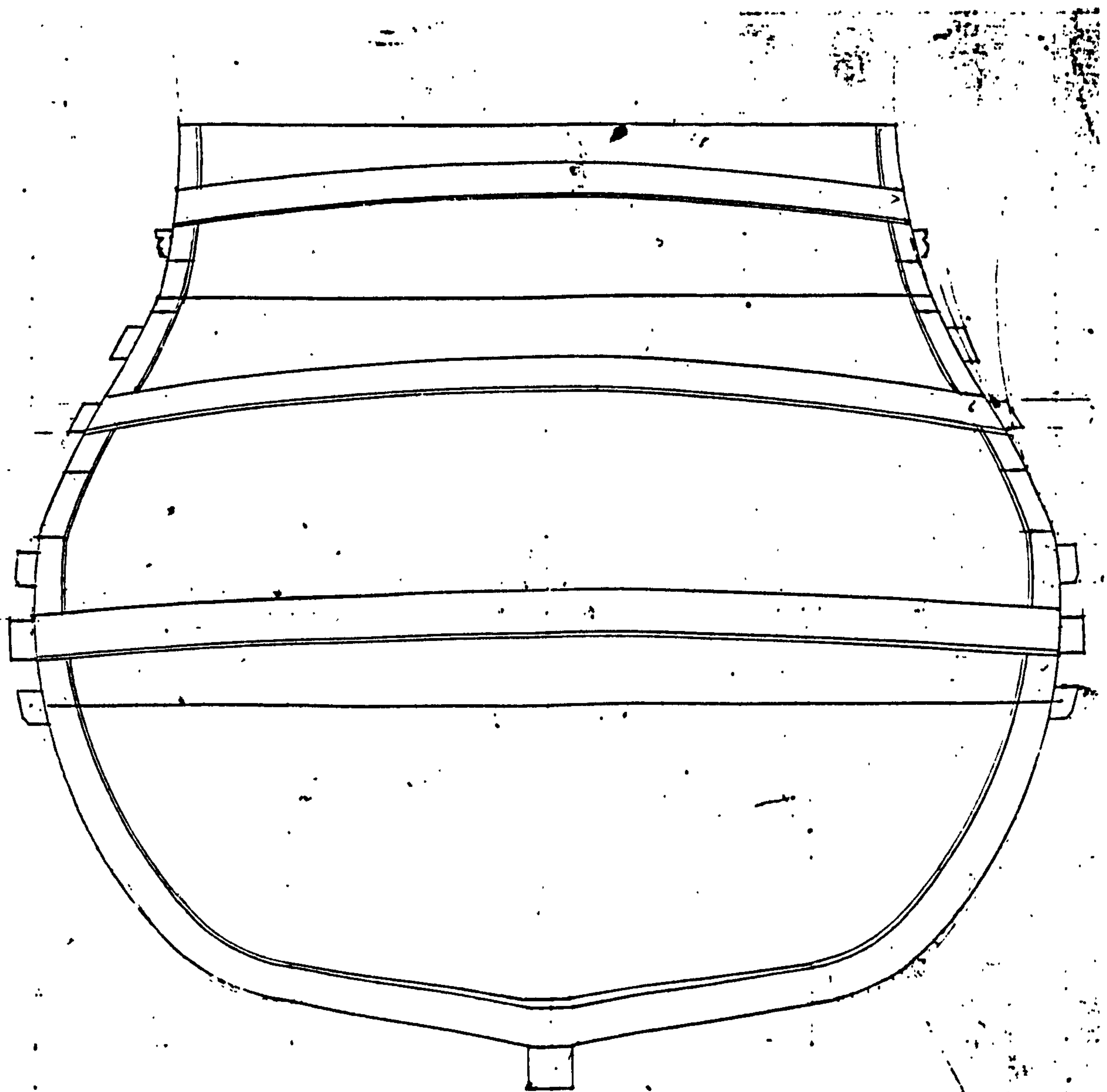


Figure A.6. Sjøetatens kort- og tegningssamling, Des. E.5.

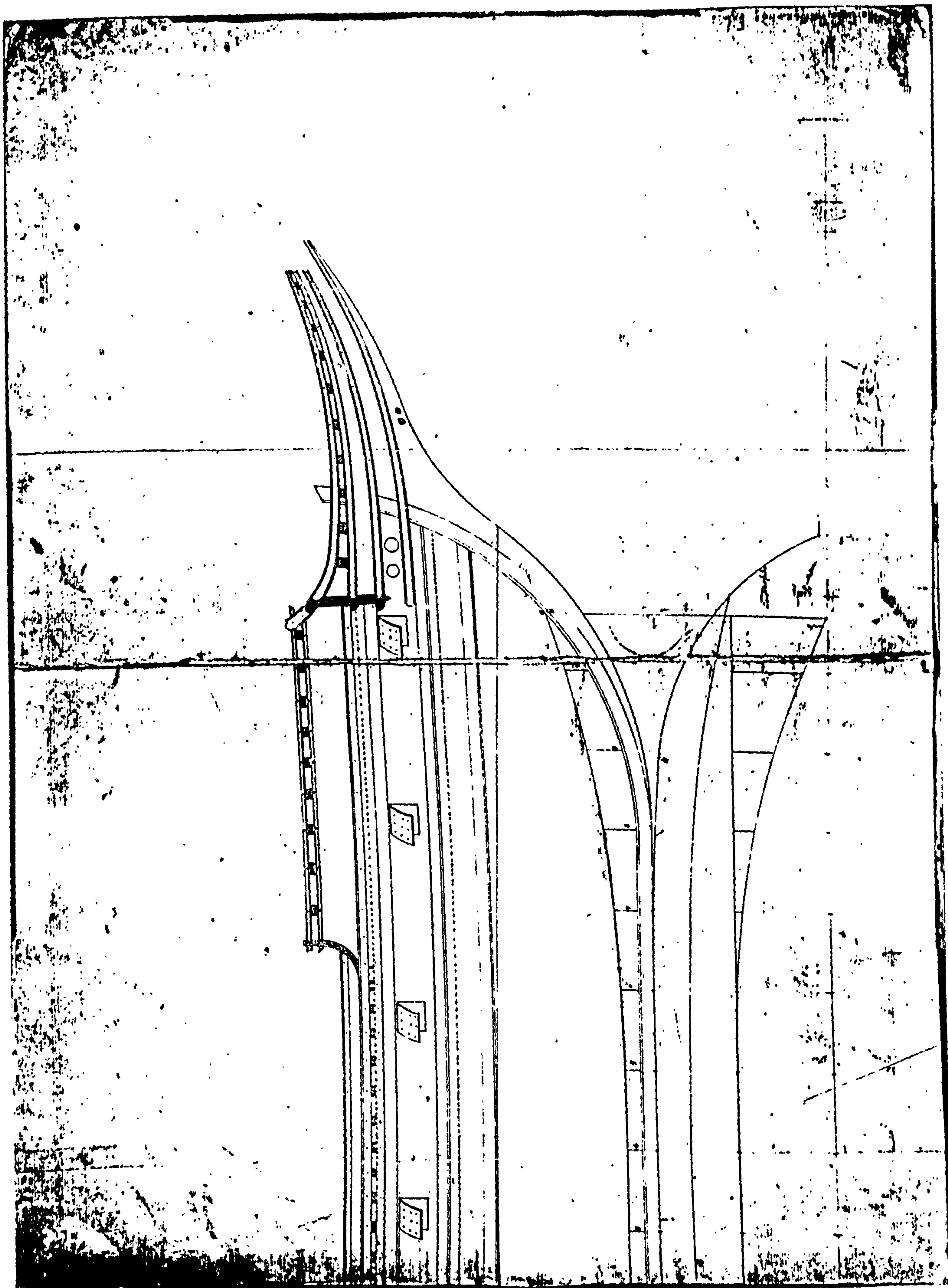


Figure A.7. Sjøetatens kort- og tegningssamling, Des. E.6.

Des. E.7.

Side 1. (Figure A.8.)

Profiles and midship sections of two ships. The first is a full-bodied one decked vessel. It contains nine gun ports on the main deck and two each in the forecastle and quarterdeck, giving an approximate cannon carrying capacity of 28-30 depending on the number of bow and stern chasers. It has a keel length of 46 alen (28.8m) and a breadth of 14 alen (8.8m). The other ship is a smaller one decked vessel with seven gun ports on the main deck and none in its smaller forecastle and quarterdecks, giving a cannon carrying capacity of around 14-16. It has a keel of 30 alen (18.8m) and a breadth of 9 alen (5.6m). Although Balfour was almost certainly the author of these plans the ships cannot be identified and may well be just design proposals, rather than built vessels.

Side 2. (Not Illustrated)

The middle section of the plan of *Tre kroner*, as discussed above.



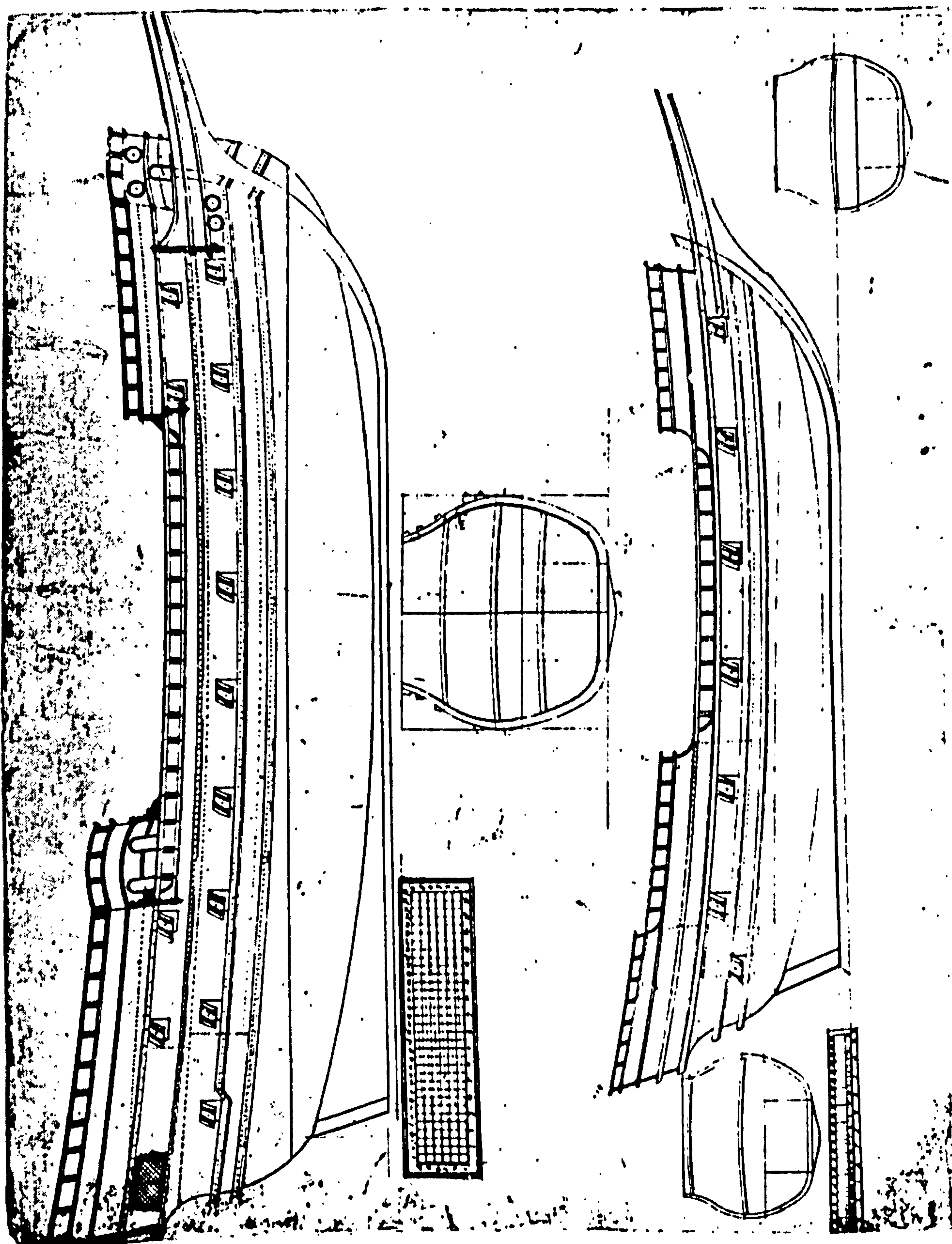


Figure A.8. Sjøetatens kort- og tegningssamling, Des. E.7.

Des. E.8.

Side 1. (Figure A.9.)

The design of a *defensionskib*. This ship is a bluff-bowed, full-bodied single decked vessel with a large hold and 11 gun ports on the main deck. It may be connected with the ordinance for the establishment of the *defensionskibe* fleet of 1630 which stated that the ships should 'opbygges og forferdiges efter den Model og Maneer, som vi selv med vor egen Skibbyggerne ville did opstikke' (be built and completed after the model and manner which we with our shipwrights will outline)<sup>11</sup>. Alternatively it may be connected with one of the *defensionskibe* that Balfour built himself. Beneath the top layer of paper can be discerned another similar design, which was presumably superseded.

Side 2. (Not Illustrated)

Detail of a rudder. It would be tempting to link this drawing to *Recompens*, the design of whose rudder was explicitly mentioned during the construction process<sup>12</sup>, but there is no evidence to connect it to any particular ship.

Des. E.9.

Side 1. (Figure A.10.)

The profile, midship section and plan of a medium sized one-decked warship. This ship is now identified as Balfour's *Hummeren* of 1624.

Side 2.: Blank

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11. Ordinance, 27 March 1630, *Norske rigsregistranter*, VI, 213-5.

12. See Chapter 8.



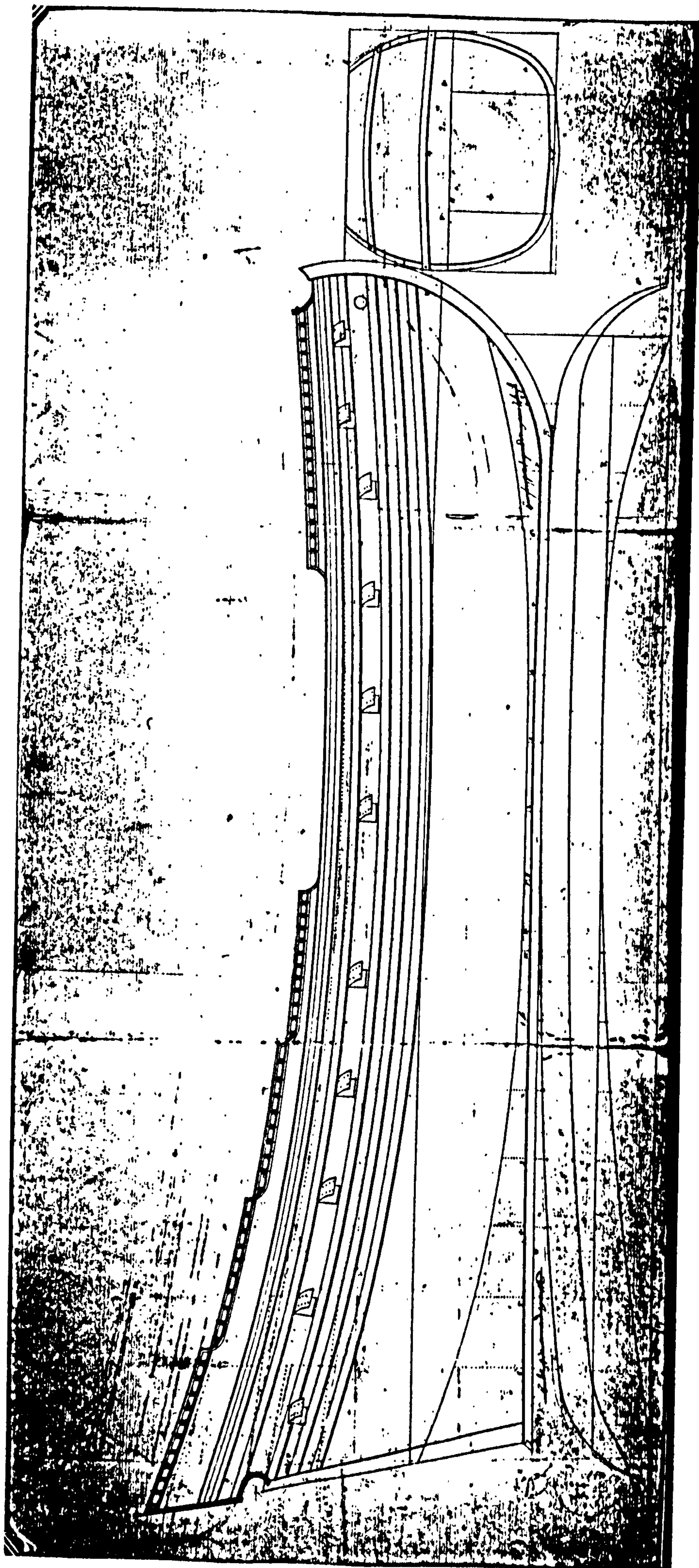


Figure A.9. Sjøetatens kort- og tegningssamling, Des. E.8.



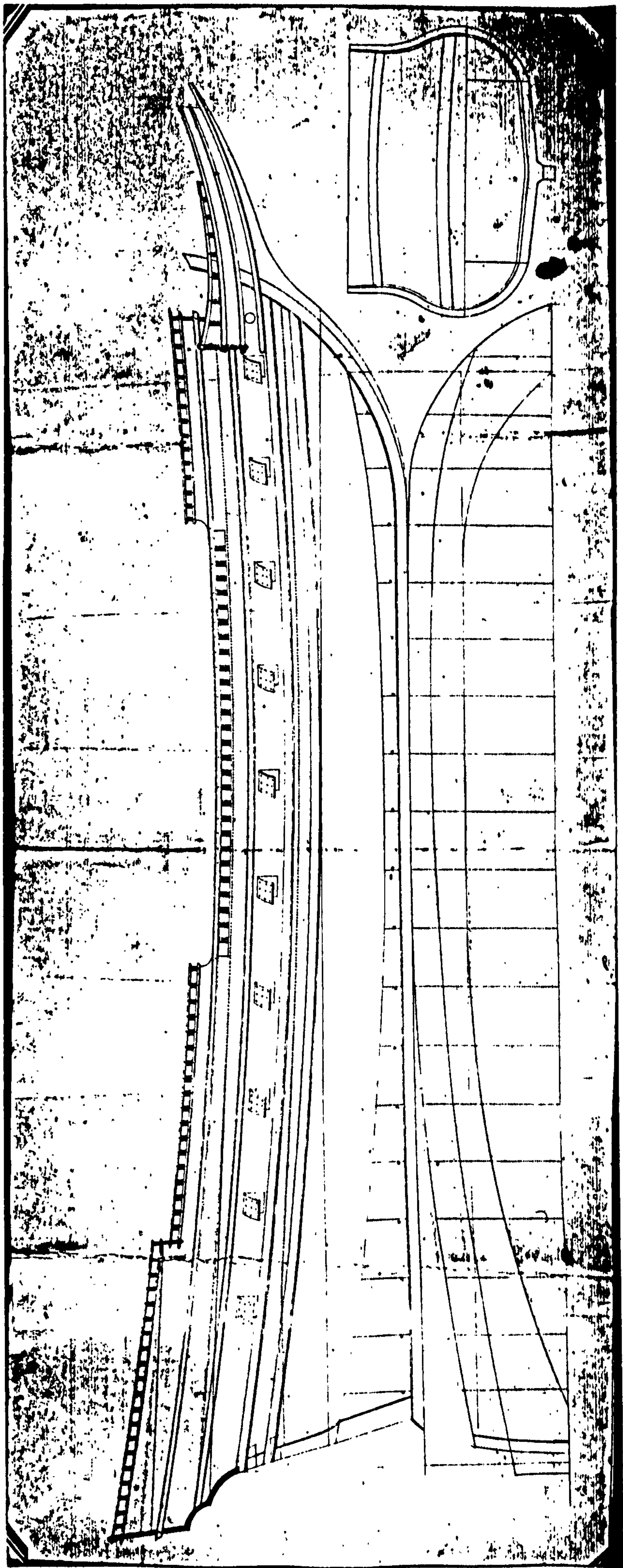


Figure A.10. Søetatens kort- og tegningssamling, Des. E.9.

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