

THE ROYAL NAVY UNDER THE FIRST DUKE OF BUCKINGHAM,
LORD HIGH ADMIRAL 1618-1628.

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Abstract

Between 1603 and 1613 the navy James I had inherited rotted slowly at its moorings, neglected by corrupt principal officers and an ageing Lord Admiral Nottingham who refused to recognise any responsibility for the administration. Abortive attempts to reform the navy were made in 1608 and 1613, but it was not until 1613 that success was achieved. The Commission of Enquiry led by Cranfield not only produced a searching and objective report, but also recommended a means by which the navy could be reformed, the ships fully repaired, and ten new ships added in five years while still saving £20,000 per year. Buckingham who had been appointed lord admiral soon after the enquiry had begun, supported the recommendations; accordingly, the king in council suspended the three principal officers and re-appointed the commissioners for a new five-year term. By 1623 the commissioners, with Buckingham clearly an active force behind them, had fulfilled their promise, and their patent was again renewed.

The outbreak of war in 1625, together with the increasing depredations by pirates, caused several large fleets to be despatched in the period 1625-28. A study of the consequent problem confronting the administration in the spheres of finance, manning, victualling and dockyard service demonstrates that the organisation was competent until it was faced with the almost impossible task of preparing large scale expeditions on a meagre budget. At the same time it is evident that the lord admiral was influential in improving standards in seamen's wages and other matters affecting their welfare.

Buckingham was active in the executive direction of the navy, which was the lord admiral's first responsibility, but it was his concern with administration which left a lasting effect upon the office after his assassination in 1628.

Contents

Abstract	2
Abbreviations	4
Introduction	5
Chapter I The 1613 Commission of Enquiry: Report	9
Chapter II The 1613 Commission of Enquiry: Recommendations	40
Chapter III The Commission's Successful Years: 1613-23.....	71
Chapter IV Finance	86
Chapter V The Problems of Manning and Discipline	124
Chapter VI The Seaman's Welfare	145
Chapter VII Shipbuilding and the Administration of the Dockyards	195
Chapter VIII Victualling and Ordnance	239
Chapter IX The Commission's Decline	265
Chapter X The Lord High Admiral	278
Appendices I The Pay Scale of 1626	301
II The Annual Charge and Expenditure in the Ordinary and Extraordinary 1604-28	303
III The Length of Service of the Ships Built by William Burrell	304
IV Some Early Stuart Warships: their size, complement and ordnance	305
Bibliography	306

Abbreviations

Adm. Lib. MSS.	Admiralty Library Manuscripts.
B.M. Add. MSS.	British Museum Additional Manuscripts.
<u>E.H.R.</u>	<u>English Historical Review.</u>
Gardiner	<u>History of England . . . 1603-1642, 10 vols.</u>
<u>Bulletin I.H.R.</u>	<u>Bulletin of the Institute of Historical Research.</u>
Keevil	<u>Medicine and the Navy, I.</u>
<u>M.M.</u>	<u>Mariner's Mirror.</u>
N.R.S.	Navy Records Society.
N.S.	New Style.
Oppenheim	<u>A History of the Administration of the Royal Navy.</u>
P.C.C.	Prerogative Court of Canterbury.
<u>T.R.H.S.</u>	<u>Transactions of the Royal Historical Society.</u>

1. Throughout this work, all dates have been written New Style.
2. In dealing with sums of money, shillings and pence have been ignored except where it was felt that to do so would make nonsense of the argument.

Introduction

Few royal favourites have been so universally labelled a villain as the first Duke of Buckingham. The particular villainy with which historians have charged him has been the reckless, unconsidered waste of money and manpower on expeditions doomed to fail before they were launched--doomed because of his lack of interest in the preparations and his ineptitude in wielding the enormous power the king's affection had brought him.

The aim of the study which follows is to suggest some modifications in this picture of Buckingham. None can deny the costly failure of the expeditions, but the reason for their failure may not be as obvious as his critics have suggested. Equally, none can deny the state of the ships and men on their return, but faulty preparation may not perhaps be attributable to neglect or incompetence on the part of the lord admiral.

The conception of the office and function of lord admiral changed considerably after Buckingham's death in 1628. . Indeed, so significant was the change that it can hardly have been due to coincidence. During his tenure of office he assumed more direct responsibility for the control of the navy's affairs than any of his predecessors. This was true even of the executive direction of the service, the only sphere of naval activity in which earlier lord admirals evinced any interest at all. It was particularly true, however, of the administration; no previous lord admiral had taken any part in administrative affairs, whereas Buckingham maintained a close supervision over all departments of the navy. He deserves to be remembered for these achievements, as well as for his strategic follies and his overweening political ambitions.

In 1599 the navy prepared a fleet for sea in twelve days, and it was said, with good reason, that Queen Elizabeth was never more dreaded abroad for anything she ever did. This statement is not inapt as a general summary of England's maritime position throughout most of the sixteenth century, for Elizabeth had inherited the naval organisation virtually unaltered since its establishment by Henry VIII. The queen's parsimony had often endangered the navy, but she had been blessed with the devotion of administrators such as Hawkins, and an abundance of talented seamen encouraged by letters of marque. There were, it is true, occasionally allegations of corruption, even against Hawkins, but these seem to have been personal attacks with little foundation in fact; the queen herself was too inclined to look over the navy treasurer's shoulder to allow much latitude. By 1604 however, the safeguards had gone.

To James I, on his accession in 1603, the crown of England seemed to be accompanied by an almost limitless wealth, accustomed as he was to the frugality of Edinburgh. As a consequence, officers of state were freed from the close personal supervision that had marked the previous reign. The following year Sir Robert Mansell, a former admiral of the Narrow Seas, was appointed treasurer of the navy, a position in which he seems to have been as unscrupulous as he was incompetent. For the next fourteen years the navy paid the price, for Mansell had every advantage necessary for making the most of his position. He had something of a reputation as a seaman, certainly greater than that of any other principal officer. His colleagues were nonentities who either joined him in profiting by office or else lacked the spirit to oppose him. This is not surprising, for

Mansell's character seems to have been unpleasantly forceful and domineering. Finally, as a kinsman of Nottingham, he not only received the protection of the lord admiral, but was also favoured by the king.

One of the earliest steps Mansell took to improve his own financial position was to arrange with Sir John Trevor, the surveyor, that between them they should supply the king with all the necessary stores. As a result, provisions of poor quality, purchased at the lowest prices, were often sold to the king at rates higher than those paid for the stores of the best quality. According to figures produced by their accusers, Mansell and Trevor received more than £7,000 in four years by reselling to the navy such items as masts and tar at exorbitant rates. Mansell was also accused of obtaining during the same period £5,000 by ordering and paying for timber several times over for the same purpose. By 1608 corruption had reached such proportions that the Earl of Northampton, Sir Robert Cotton and others obtained a commission to enquire into the abuses in the navy. Its report was highly critical of the administration, but the chief targets, the principal officers, suffered no more than an admonition from James. So the waste and corruption, demonstrated to be rampant throughout the service from the treasurer to the porter and the dockyard labourer, continued. In 1613 another attempt to obtain an enquiry was made abortive by the prompt intervention of the lord admiral, who considered the proposal an affront to his honour and a reflection upon his ability. Indeed it was. Unfortunately for him, although Nottingham may have been honest enough himself, he seems to have had little knowledge of the way in which his subordinate officers conducted the navy's affairs.

The criticisms had not been entirely without effect, however, for in 1617 the ageing lord admiral did make a gesture towards reform by re-issuing the regulations for the government of the navy. The gesture was too late: reform was in the air, and the commissions investigating the administration of the Wardrobe and the Household had succeeded beyond the king's expectations. The navy provided an obvious field for similar enquiry.

CHAPTER I

The 1618 Commission of Enquiry: Report¹

It is somewhat frustrating to find that the origins of the Commission of Enquiry into the navy in 1618, itself so practical and clear, are obscure. The first known mention of an enquiry appears in the privy council register for 4th June 1618.² On that day the council referred the consideration of the means of better husbandry of the navy to Sir Fulke Greville,³ authorising him to summon any person who might give him pertinent information. Improbable as it seems, this entry might indicate that the enquiry was originally intended to be a personal affair conducted by Greville, who, with the exception of Lord Admiral Nottingham, was the only member of the council technically equipped for such a duty. However, the only viable alternative, that Greville alone was to nominate the members of the commission seems even less probable. It seems therefore that the enquiry was indeed intended to be conducted by Greville but that for some reason the lords of the council changed their minds.⁴ There appears to be no evidence at all which explains this, the next point on record being that just two weeks later, on 18th June, the privy council wrote to the attorney general and the solicitor general⁵ instructing them to prepare for seal a commission concerning the enquiry into the navy by the twelve named.

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1. S.P.(D.), Jas.I, ci. This account of the report in four parts is probably the official copy submitted to the privy council. Whether this is so or not, it was used by someone who had the authority to mark certain recommendations as approved and query the wisdom of others. There is a copy of this report, but with the text and marginal notes in the same hand, in the library of the National Maritime Museum at Greenwich. Judging by its subsequent owners, this volume, resplendent in its red velvet binding, was probably the lord admiral's copy.
 2. Acts of the Privy Council, 1618-19, H.M.S.O. (1934), p.157.
 3. Formerly treasurer of the navy, 1598-1604.
 4. Several historians have asserted that Buckingham was the force behind the 1618 Commission of Enquiry, but none either adduces any evidence to support the suggestion, or gives his reason for making it.
 5. Respectively Sir Henry Yelverton, appointed 7th March 1617, and Sir Thomas Coventry, appointed 14th March 1617.

The first indication that Buckingham was an interested party occurs in a letter to Cranfield dated 25th August. The king had offered the post of lord admiral to Buckingham at the beginning of 1618, but he had refused it on account of his inexperience in such matters.¹ At that time Buckingham was only 28 years old. During the summer however, when it became clear that there was to be a full investigation of the navy's administration, he seems to have had second thoughts which may be reflected in his reply to Cranfield:

His majesty is very satisfied with the account of the navy as given, though he has great reason to be sensible of the abuses committed therein by those put in trust, and is so farre from any remissness in the course you saie now in hand that he will give all encouragement that can be for the prosecution of it and sufficient testimony to the world of his good acceptance of theis endeavours that are instruments in doing so good and important a service . . . Of myself you make right judgment that my respect to noe man noe matter how dear shall ever divert me from furthering his majesty's service.²

Cranfield had written to Buckingham to know the king's reaction to the commission's reports.³ The commissioners were apparently somewhat apprehensive of the results of exposing two such favourites as Nottingham and Mansell as being corrupt, or at best grossly inefficient, administrators. The last sentence is interesting since it may well be an oblique reference to Buckingham's wish to become lord admiral as a means of reforming

1. S.P.(D.), Jas.I, xcvi, 8. Sir Edward Harwood to Sir Dudley Carlton, 8th Jan. 1618; Commons Journals the king's speech at the opening of parliament in 1621.
2. Sackville-Knole MSS. 1073.
3. It is evident from this and other letters that James did not wait until the finished report had been prepared but was receiving it piecemeal as each section was completed.

naval administration. Not until October 1618 is there any actual connection shown between Buckingham and the office. The first mention appears in a report that he was to hold office jointly with Nottingham,¹ then later in the month appears the news that the two had reached an agreement by which Nottingham was to retire with an annual pension of £1,000 from the crown, and a cash payment of £3,000 from Buckingham.² However the new lord admiral's patent was not issued until 28th January 1619.³

With no evidence to the contrary, it seems to be reasonable conjecture that soon after the privy council's instruction to Sir Fulke Greville, Buckingham may have declared his interest in the post of lord admiral and in the administrative reform. At once the whole position would have changed. The privy council alone, or such of its members as sought reform, may well have hesitated to press for a public enquiry into the navy, especially in view of the failure of the very powerful commission of 1608. This would account for the instructions for a "private" enquiry by Sir Fulke Greville. The privy council supported by the Marquis of Buckingham would be a potent force indeed however, and the latter presumably would be able to overcome his majesty's objections. Accordingly, with the support of Buckingham assured,

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1. S.P.(D.), Jas.I, ciii, 14. Harwood to Carlton, 3rd Oct. 1618. Gardiner, III, 205, states that this arrangement was never carried into effect and for all practical purposes this was no doubt true. However, the privy seal prepared for the patent of the navy commissioners in February 1619 reads, "the said Marquis our Lord High Admiral and other Lord High Admiral for the tyme being may be informed . . ." P.R.O. c/82/1904.
 2. *Ibid.*, f.45. John Chamberlain to Carlton, 24th Oct. 1618.
 3. Patent roll c/66/2131.

the enquiry was put into the hands of a commission of twelve under the leadership and reforming zeal of Sir Lionel Cranfield.¹¹

There appears to be no evidence at all of the way in which membership of the commission was determined, although the commissioners were presumably appointed by the privy council. Indeed the commission was considered technically to be a sub-committee of the privy council, as the entry in the register for 2nd November 1618 shows. All but three of the commissioners had been members of the Commission of Enquiry into the Household in 1617; the exceptions, Coke, Burrell and Norreys having particular abilities and experience which commended them. Thus in marked contrast to the political nature of its predecessor in 1608, the 1618 Commission of Enquiry was composed of men presumably chosen for their ability. Cranfield's apparent success in the reorganisation of the Household and the Wardrobe made him an obvious choice, and each of the other eleven members had similar qualifications from the world of commerce, of finance or of maritime affairs. some could boast knowledge of all three. Two such were Sir Thomas Smythe,² and Sir Richard Weston.³ Other commissioners were Sir John Wolstenholme,⁴ Nicholas Fortescue,⁵

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1. Acts of the Privy Council 1618-19, p.174; patent roll 23rd June 1618, c/66/2165. The person names in the patent roll to receive the commission was Sir Thomas Smythe (his name appears at the top of the list sent to Yelverton and Coventry), but there seems little doubt that until his disgrace in 1623 Cranfield was regarded as spokesman and chief commissioner. The patent for the commission to execute its recommendations was issued in Cranfield's name, 12th Feb. 1619, c/66/2167.
 2. A city merchant and a governor of the Muscovy and the East India companies.
 3. A former collector of "little customs" in London, later lord treasurer; created 1st Earl Portland, 17th Feb. 1633.
 4. A farmer of customs in London and a member of the Company of Merchant Adventurers.
 5. A commissioner of James' household and later chamberlain of the exchequer.

John Osborne,¹ Francis Gofton,² Richard Sutton,³ William Pitt,⁴ John Coke,⁵ Thomas Norreys,⁶ and William Burrell.⁷

It would have been difficult to better this selection, at least on the basis of experience, although the omission of Fulke Greville himself is perhaps rather surprising. He may have declined to serve on principle, since he had been ousted by Mansell upon whom most of the odium would be certain to fall; he may even have declined to serve once Buckingham became involved.⁸ On the other hand it was certain that he would be kept in close contact with the commission's proceedings and it was possible that he might still influence the members, for Coke had been Greville's man since their first association more than twenty years previously.

The commission was issued on 23rd June, and not surprisingly tactfully avoided any imputation of insufficiency on the part of

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1. One of the lord treasurer's remembrancers.
 2. A lord treasurer's remembrancer, an auditor of the prests and of the navy accounts.
 3. An auditor of the prests and of the navy accounts.
 4. A city merchant, member of the Muscovy Company and former officer in the exchequer of receipt. Pitt's youngest brother was the great-great grandfather of the Earl of Chatham, see Diary of William Hedges, III ed. H. Yule, Hakluyt Soc. Pub. (1889), xxix.
 5. Deputy treasurer of the navy 1597-1604 under Sir Fulke Greville.
 6. A master shipwright formerly employed by the navy.
 7. For seven years the master shipwright to the East India Company. Except for the placing of Cranfield's name second to that of Smythe, the order shown is precisely that in the instruction to the attorney general and the solicitor general, which appears to indicate precedence. Coke's lowly position is not as surprising as it may seem. He had never held more than a subordinate position and had been absent from public life for fourteen years. His appointment to the commission was undoubtedly the result of Greville's influence.
 8. There seems to be no evidence that Greville disliked the favourite. Had he done so, Coke's position would have been difficult, for while continuing his close association with Greville, he placed himself unreservedly in the service of the Duke, e.g. Coke to Buckingham, Dec. 1618 and 6th June 1921. Coke MSS. Bundle 21.

the lord admiral. Indeed, the preamble seemed to make it clear that whatever the outcome of the enquiry, Nottingham would not in any way be blamed:

Whereas we are informed that verie greate and intollerable abuses, deceipts, frauds, corruptions, negligences, misdemeanours and offences have byn and daylie are perpetrated, comitted and done against the continuall admonicons, and direcccons of Charles Erle of Nott, our high admirall of England by other the Officers of and concerning our Navy Royall and by the Clerkes of the pricque and checke and divers other inferior officers . . .¹

The powers conferred upon the commission were common to all such boards of enquiry. The commissioners had the authority to summon the principal officers and any of their subordinates, past or present, as well as anyone having had any dealings with the navy in buying, selling or transporting stores and provisions. Evidence might be heard on oath and books and accounts examined, for which purpose they might call upon the auditors of the exchequer for assistance. Were any witness to be prevented from attending the enquiry by reason of illness, infirmity or excessive cost involved in travelling, the commissioners had only to apply to the lord chancellor or lord keeper and a commission would be issued authorising the taking of a deposition wherever the witness happened to be. Finally the commissioners were adjured to report their proceedings regularly to the privy council so that their lordships might take such action as they thought necessary to further the enquiry.

Two days earlier on 21st June, the privy council had written to the masters and wardens of Trinity House, requiring

1. Patent roll, c/66/2165.

them to give all assistance to the Commission of Enquiry as and when it might be required.¹ At about the same time the council drew up instructions for the guidance of the commissioners, who were to form their report about the following eight points:

1. Which provisions would lose weight or quality in storage and which were imperishable staple commodities requiring time for provision and so must therefore always be held in stock.
2. The course necessary for purveying, receiving, issuing and husbanding to avoid high prices in buying, loss in keeping and waste in spending, as well as the frequency with which the accounts should be examined.
3. The quantity of stores required to furnish each ship for sea in all respects, and the charge involved "and whether it will not be fitt to stowe all the cordage . . . for shrowds, staves and standing ropes" for preserving them.
- 4.i The quantities of timber and other provisions to be kept in store and replenished as used.
 - ii Where and when such stores might be had at the best price for materials of good quality.
 - iii The state of the stores currently in hand.
5. The complete costs of setting one ship of each burthen to sea for one month in varying service.
- 6.i The best size of ships for normal use.
 - ii Where they should be graved and generally made serviceable.
 - iii The differing complements necessary for home and foreign service.
7. The present institution of the navy and how it might be improved.
8. Such other courses of instructions the commissioners' experience and judgment should consider necessary.²

1. Acts of the Privy Council 1618-19, p.179.

2. Adm.Lib.MSS.12, ff.11-12. The instructions were signed George Abbott, Archbishop of Canterbury; Lord Carew, master of ordnance; Suffolk, Arundel and secretary Naunton. Unfortunately none of these documents in the Adm.Lib.MSS. is dated more exactly than merely 1618. The contents suggest a date between 18th June and 5th August, probably 18th June to mid-July.

The invitation to act upon their own initiative brought an eight-point reply from the commissioners, suggesting that they should be allowed to:

1. Enquire into the additional allowances paid to admirals, vice admirals and captains since the death of Queen Elizabeth and above the rates normal in that reign.
2. Enquire into the allowance of 'dead pays' to the officers mentioned.
3. Enquire into the increased expense of Upnor Castle and the Wareham and Bay sconces.
4. Have power to call witnesses to answer on oath "and doe all other acts and things tendering to the furtherance of his majesty's service, according to our instructions."
5. Put the survey of the remains of provisions in store into other hands, so that time might not be lost on more vital matters.
6. Use the findings of the late Earl of Northampton and demand them from their keepers. ¹
7. View past actions for the better avoidance of future abuse.
8. Be advised what numbers of the sub-committee should be sent for the initial survey, considering
 - i. how to ease his majesty's charge
 - ii. the numbers to accompany them e.g., masters and wardens of Trinity House, masters attendant, shipwrights, boatswains and other assisting officers. ²

As in the case of almost every aspect of the enquiry, it is to the commission's great credit that it sought, and

1. I.e., the findings of the Commission of Enquiry of 1608.
2. Adm.Lib.MSS.12,f.12. This document was also signed by the same five members of the Privy Council. It would appear that all eight points were approved, but in the event, the survey of the remaining stores was carried out by the commission with the assistance of subordinate officers.

usually followed, the counsel of the chief professional advisers wherever technical matters or the actual practice of serving at sea was in question. The Admiralty Library MSS contain three documents which amply demonstrate the co-operation sought by the commission.¹ The first is the masters' reply to a fourteen-point query from the commissioners and gives some indication of the thoroughness with which the whole enquiry was conducted. The first eight items raised by the commissioners are answered by a laconic "done according to our book delivered". The ninth sought an opinion on the size and composition of the navy. In answer the masters attendant refer the commission to their recommendations already made on shipbuilding. These begin with the somewhat vague assertion that the navy should consist of "as many good ships as can be afforded". The practical value of the Royal ships of 900 tons or more was evidently doubted for the masters suggested that the number should remain at four. Ships of the second rank were thought best for general service, and should be of 600-650 tons each with "three decks or orlopss" but carrying only two tiers of ordnance. Ships of the third rank should be between 400 and 500 tons each, while the navy also required two or three pinnaces, chiefly for patrolling the Thames estuary and the approaches to the Medway.

The commissioners' tenth point remains unknown, but the answer from the mastersattendant reflects their diligent approach: "it is too soon to give an opinion on the whole, we having seen only part". The next item evidently concerned the river defences of Chatham, in particular the means of

1. MS.12, ff.97-8.

stopping enemy vessels from entering the anchorage by stealth. The masters replied succinctly, "The present fortifying of the chain with a cable is of small use. A mast boom would be effective and cheap".¹ The twelfth query was on the subject of other harbours and drew forth the response, "In time of service, Portsmouth is a fit and necessary port for certain ships, the mouth of the harbour opening on to the sea allows ships to pass quickly to sea. Harwich is not a fit port except for ships on special service". The last two points concerned the ship-keepers. Answering point 13 the masters wrote, "If the Principal Officers be men of experience and understanding, the ship-keepers should not be kept idle. They could make caskets etc., and become trained (as they should) musket shots, a corporal being maintained to this end . . . It cannot be inconvenient to change the ship-keepers half yearly, young watermen are fit for such a job and would therein become trained seamen". In answer to the final query, the masters recommended that "the ships in ordinary may continually be rigged by the ordinary ship-keepers".

Besides their reply to these specific points, the masters attendant also made the following recommendations:

1. Every ship should be fully and completely rigged so that the ships might be ready for any service. The boatswain should be charged with the whole rigging, such charge being passed on to his successor.
2. Ships on six-month service should carry full stores, which at the end of the voyage, except in case of accidents caused by bad weather should be serviceable for a further six months.

1. This continued to be a problem for many years, for while a mast boom was more effective than a chain and cable, it was subject to greater and more frequent damage as a result of the weather.

3. When ships of the first or second rank were newly moored, they should have on board a spare stream anchor and cable and three or four small cables for emergencies.
4. All ordnance in the gun-room and the forecastle should be put ashore (when in harbour on the ordinary) to ease the ship and prevent her from becoming "camber-¹ceeled".
5. All breechings, lashings for ordnance, netting ropes and port ropes should be made from serviceable cordage from old moorings, they being better than any provided from the Tower. If each ship were thus furnished it could be maintained with a relatively small annual supply, for such ropes should be serviceable for seven years except those in the waist, forecastle and half-deck where they were continually in the weather.
6. All ropes, after their first use had been completed, should be stored to be used on cables to prevent their being galled in use.
7. The deputy masters currently in office were insufficient for their duties, having been trained only as boatswains and never having commanded a ship; they merely served "to cloud and shadow abuses".
8. No foreign ships should be allowed in the River unless for the purpose of delivering stores and provisions for the navy.

While these propositions for the navy's future were being discussed by the masters attendant and submitted to the commissioners for further discussion before being presented in turn to the king and the privy council, the work of surveying the existing navy was begun.²

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1. A fore and aft bowing of the keel caused by the unequal distribution of weight; also termed "hogging".
 2. It was during these few weeks of May and June 1618 that events were taking place in Bohemia which were to lead to the outbreak of war in the Palatinate. If the news from Prague caused any anxiety in London it seems not to have been reflected in the preparations for the enquiry into the state of the navy. The possibility of England joining the war on Frederick's behalf may have caused the king and privy council to consider more seriously the commission's proposals, although the documents show no mention of the war in that context; of certainty it can have had no influence on the commission's report.

On 6th July Thomas Norreys was paid £100 from the exchequer towards the diet and travelling expenses of the commission as a whole.¹ The first date occurring in any part of the report is 8th July, when the survey began with a detailed account, appropriately enough, of the masts and hull of the flagship, the Prince Royal. Although this was the most time consuming part of the survey, the enquiry evidently proceeded with some despatch, for despite the detailed reports required the last of the forty-two vessels was examined on 1st August. Norreys's accounts show the commissioners to have been resident at Chatham during this time, and it seems reasonable to assume that some, if not all of them were present aboard the ships when the inspections were made. The practical work was supervised by Thomas Best, the senior master attendant, and was carried out by the vessel's master or boatswain, the carpenter and other masters attendant. The inspection itself was by no means superficial, for where possible the surveyors looked at the basic structure of the vessel as is made clear in a letter from the navy commissioners to the clerk of the survey. The vessels were to be prepared by having the caulkers "burn off the stuffe upon the shipp's sides, soe many strakes between wind and water."² During the ten days 15th-25th July, with aid from masters attendant, the master and wardens of Trinity House, boatswains and storekeepers, other commissioners surveyed the stores held in the dockyard. Of this set, the returns from the inspection

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1. Declared accounts, Pipe Office 2594; Pells' Order Book 1617-18. On 13th November Norreys received a further £50 on behalf of the twelve commissioners. The total expenses came to £233; the remaining £17 was granted to Norreys for his additional work and as some compensation for the loss of his normal income during the period of the enquiry.
 2. Bodleian Rawlinson MSS. A.455, f.77. 7th July 1618.

of cordage were completed first and were being acted upon barely a week after the survey had begun. On 24th July, the privy council addressed a letter to Messrs. Greenewell and Styles, contractors to his majesty for cordage. Their lordships stated that since the navy commissioners' report showed ample stocks in hand, the £900 per month assigned from the silk farm was to be paid into the exchequer forthwith for re-issue to the navy treasurer for other purposes. Order would be made when further cordage was required.¹ The privy council was also mindful of its duty towards the contractors. Two days later Sir Thomas Smythe, as governor, was reminded of the East India Company's undertaking that it would receive at the king's prices the monthly output of cordage normally taken up by the navy.²

By the end of August the ships' cordage and moorings had been inspected, completing the survey of ships and stores. Thus by the middle of September, having discovered the defects and many of the abuses in the navy, the commissioners could meet to consider what recommendations should be made to put the navy in order, both financially and administratively, and to maintain the standard in the future. A manuscript in the Admiralty Library lists various points that were discussed. The number of vessels to be maintained on strength, their size and type as well as the nature of the repairs and alterations necessary to most of them, the building of new ships and the arrangements to be made for the disposal of those totally unserviceable. Books were to be kept in which the details of each ship were to be entered, as also other books containing details of rigging, moorings and stores

1. Acts of Privy Council 1618-19, p.223.
2. Ibid.,p233.

for each type of vessel according to the service to be performed. The commissioners also considered the dockyards and their facilities, the improvements to be made, and new buildings to be erected. As might be expected from the final report, the commissioners evidently discussed at some length the regulations for the purchase, care and issue of stores, whether they might best be obtained as required or whether they would need to maintain a supply, the time for which stores might be kept, their quality and quantity as well as which contracts should be allowed to lapse and which should be renewed. Finally the commissioners discussed the protection of the fleet in the River, with particular regard to the future use of Upnor Castle, the two sconces and the chain.¹

One item in this list, a survey of dockyard installations at Chatham, Deptford and Woolwich had probably already been made early in September.² The investigations in two other major fields of the enquiry, finance and administration, are harder to place chronologically. It seems probable however that they were the first things tackled by the commissioners, and the financial tangle at least, resulting from Mansell's fifteen years as treasurer no doubt kept some of them busy for more than a month.³ The former treasurer was unable to provide full accounts, but it was not merely that his accounts for at least six years previously had not been submitted and declared accurate. The only figures that

1. MS.12, f.13.

2. There is no detailed report of this but the precise recommendations for enlarging the Chatham dockyard and the reference to the better security of stores at Deptford indicates that such a survey of the yards was made.

3. There is a period of almost three weeks between the privy council's order for the Commission under the Great Seal and the first entry in Best's report.

could be produced from 1613 onward were contained in abstracts of expenditures for each year, with no account of what had been received. As will be seen, the commissioners had to use such working records as were available. No dockyard quarter books had been made up since 1615 and the labour involved in so doing was such that the clerk who wrote them up for the commission, one Bryan Winn, received a special allowance.¹ The enquiry into the administration seems also likely to have been concurrent with the surveys of ships and stores. Procedures for the receipt, issue and accounting of stores were carefully examined, as were the duties and responsibilities of each official from the principal officers to the porters on duty at the dockyard gates. Not only were books and accounts scrutinised; witnesses from all ranks and departments were summoned to give testimony under oath, the records showing at least ten having given evidence on a total of 23 different posts.²

The completed report was formally submitted to the privy council on 29th September, at which time Cranfield gave a brief verbal summary of the contents. The report was accepted and placed for examination before a sub-committee which was empowered to summon anyone to answer questions about the navy and the report.³

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1. Declared accounts, Pipe Office 2594.
 2. Adm. Lib. MSS. 12, ff. 3-22. The ten were Sir Guilford Slingsby, comptroller; Sir Richard Bingley, surveyor; Sir Peter Buck, clerk of the navy; Mr. Peter Buck, clerk of the cheque at Chatham; John Wryothersley, clerk to the clerk of the cheque; Nathaniel Tearne, clerk to the clerk of the navy; Bartholomew Preston, Thomas Forde, John Rockewell, Robert Bevis, pursers. The list of 23 positions is probably complete, but one can be much less certain about the testimonies; however, ten is a likely number and the witnesses appear to supply an adequate cross section of the officials most likely to be able to give evidence with some authority.
 3. Acts of the Privy Council, 1618-19, p.263. The Archbishop of Canterbury, Lord chancellor, Lord privy seal, Lord steward, Lord admiral, Lord chamberlain, Arundel, Doncaster, the chancellor of the exchequer (Greville), Secretary Naunton or any five of them.

The survey of the hulls disclosed that of the 42 vessels of all kinds at that time on charge to the treasurer of the navy, only 26 were worth retaining, and most of those required extensive repairs before they could be considered serviceable. The table on p. includes all 41 vessels; only the Crane and the Answer needed no repairs or only such as were negligible in cost; the size is given to indicate the approximately relative value of each ship.¹ The number of men "in ordinary", i.e. used to maintain the vessel in harbour, is of significance in considering the unnecessary cost involved in keeping worthless hulks.

Of the ships to be made serviceable, the Rainbow and the Antelope had lain in the dry dock at Deptford since 1616 and 1617 respectively. Twice repairs had been started and twice abandoned; on each occasion the green unseasoned timbers used in the repairs had been left uncovered. This had had to be torn down before repairs could be continued, and it was clear that when the shipwrights once more returned to the task they would again have to take down the incomplete repairs and start anew. The cost of the work on the two ships to be undertaken after the report was assessed at £5,379; the commissioners forbore to comment on the cost of the abortive attempts to repair them. The remainder of the repair costs, including "masts, yards, pumps, parells, shivers and boats" was estimated to be £4,541.²

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1. The chief exceptions are the Royal ships, i.e. those of 800 tons or more. They were very expensive to keep at sea and were too large, slow and unhandy for the normal peace-time duties of patrolling the Narrow Seas and hunting pirates in coastal waters. Almost their only virtues were their prestige value, and their usefulness on protracted voyages or expeditions where speed and manoeuvrability mattered little compared with the ability to carry large numbers of soldiers or vast quantities of provisions.
 2. S.P.(D.), Jas. I, ci, 7.

Ships either serviceable
or able to be made so:

Ship	ton and tonnage	men in harbour
<u>Prince Royal</u>	1,200	30
<u>White Bear</u>	900	30
<u>Merhonour</u>	800	30
<u>Anne Royal</u>	800	17
<u>Due Repulse</u>	700	15
<u>Defiance</u>	700	12
<u>Warspite</u>	600	12
<u>Assurance</u>	600	12
<u>Vanguard</u>	600	12
<u>Red Lion</u>	500	12
<u>Nonsuch</u>	500	12
<u>Rainbow</u>	400	10
<u>Dreadnought</u>	400	10
<u>Speedwell</u>	400	10
<u>Antelope</u>	350	10
<u>Adventure</u>	250	9
<u>Crane</u>	200	6
<u>Answer</u>	200	6
<u>Phoenix</u>	150	6
<u>Lion's Whelp</u> (pinnace)	90	4
<u>Moon</u> (pinnace)	100	4
<u>Seven Stars</u> (pinnace)	100	4
<u>Desire</u> (pinnace)	50	4
	<hr/>	<hr/>
	10,690	279
Auxiliaries:		
<u>George</u> (hoy)	100	2
<u>Primrose</u> (hoy)	80	8
<u>Eagle</u> (lighter)	200	5
	<hr/>	<hr/>
	380	15

Ships irreparably decayed:

Ship	ton and tonnage	men in harbour
<u>Triumph</u>	1,000	30
<u>Elizabeth Jones</u>	900	30
<u>Garland</u>	700	12
<u>Mary Rose</u>	600	12
<u>Bonaventure</u>	560	3
<u>Quittance</u>	200	6
<u>Advantage</u>	200	5
<u>Tremontana</u>	160	6
<u>Primrose</u> (pinnace)	30	0
<u>Disdain</u> (")	30	3
<u>Charles</u> (")	100	3
a ketch	10	0
<u>Superlative</u> (galley)	100	6
<u>Advantagia</u> (")	100	6
<u>Volatilia</u> (")	100	6
<u>Gallerita</u> (")	100	6
	<hr/>	<hr/>
	4,890	134

The actual work in the survey of the rigging and sails was carried out by the masters attendant assisted by the master and wardens of Trinity House, under the supervision of the commissioners. The replacement of nearly 94 tons of defective rigging in all sizes of cordage was to cost an estimated £3,287, while the needs in canvas (182 sails) was estimated at £2,000. No deficiencies were found in the survey of anchors.

The commissioners divided into three categories the charge of the navy upon the exchequer. First were the amounts claimed by virtue of patents held:

	£	s	d
Lord High Admiral of England	133	6	8
Lieutenant of the admiralty (not bestowed since the death of Sir Richard Leveson)	322	18	4
Treasurer of the navy (fee, travelling, boathire and clerks)	220	13	4
Comptroller	155	6	8
Surveyor	145	6	8
Surveyor general of marine victuals	159	10	0
Clerk of the navy	100	3	4
Keeper of stores	78	5	10
Keeper of stores (Portsmouth)	20	0	0
Assistants (3) to principal officers	60	0	0
A master for grounding the great ships	9	2	6
Master shipwrights (3)	66	18	4
Pilot of the Black Deeps	20	0	0
	<hr/>		
Total	<u>1,491</u>	<u>11</u>	<u>8</u>

In addition to these were payments by patent, listed as "New Erections Since His Majesty's Reign" of which the commission evidently disapproved.¹

1. S.P. (D.), Jas. I, ci, 8-9.

	£	s	d <u>p.a.</u>
A captain-general of the Narrow Seas, at the rate of 20s. per day, allowed one clerk at 8d. per day and sixteen servants at 10s. each per month (besides £663.18.8d from the treasurer and victualler of the navy)	481	3	4 ¹
A vice-admiral of the Narrow Seas at 10s. per a day allowed eight servants at 10s. per month (besides £234.12.8d from treasurer and victualler of the navy)	234	12	8
A vice-admiral for service in the Narrow Seas at 10s. per day (plus 10s. per day when at sea)	182	10	0
A surveyor of tonnage (surveying tonnage at no more than an average annual value of £1,888)	12	5	0
A storekeeper at Woolwich (for stores valued at less than 40s.)	54	8	4
Two clearers of the road	30	0	0
A captain and 20 soldiers in Upnor Castle (besides £182.1.8d paid by the treasurer of the navy)	243	6	8
	<hr/>		
	1,244	6	0

A further new office of some importance had also been created under warrant from the lord admiral (and therefore paid by the treasurer of the navy), a keeper of the outstores at Deptford, at £66.13s.4d. p.a.

The second and third categories of payment by the exchequer were the ordinary and extraordinary charges respectively, each subdivided into charges submitted by the treasurer of the navy and the surveyor of marine victuals. As a substitute for the declared accounts the commission based its calculations on the monthly certificates signed by the Lord admiral and the principal officers. In these certificates the amounts specified would certainly have

1. Recte £470.4s.4d. I have found the official accounts of the navy and especially those audited, to be invariably accurate. The likeliest explanation of such errors as this is that they occurred in the copying.

been issued, and although the particular items in each might later be changed, the totals would remain the same. To get as true a picture as possible of the annual costs, the commission calculated the average yearly expenditure for the four years 1614-17, for during this period there was least need to raise the ordinary charge artificially since the number of ships at sea was minimal. In this the practical attitude of the commission was made evident. The members were not primarily concerned with laying blame and discrediting individuals. Their task was to find the causes of the disorders in the service and seek to set its affairs straight.

Ordinary charges to the treasurer of the navy:

	£	s	d	£	s	d
1614	20,428	1	0			
1615	19,134	13	8			
1616	11,821	4	5			
1617	<u>11,409</u>	<u>13</u>	<u>0</u>			
Total	62,793	12	1			

of which the "medium" (average) is15,698 8 0

Ordinary charges to the surveyor of marine victuals:

	£	s	d
1614	3,752	2	9 $\frac{1}{2}$
1615	3,770	8	2 $\frac{1}{2}$
1616	4,401	7	7 $\frac{1}{2}$
1617	<u>3,660</u>	<u>18</u>	<u>2$\frac{1}{2}$</u>
Total	15,584	17	10

of which the average is 3,896 4 5

Total ordinary charges p.a. by average 19,594 12 5

The average for the same four years was used to calculate the extraordinary charges. The year 1613 was properly excluded, it

was pointed out, because the transport of Princess Elizabeth to Flushing was a "great and unusual charge".

Extraordinary charges to the treasurer of the navy:

	£	s	d	£	s	d
1614	11,205	12	4			
1615	11,011	12	10			
1616	8,199	12	8			
1617	<u>9,944</u>	<u>13</u>	<u>2</u>			
Total	40,361	13	2			

of which the average is 10,090 8 3

Extraordinary charges to surveyor of victuals:

	£	s	d	£	s	d
1614	10,721	13	8			
1615	11,597	8	1			
1616	8,541	8	8			
1617	<u>10,000</u>	<u>17</u>	<u>6</u>			
Total	40,861	12	11			

of which the average is 10,215 8 3

Total extraordinary charges made to treasurer
and surveyor of marine victuals 20,305 16 6

Other great extraordinary payments were made for cordage.

Figures given for such annual charges since 1609 were:

		£	s	d
Muscovy Co.	1609	18,173	8	7
	1610	8,476	9	8
Messrs. Grenewell	1610	4,888	6	1
and Styles	1611	11,506	4	5
(Contractors)	1612	6,623	3	7
	1613	9,439	3	7
	1614	9,208	13	0
	1615	13,353	2	10
	1616	12,093	18	8
	1617	10,008	3	10
	1618	<u>5,125</u>	<u>16</u>	<u>3</u> ¹
		<u>108,895</u>	<u>16</u>	<u>3</u>

1. The figure for the first six months only of 1618.

The roughest calculation demonstrates an average annual expenditure on cordage in excess of £10,000; the years 1614-17 show an average of more than £11,000. However, the commission had no use for such facile conclusions. Since the only real cost involved came from cordage that was spent, the figures used were based on the amounts issued for moorings and sea-service according to the storekeeper's accounts and averaged over the last seven years.

Amounts of cordage spent 1611-17	tons	cwts	qtrs	lbs
Moorings	867	14	3	2
Sea-stores	1,239	17	2	15
Total	<u>2,107</u>	<u>12</u>	<u>1</u>	<u>17</u>
of which the average is	301	1	2	23

Thus the annual average expense in cordage (valued at 30s. per cwt.) was £9,032.12s.2d.

The remaining extraordinary payments made in those years were for ship repairs and building.

	£	s	d
1609 for finishing the <u>Victory</u>	4,071	9	6
1610 May 15 for building a ship of 600 tons in place of the <u>Bonaventure</u> . £5,700 allowed of which (though no ships were built) there was received	1,700	0	0
Nov.24 for finishing the <u>Prince Royal</u> , besides £6,000 formerly paid	2,500	0	0
1612 for repairs to the <u>Merhonour</u> , <u>Defiance</u> , <u>Dreadnought</u> , and converting H.M.'s timber into plank	11,316	2	6
1614 June 14 for repairs to the <u>Vanguard</u>	3,867	0	0
1615 Nov.30 for finishing the <u>Merhonour</u> , <u>Defiance</u> , <u>Dreadnought</u> and <u>Vanguard</u>	7,487	10	0
1617 Feb.28 for rebuilding the <u>Elizabeth</u> , <u>Triumph</u> , <u>Rainbow</u> and <u>Antelope</u>	3,700	0	0
1614-17 for land carriage of timber at the rate of £500 p.a., for four years ended in 1617	<u>2,000</u>	<u>0</u>	<u>0</u>
	<u>36,642</u>	<u>2</u>	<u>0</u>

Although this sum was received in seven years, because two years passed without any receipt for these purposes, the commission averaged the annual expense over the nine years 1609-17¹ at £4,071.6s.10d.

This section of the commission's report may thus be summarised:

Yearly average	£	s	d
Ordinary charges to treasurer of navy and surveyor of marine victuals	19,594	12	5
Extraordinary charges to treasurer of navy and surveyor of marine victuals	20,305	16	6
Extraordinary charges for cordage	9,032	12	2
Extraordinary charges for ship-building and repairs	4,071	6	10
Total	<u>53,004</u>	<u>7</u>	<u>11</u>

"So the whole yearly charge of his majesty's navy that could not keep it from decay, is by the rates aforesaid for all payments, excluding Patentees and not valuing his majesty's timber, £53,004.7s.11d." ²

Having demonstrated the present state of the navy the commission set out in nine categories the reasons for that state.

First, work on a large scale had been taken in hand and a great many workmen kept in pay when neither the materials nor the money had been provided. This caused the wage bills for shipwrights and caulkers to reach unprecedented heights for peace time.

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1. The averaging of this sum over nine years is a further example of the commission's businesslike objectivity.
 2. S.P.(D.), Jas. I, ci, 11.

	£	s	d
1614	4,831	14	4
1615	5,032	9	4
1616	3,975	7	5
1617	3,532	11	4
	<hr/>		
Total	<u>17,372</u>	<u>2</u>	<u>5</u>

In the words of the report,

With which chardge there might have bene buylte for carpentry and caulking woorke 8 new shippes of 800 tons apeece, as the accompts of the East India Co. doe prove, yet all this while the kinges shippes decayed and if the Merhonour were repaired, she was left so imperfect that before her finishing she beginnes agayne to decay.¹

The second cause dealt with the acceptance of materials of poor quality from the contractors.

When provisions are made, the best are not chosen nor the worst refused. This appeareth at Depteford by the store of unserviceable tymber and 14800 ft of shells and 2400 ft of rotten plancke and a whole house full of other refuse stuffe. But specially in the cordage whereof thoughte some be better than the last that came from Muscovia yet part (in the iudgment of skilfull masters and ropemakers), is neither good hemp, nor well dressed, nor well spun, and so long iawed and ill layde that a cable of 19 ynches was thought to wante nere forty mens worke.² Besides, compared with the best cordage in many sizes these have not much above halfe so many thrids [threads] in a skeine and withall six or seaven poundes too much tarre in every cth waighte at the least. This the boatswains complayned of (as they say) yet no stay nor redresse was made thoughte the merchaunts tell us they were and are readye to receive backe what shall justly be refused.³

The third cause concerned the scales in the storehouse at Deptford, which, so the clerks confessed, had been for many years weighing light by about one pound in every hundredweight. The loss on just over 2,761 tons of cordage received from the

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1. S.P.(D.), Jas. I, ci, 12.
 2. "Long iawed" (jawed) meaning that the twists in the rope were long and therefore looser than if they had been properly short. Thus the cable was weaker.
 3. S.P.(D.), Jas. I, ci, 12.

contractors amounted to £828.6s.6d, besides great losses in Muscovia cordage and other provisions taken in over those scales.

The fourth category dealt with procedures that were even more reprehensible: entries in the storekeepers' books showed stores of greater value than had actually been received. Typical was the case of a 16-inch cable being entered at 2 lbs. overweight. The excuse made was that as it dried out shrinkage had occurred during the two years the cable had been stored, but when it was compared with best Muscovy cable of similar age, length and kind the latter was found to be heavier by more than 7 tons, the difference in monetary value being £249.15s.6d. Several other discrepancies concerning cables were noted, but perhaps the most surprising confession was that which admitted the addition to one bill of 10 cwt. of iron for work other than the king's.

The neglect of necessary work while much was spent on unnecessary stores was the subject of the fifth category. Once again the material in question was chiefly cordage. In 1609, with some cordage remaining in hand, £1,800 was paid to the Muscovy Co. for more. The survey of 1611 showed almost 700 tons in store, enough to rig and fit anew all the ships then fit for service. Thus until this supply had been greatly reduced the only necessary charge should have been for moorings and sea-service. The report observed that in former years Sir John Hawkins had easily provided moorings for the same number of ships at a cost of £1,200 p.a. The commission allowed £2,500 p.a. (£1,300 for increase in prices) and £2,000 for service on the Narrow Seas, "very generous if good husbandry used", a total of £4,500 p.a. By this calculation the requirements for the years 1611-17 should have amounted to £31,500 rather than the £65,851 that was actually

spent, and the commission adjudged £34,351 to have been spent on unnecessary cordage.

Masts had been similarly over-purchased. No fewer than 541 remained in store, at least one third of which, the commission's experts calculated, would be so decayed as to be useless by the time they would be required. These 541 masts had cost the king £6,768, yet the repair of all the ships and the provision of masts for ten new vessels would cost no more than £2,000. In consequence the king had borne an unnecessary charge of £4,768.

The sixth category of waste showed the exorbitant prices of materials bought for the royal service. The report set out three pages of items comparing the price charged to the king with the price paid by merchants for the same article. The following examples are typical:

Item		King's price			Merchant's price		
		£	s	d	£	s	d
Masts of 20 hands	each	20	0	0	10	0	0
Anchors (great)	each	3	0	0	1	15	0
Tarred lines, per 100		1	12	0		1	2
Flags 16 ft breadth	each	5	5	0	2	13	4
Tar per last		18	0	0	7	10	0
Longboats 35 ft.		39	0	0	25	0	0
Pinnaces 28 ft.		20	0	0	11	0	0

The report listed 58 items, the increase in price ranging from 0% on white twine (the only item not increased) to nearly 3000% on tarred line.¹

The average price increase was approximately 51%. There were eight items increased by 100% or more: Hamburg twine, deep sea line, tarred line, Great Band tar, Herring Band tar, Middle

1. The vast increase in this item is perhaps accounted for by the simple transposition of figures into different money columns. Although the increase is so huge, it may have been felt that such a change might be less noticeable in a cursory inspection. Certainly it might always be claimed that the error was one of carelessness rather than deliberate fraud.

Band tar, Denmark deals, and baulks of timber. Of the twenty-eight items in which the increase was 50-100%, three notable instances are 26 ft. pinnaces 95%, 28 ft pinnaces 81%, and 16 ft. broad flags 98%.

The seventh category returned once more to the question of cordage, and the sizes of mooring cables in particular. The new cordage that had been demanded annually to moor all ships (118 cables p.a.) amounted to 183 tons 14 cwt. 3 qrs. 20 lbs., yet apart from the issues to ships at sea or in dry dock those made annually during the seven years 1612-18 were as follows:

	tons	cwt.	qrs.	lbs.
1612	150	18	1	24
1613	135	13	3	3
1614	96	13	3	1
1615	155	3	0	0
1616	132	1	1	24
1617	124	5	3	4
1618	117	14	0	16
	<hr/>			
Total	<u>912</u>	<u>10</u>	<u>1</u>	<u>16</u>
Average <u>p.a.</u>	130	7	0	22
Value at 30s. per cwt. £3,910.15s.0d.				

Such amounts might be lessened by a reduction in the size and length of mooring cables, for upon consultation all the masters attendant had agreed that the cables were generally not merely too large but also too long. They themselves proposed the new scale of issue. The report set out tables showing for each ship the length of each cable currently supplied, the length actually needed according to the revised scale, and the difference or wastage. For example, in the case of the Anne Royal there was an unnecessary length of 10 fathoms of 18 inch cable (7 cwt.), and 25 fathoms of 17 inch cable (13 cwt.). The total excess weight for the whole fleet was 13 tons 12 cwt., to the value of £408 p.a.

This loss was further compounded since the extra length of the cable was never used. Having remained inboard throughout its use, free from wear and tear of strain as well as from the continual wetting and drying process suffered by the "working" part of the cable, the "bitter ends"¹ as they were called were still as good as new although written off at the same price as the rest of the cable. Similarly, the wastage because of over-large cables amounted throughout the fleet to 8 tons 14 cwt. 1 qr., or £261.7s.6d. In recent years the practice had arisen of providing all ships with stream cables,² although the masters attendant were again unanimous in the opinion that they were unnecessary for ships of the size of the Dreadnought (400 tons), or smaller. The wastage for this item is included in the following summary, as is the cost of two 12 inch cables, allowed for the strengthening of the chain across the Medway at Upnor, but which in 1613 were considered unnecessary.

	£	s	d
Unnecessary provision of stream cables	171	18	9
Cables for chain at Upnor	84	15	0
Wastage by over-long cables	408	0	0
Wastage by over-size cables	261	7	6
	<hr/>		
	926	1	3

Still another aspect of the great waste in cordage which concerned the commission was the method used to dispose of rope

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1. So called because they were made fast to the bits, the large, square timbers which protruded through the deck for the purpose.
 2. A small cable used when anchoring in a river, or in fair weather when anchoring in a tide race; the idea being that the smaller tackle, provided it served the purpose, was much easier to handle and saved the heavy cables unnecessary wetting.

and moorings that had been replaced. This went to certain boatswains who received annually

- (a) $22\frac{1}{2}$ tons of old moorings to furnish the needs of ships both at sea and in harbour.
- (b) 20 tons more.
- (c) Whatever other 'old' cordage that came in paying at the rate of £8.10s. per ton for moorings and £7. per ton for "sea junk".¹

Some of the same boatswains received all "brown paper stuff" at £3.10s. per ton. Each year the master caulker was supposed to receive 28 tons of moorings to serve all the ships with oakum at £70. for the first year, £75. the second year and £100. the third year. There were also other 'contracts'. At Chatham the whole rigging of the Merhonour went to the ship's boatswain for disposal; and at Deptford, a dozen cables from launching tackles went to the clerks there. Even accepting these rather dubious means of disposal, however, the commission could find no reasonable balance between receipts and issues. The summary illustrates the position very clearly:

	tons	cwt.	qtrs.	lbs.
Receipts acknowledged by boatswains over 3 years	174	3	3	6
Receipts of master caulker	85	2	3	26
Brown paper stuff, much more than acknowledged	40	0	0	0
	<hr/>			
Total	299	6	3	4

1. "Junk" appears to be the term given to all cordage withdrawn from its original service. "Brown paper stuff" was used to denote cordage that had no further use except as caulking material.

	tons	cwt.	qtrs.	lbs.
Issues recorded in past 3 years	891	16	3	12
less amount acknowledged as received	299	6	3	4
	<hr/>			
Amount not accounted for	592	10	0	8

The eighth category dealt with unnecessary charges placed on the king's service, such as the transportation of ships from Chatham to Woolwich or Deptford only to be broken up entirely or perhaps torn down to the keel for rebuilding. The four ships¹ currently in dock were a good example, for their transportation costs had been 1,000 marks (£666.13s.4d). Of a similar nature was the building, renting and enlarging of houses for private use; the employment of aged men and boys where a man's strength and agility were essential, and the selling of places at such rates that the buyers freely admitted that "they will not paie and woorke, and that they cannott lyve except they may steale".² On the sea books were to be found many new and unnecessary allowances such as treble wages for lieutenants, and vice-admirals receiving allowances from each of the exchequer, the treasurer of the navy and the surveyor of victuals for themselves and for a number of servants. The principal officers had been receiving wages and victuals for a dead pay in each ship, and lastly there were to be found seven or eight admirals, vice admirals and captains all with extraordinary allowances in the space of one year.

In the ninth and final category, the report indicts the principal officers and their management, which was considered to be

1. The Antelope, Rainbow, Merhonour and Defiance.
 2. S.P.(D.), Jas. I, ci, 17.

the real basis of the navy's disorders. Once more however it must be asserted that the commissioners were admirably objective. There are no names nor so much as a hint of the pointing finger. The attack is upon the system employed rather than upon the men employing it. The report condemns the multiplicity of offices and the poverty of the wages, and the principal officers' habit of committing trust to inferiors and clerks, some of whom had, in part, maintenance from the merchants providing the goods. Similarly the unwillingness to sign orders, particularly on the part of the principal officers is also criticized, as is the practice of allowing warrants and vouchers for issue to be made out by those most interested in keeping high the king's expenses. The last point made by the commissioners in this section was the total inadequacy of any surveys made under the existing system. In the same way no proper warrants were made for materials sent out from the stores, accounts were not kept, and indeed the system made it impossible to keep any true account or record of any large scale work or service undertaken.

This statement of the condition of the navy was to form the basis of the commission's report. With the survey complete, the next task was to consider its implications and recommend a means by which the navy's disorders could be removed. There are unfortunately no minutes of the commission's deliberations, nor any record of how often it met. The last dated survey report is for 26th August, which, since the recommendations were submitted to a meeting of the king and privy council on 2nd November 1618, suggests that the commissioners had at most a period of eight weeks to consider the navy's future organisation. The three sections of the report dealing with this aspect of their work are the subject of the next chapter.

CHAPTER II

The 1618 Commission of Enquiry: Recommendations

Although the three books of recommendations were not formally presented until 2nd November, the events recorded at that meeting make it clear that those present were already aware of the contents. The first of the three books containing the commission's recommendations was entitled "Propositions for bettering the State and lessening the Charge of the ships that now remayne". This in turn was divided into three parts: "the Number of ships, their State, and the Charge of the Navy!"¹

The number of ships in the navy was dealt with in eight points.

- i. Of the existing establishment there were to be continued in the service 23 ships, 2 hoys and a lighter.
- ii. The twelve unserviceable ships, together with the Elizabeth Jonas and the Triumph which were currently in dry dock at Woolwich unable to be moved, were to be sold to the highest bidder who would break them up at his own charge.²
- iii. The Garland and the Mary Rose at Chatham were to be grounded at a point where their timbers might be salvaged to wharf the proposed new dock.
- iv. Timber allocated to the Tremontana and the Quittance (at Deptford) was to be used elsewhere, and the extensive repairs to those two unserviceable ships was to cease.
- v. The Disdain (pinnace) was either to be grounded or taken aboard another ship so that no further expense might be incurred for her mooring or guard.
- vi. The Primrose, in Ireland, was to be disposed of or sold so that she no longer incurred any charge.
- vii. The Bonaventure, Advantage, Charles and the ketch, none of which then existed were to be removed from charge.

1. S.P.(D.), Jas. I, ci, 22.

2. Marginal note of approval, "fiat" for each of these items except that concerning the Primrose, which was queried.

viii. The four galleys were to be laid up in a creek at no charge or hazard until they might be disposed of satisfactorily.

For the state of the ships, the recommendations were three. First, such imperfections as by the book of survey were indicated in any of the 26 vessels were to be repaired annually, so that in five years all ships would be perfect. Each vessel was to be maintained in a serviceable state by work done afloat until she required attention in dry dock. Each year every ships was to be caulked and ransacked throughout and one third of the fleet was to be graved, all these charges being placed upon the ordinary. Second, with regard to furniture, all rigging required was to be supplied according to the survey book. For sails, the ships were to be suited according to the survey book drawn up at the commission's request, which showed how, of 182 sails needed, 104 might be supplied by "stragling" sails of other ships. The remainder would be newly made from canvas in the stores, the whole fleet being fitted at a cost of £307. Flags and ensigns would best be produced as the king's service required. All other furnishings had either been found not defective or else had been included in the long list of necessary repairs.¹

It is perhaps not surprising that the remainder, and by far the greatest part, of this section of the report is concerned with the navy's financial affairs. In dealing with the costs of the navy, the commission had no alternative but to refer to the king himself the continuance of fees and allowances paid directly from the exchequer, for since such payments were made on royal

1. Marginal note, "All this agreed unto".

authority they were beyond the commission's jurisdiction. However, although not presuming to make recommendations in such matters, the commissioners observed "how the yearly charge of the navie is thereby increased and manie services or other expenses procured or drawn on which wee likewise leave to your honours' the privy council's considerations".¹

Concerning themselves with an estimate of the annual ordinary charge, the commissioners first listed their proposed pay increases beside the old rates, for since it had been shown that one of the prime reasons for the navy's disorders was that wages were not commensurate with the responsibility of the office nor the cost of living, their first aim was to make peculation neither necessary nor excusable.

The ordinary companies and their charge for the ships in harbour:²

ship	rank	old rate			new rate								
		Month			Year								
		(28 days)			(13mths 1day)								
		£	s	d	£	s	d	£	s	d	£	s	d
<u>Prince Royal</u>	Master ³	2	0	0	26	1	5	3	1	5	40	0	6
and													
<u>White Bear</u>	Boatswain	16	8		10	17	3	2	0	0	26	1	5
	Gunner	15	0		9	15	6	1	16	10	24	0	3
	Cook	11	8		7	12	1	11	8		7	12	1
	15 Mariners ⁴	7	10	0	97	15	4	7	10	0	97	15	4
	2 Grometts	15	0		9	15	6	15	0		9	15	6
					161	17	1				205	5	1

1. S.P.(D.), Jas. I, ci, 22
2. Ibid., ff23-4. The wage increases afloat affected masters boatswains and gunners only. Wages of cooks at 11s.8d per month, mariners at 10s. per month and grometts (trainees roughly corresponding to the modern ordinary seaman) at 7s.6d per month remained unchanged.
3. The commission proposed to reduce the number of masters attendant from six to the earlier establishment of four, "twoe to diett and lodge aboorde theise twoe Royall Shippes the others to be ymployed as captains of the small ships or pinnaces at the Narrow Seas or as Masters in the Admirall or Vice-Admirall there as the Lord Admirall shall direct, and soe, to increase their wages upon the Seabooke that their £40 in harborowe may be £60 at sea so as each of the fower may have £50 by the year and be half a yeare at sea." A marginal note queries the proposed reduction.
4. A marginal note queries the number of mariners required on the ordinary establishment of the Prince Royal. By the corresponding entry for the White Bear the margins bears a somewhat cynical approval, "fiat doeing their duties for the wages".

ship	rank	old rate						new rate					
		Month			Year			Month			Year		
		(28 days)			(13mths 1day)								
		£	s	d	£	s	d	£	s	d	£	s	d
<u>Merhonour</u>	Boatswain	16	8		10	17	3	2	0	0	26	1	5
	Gunner	15	0		9	15	6	1	16	8	24	0	3
	Cook	11	8		7	12	1	11	8		7	12	1
	15 Mariners	7	10	0	97	15	4	7	10	0	97	15	4
	2 Grometts	15	0		9	15	6	15	0		9	15	6
					135	15	8				165	4	7
<u>Anne Royal</u>	Boatswain	16	8		10	17	3	1	15	0	22	16	7
	Gunner	15	0		9	15	6	1	10	0	19	11	0
	Cook	11	8		7	12	1	11	8		7	12	1
	5 Mariners	3	10	0	45	12	6	3	10	0	45	12	6
	2 Grometts	15	0		9	15	6	15	0		9	15	6
					83	12	10				105	7	8
<u>Due Repulse</u>	Boatswain	16	8		10	17	3	1	10	0	19	11	0
<u>Warspite</u>	Gunner	15	0		9	15	6	1	6	8	17	7	7
<u>Defiance</u>	5 Mariners	2	10	0	32	11	9	2	10	0	32	11	9
<u>Vanguard</u>	1 Gromett	7	6		4	17	9	7	6		4	17	9
<u>Assurance</u>													
<u>Red Lion</u>					58	2	3				74	8	1
<u>Nonsuch</u>													
<u>Rainbow</u>													
<u>Dreadnought</u>	Boatswain	13	4		8	13	9	1	6	8	17	7	7
<u>Speedwell</u>	Gunner	15	0		9	15	6	1	3	4	15	4	2
<u>Antelope</u>	4 Mariners	2	0	0	26	1	5	2	0	0	26	1	5
					44	10	8				58	13	2
<u>Crane</u>	Boatswain	13	4		8	13	9	1	3	4	15	4	2
<u>Answer</u>	Gunner	15	0		9	15	6	1	0	0	13	0	8
<u>Phoenix</u>	2 Mariners	1	0	0	13	0	8	1	0	0	13	0	8
					31	9	11				41	5	6
<u>Lion's Whelp</u>	Boatswain	13	4		8	13	9	1	0	0	13	0	8
<u>Moon</u>	Gunner	15	0		9	15	6	16	8		10	17	3
<u>Desire</u>	Mariner	10	0		6	10	4	10	0		6	10	4
<u>Seven Stars</u>													
					24	19	7				30	8	3
<u>Primrose</u>	Master	16	8		10	17	3	16	8		10	17	3
(hoy)	7 Mariners	3	10	0	45	12	6	3	10	0	45	12	6
					56	9	9				56	9	9

ship	rank	old rate			new rate								
		Month	Year		Month	Year							
		(28 days)	(13mths 1day)										
		£	s	d	£	s	d						
<u>George</u> (drumler)	Master	16	8	10	17	3	16	8	10	17	3		
<u>Eagle</u> (lighter)	6 Mariners	3	0	0	39	2	1	3	0	0	39	2	1
Total at old rates		1,487			0		6						
Increase					375		17		10				
Total at new rates		1,862			18		4		1,862 18 4				

The commission's proposed rates of pay were logical and systematic and were on a graduated scale which had the flagship Prince Royal at the top and auxiliary vessels at the bottom.¹

The highest paid boatswain's rate was raised to the former rate given to a master. The differential in rates first appears in the Anne Royal where the boatswain was awarded 5s. per month less than his counterpart in the other Royal ships. The boatswains of the remainder of the great ships were to receive 5s. less again after which in each successive group the rate was to be reduced by 3s.4d. The boatswain of the smallest type of warship, the pinnace, was to receive £1 per month, i.e. 3s.4d more than the old standard rate of 16s.8d for boatswains on all men of war. The proposed rates for the gunners were linked to this scale, so that with minor differences within the rates for the four Royals, the gunner of one "class" of ship was to receive the same rate as the boatswain of the "class" next below. The masters of the

1. The groups of ships do not exactly coincide either with the lists of the sixteen-twenties which show them divided into ranks, or with the much more common division of the period, into great, middling and small. The groups shown above comprise ships within the following tonnages: the four Royals over 800 tons, 8 ships of 500-700 tons, 3 of 350-400 tons, 3 of 150-200 tons, 4 pinnaces of 50-100 tons, and the auxiliaries.

auxiliary vessels were to receive their old rate of 16s.8d per month i.e. 3s.4d less than the boatswain of a pinnace and the same as its gunner. Thus the scales proposed were logical and just, at least insofar as the rate increased with the relative responsibility accorded to men of nominally equal rank. The scale also planned to eliminate the anomaly which existed aboard vessels of 400 tons and smaller, where the gunner, with his definite but limited responsibility, received more than the boatswain who was responsible for the whole ship. The new rates would increase the total ordinary charge for wages by £375.17s.10d, but against this must be set the drastic reduction of the ships' companies in harbour. The number of men and boys so employed was cut by 87, a saving, even by the old rate, of just over £560.¹

The garrison of Upnor Castle, despite an annual charge of more than £300 in fees and wages, had been found by the commission to be virtually non-existent. The report proposed a new establishment of a master gunner at 1s.3d per day and seven gunners at 1s.0d per day, instead of the former captain and twenty soldiers. This reduction brought a saving of £30 p.a. on the charge to the navy, without regard to what might be saved by the exchequer. The report listed the various estimated costs, among them that for the repairs of the vessels to be retained. This total of £4,542 was to be spread over the five years allowed for bringing the fleet to a complete state. Thus the repair charge for one year was estimated at £908.8s.0d.

1. Compare the ships companies in harbour shown on p.17 with those on pp.34-6. A summary of the proposed charges upon the ordinary which came to nearly £8,100 is shown on p.38.

Estimated Ordinary Charges

	£	s	d	£	s	d	£	s	d
Wages: ships				1,862	18	4			
Upnor Castle				152	1	8			
2 sconces				19	11	0			
Shipwrights and caulkers				631	0	0			
Timber, plank, treenails, pitch, tar etc., (ord. repairs)				1,323	11	0			
Wages and all charges for repairs of ships found defective in the survey £4,542 - 5				908	8	0			
Repairs to wharves, cranes, houses etc.				220	0	0			
Allowances for clerks: ¹									
Treasurer	1	at	1s. per day	18	5	0			
	1	at	8d. per day	12	3	4			
Comptroller	2	"	"	24	6	8			
Surveyor	2	"	"	24	6	8			
Clerk	1	"	"	12	3	4			
Under-storekeeper			Chatham	18	5	0			
			Deptford	18	5	0			
Clerk of the cheque			Chatham	50	0	0			
			Deptford	30	0	0			
			Portsmouth	20	0	0	227	15	0
Surgeon				13	6	8			
Messenger				18	5	0			
Housekeeper at Chatham				13	6	8			
Porters			Chatham (2)	26	13	4			
			Deptford (1)	13	6	8			
Boatswain			Chatham	25	0	0			
			Deptford	25	0	0			
Labourers and Watchmen				154	15	6	289	13	10
Rents for grounds and houses			Chatham	4	6	4			
			Deptford	4	0	0	8	6	4
Paper, ink, quills for office of clerk of cheque			Chatham	24	13	4			
			Deptford	1	0	0			
			Portsmouth	1	8		25	15	0
Travelling charges to and from London				100	0	0	5,769	0	2
Charges for surveyor of marine victuals:									
199 ord. shipkeepers 7 $\frac{1}{2}$ d day per man				2,269	16	10 $\frac{1}{2}$			
Board wages 2 masters 10s. per week				52	0	0			
Candles for 4 Royal ships				8	10	8	2,330	7	6 $\frac{1}{2}$
Total of all ordinary charges							8,099	7	8 $\frac{1}{2}$

1. Marginal note for each of these items "fiat". For wages £908.8s.0d however, there appears "quere by meetinge", subsequently crossed through when approval was given.

The total payments to clerks chargeable to the navy treasurer was £227.15s.0d; that for other dockyard officials and workmen £289.13s.10d. Slight changes were proposed in order to rationalise the organisation, but savings were very small. For example the post of keeper of the plug was to be abolished and the duties assumed by the boatswain of the yard. The plug-keeper had formerly received £12 p.a., of which wages amounted to £5.4s.0d and diet £6.16s.0d. A fee of 5 marks (£3.6s.8d) was to be included in the boatswain's £25 p.a., but he was allowed no diet money as keeper of the plug.

The total charge to the navy treasurer for 26 ships, £5,769.0s.2d, approximates to that for more than 30 ships from 9° to 32° Elizabeth, which was £5,714.2s.2d. In 1590, when the establishment was increased to 43 ships, the ordinary charge became £8,973, an amount which had continued, the commissioners pointed out, until Sir John Hawkins's death in 1596.

The commissioners then considered the extraordinary charges, a summary of which is shown on the following page. The normal cost of sea-service was occasioned by the guard which patrolled the Narrow Seas, the coasts of Ireland and the west of England.¹ This was usually provided by one middling and two small ships and a pinnace. The report gives as examples the Dreadnought, Crane, Phoenix and the Seven Stars. The proposed complements were much reduced however, the respective figures being 120, 60, 60 and 40 men, instead of 200, 100, 100 and 40 men,² a saving of 160 men. The total estimated for a year's sea-service was £6,886.9s.10d.

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1. There seems to have been no attempt to differentiate between summer and winter guards until 1642.
 2. A marginal note queries the proposed ships' companies.

Estimated Charges (Ordinary and Extraordinary)

	£	s	d	£	s	d	£	s	d
Ordinary							8,099	7	8½
Extraordinary									
Prest and conduct money (London-Chatham areas) 240 3s. per man	36	0	0						
Wages 365 days 280 men at 6d per man day	2,555	0	0						
Victuals 365 days 280 men at 8d per man day	3,406	13	4						
Grounding and graving each ship	72	11	6						
Carpenters sea-stores (4 ships)	180	9	11						
Boatswains' sea-stores (4 ships)	495	15	1						
Repainting ships; conduct in discharge	<u>140</u>	<u>0</u>	<u>0</u>	6,886	9	10			
Cordage moorings	1,368	1	10½						
sea-service	<u>1,421</u>	<u>12</u>	<u>6</u>	2,789	14	4½			
Sails to furnish all ships				<u>307</u>	<u>0</u>	<u>0</u>	9,983	4	2½
Total annual charges estimated for marine causes							<u>18,082</u>	<u>11</u>	<u>11</u>

Cordage (ordinary)

	tons	cwt	qrs	lb	Value	£	s	d	
In store									
Deptford	832	12	2	21					
Chatham	<u>22</u>	<u>11</u>	<u>2</u>	<u>0</u>					
Total	855	4	0	21					
less supply demanded by masters	<u>93</u>	<u>18</u>	<u>2</u>	<u>12</u>					
Remains, some of which to be exchanged	<u>761</u>	<u>5</u>	<u>2</u>	<u>9</u>					
Amount required if old moorings used	45	12	0	7	1,368	1	10½		
New moorings issued formerly	130	7	0	0					
New moorings with proposed reductions	<u>70</u>	<u>9</u>	<u>1</u>	<u>7</u>					
Saving	59	17	2	21					
Amount required for sea-service by each of the four ships									
		tons	cwt	qrs	lb				
<u>Dreadnought</u>		19	6	0	0				
<u>Phoenix</u>		11	1	1	0				
<u>Crane</u>		11	1	1	0				
<u>Seven Stars</u>		<u>5</u>	<u>19</u>	<u>1</u>	<u>0</u>				
Total		47	7	3	0	1,421	12	6	
Total ordinary cost of all cordage p.a.						<u>2,789</u>	<u>14</u>	<u>4½</u>	

Cordage was the other expensive item in the extraordinary charges. The supply of rigging to meet the masters' requirements, and which was available in the stores, amounted to 93 tons 13 cwt. 2 qrs. 12 lbs. However there were certain sizes of rope not in store. To provide these without additional charge to his majesty, the commissioners proposed to return the worst of the cordage in store to the merchants, in exchange for the same amount of good quality and more useful size. By such means there might be no further charge for the current year's service, and for the following year charges for moorings and sea-service only. As a further economy, it was proposed that when in September 1619 the moorings were being renewed in preparation for the winter, ships of the second rank and smaller, for their easternmost side only, should be provided with the best of the used cables.¹ By this means the supply of new cordage required would be reduced to 45 tons 12 cwt. 7 lbs., valued at £1,368.1s.10¹/₂d. If all the moorings were renewed as in the past, the cable sizes reduced as recommended, and stream cables not used in the lesser ships, the weight of cordage for all ships would be 70 tons 9 cwt. 1 qr. 7 lbs. Under the former rates of issue the amount (calculated by average) was 130 tons 7 cwt. The four vessels of the ordinary guard would require about 47 tons of cordage whereas the former, larger, guard required approximately 177 tons. Should the partial use of old

1. No explanation is given for this, but presumably it is that since the prevailing winds were from the s.w., the old cables would be in use on the leeward side and therefore would not be subjected to great strain. The moorings on the windward side would be new.

moorings be permitted, the total quantity of new moorings to be supplied annually (until the service increased) would be 97 tons 13 cwt. 3 qtrs. 7 lbs, which at 30s per cwt. would mean a yearly charge of £2,789.14s.4½d, compared with the former average annual charge of £9,032.12s.2d. A summary of the extraordinary charges amounting to almost £10,000 is shown on p.40. There could be no attempt made to calculate the amount that would be saved in the example given, but the commissioners pointed out that with more ships at sea the average charge had previously been for 177 tons 7 cwt.

The commission planned to decrease the charges to the king by practical means; not, it was hastily added, by weakening the guard or by reducing reasonable pay, or by anything that would dishonour his majesty or his service.

The first step would be the removal from charge of the ships falsely listed, such as the Bonaventure,¹ the Advantage² and the Charles.³ The charges made were for wages and victuals of the eleven supposed shipkeepers. The disposal of the nine ships, four galleys, and the ketch, all of which were unserviceable would remove also the charge of a further 71 men. In future the office of assistant to each of the two masters attendant at sea should be discontinued as would that of the two masters attendant created since 1588;⁴ there should be no purser allowed on the ordinary of any ship but the Royal class wherein he was to be shown as a cook, and no cooks allowed on any other ships;

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1. Broken up in 1611 but charged to the king at £63 p.a. ever since.
 2. Seriously damaged in a fire in 1613, not repaired but "maintained" at a charge of £104.9s.5d p.a.
 3. Disposed of in Scotland in 1616 but since charged at £60.16s.10d p.a.
 4. I.e., leaving four only. This point was queried in the margin.

altogether a saving of 36 men; no carpenter should be allowed on the ordinary of any ship, for they had been "borne to maintain pay, who doe no work and neither eat nor sleep aboard in harbour", a saving of 30 men; no dead pays "allowed by custom", a saving of 36 men; in all a total saving of 188 shipkeepers. The removal of pursers and cooks from the ordinary would also mean the removal of the "servants" that custom had long allowed to each.¹ As part of their long-term plan for economy, the commissioners recommended a concentration at Chatham and Deptford for all the navy's requirements so that the charges at Woolwich might be reduced and later abolished. Pensions were to be reviewed and those which had been intended as outright rewards, but which by various means the recipients had succeeded in having continued, were to be stopped.² Upnor Castle, the chief fortress for the defence of the Medway, was supposed to be manned by eight gunners and twenty soldiers under the command of a captain. So the accounts were rendered, but in fact the commissioners found the bastion of the navy's defence manned by four scarecrow local men hired very cheaply. The commission suggested that in future the garrison should consist of eight gunners and an officer, to be reinforced by trained soldiers as occasion arose. Another proposal was that the victualling rate, both in harbour and at sea, might be reduced by one penny per day, in view of the current merchant rates and the good harvest of 1618.³ A further saving in manning might be made if a close scrutiny were

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1. A "servant" was usually a boy engaged and paid by the officer who himself drew the servant's official wages and victualling allowance.
 2. The commissioners were not blind to the hardship that some had suffered because of serving the king. It was thought, however, that "dead pays" and sinecures were not the fitting way to reward them.
 3. From 7½d to 6½d in harbour; 8d to 7d at sea.

kept of the sea-book, to ensure that each ship retained only the right number of men required for the current service.¹ Wastage and embezzlement of stores might be curbed by re-establishing an official procedure for drawing stores and supplying deficiencies, each storekeeper having books showing the complete rigging for each type of ship, the proportion of sea-stores for all types of service, the correct distribution of sails, flags and ensigns, the correct number and types of boats and anchors supplied to each ship, and the correct number and size of moorings for each type of vessel.²

One of the more imaginative recommendations from the commissioners was that the pay of subordinate officers should be increased, so that they should have no need to steal to maintain a fair living standard; at the same time the increased wages would justify severe punishments meted out to offenders in the future. The increase in wages for the officers at sea was to be tied to the scales already suggested for the ordinary.³ Thus boatswains were to receive 11d per month above the harbour rate. The wages of the masters attendant were to be maintained at the former rate of £50 p.a., with a slight increase in diet money.⁴ Such increases as were proposed for the clerks of the cheque and other administrative officers were made according to the responsibility of the office rather than being attached to the

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1. A reference to the commission's proposal to reduce complements of each ships on patrol in home waters. Marginal note "quere".
 2. The books of rigging and sea-stores, each showing the equipment for all vessels from Royal ships to pinnaces are in the Adm. Lib. MSS. 12, ff.72-95.
 3. See above, pp. 34-6.
 4. The commissioners considered the prestige of a master attendant enough recognition in itself.

incumbent. The commissioners made no recommendation concerning the wages of the clerks to the principal officers, as they felt this to be pointless until his majesty had decided upon the future administration of the navy. With regard to porters, surgeons and the housekeeper, their incomes were to remain the same, the change being that in future the whole sum would be paid as wages and the supplementary sources of dead pays would be unnecessary. Finally, in this section, the commissioners recommended that the seven boatswains and seven gunners of the ships discharged should be found appointments in the service as soon as possible.

The second part of the commission's recommendations entitled "A Proposition for a new establishment of the Navie Royall by addycon of more shippes," considered the problem under three headings: Building, Furnishing and Maintenance.

The first point to be considered was the number of ships to be built. The commissioners very properly submitted that decisions on such matters were beyond their province, but that they felt justified in pointing out certain facts which his majesty and the privy council might find helpful. In the reign of Henry VIII the navy had consisted of 71 vessels totalling 10,550 tons burthen, of which 30 were vessels of 80 tons or more; in Edward VI's reign there had been 53 vessels totalling 10,065 tons of which 21 were more than 80 tons burthen; in Queen Mary's time the navy had 46 vessels of all kinds; Elizabeth's first year had seen 22 ships serviceable and 10 that might be repaired in an emergency, a total of 32 vessels, and 7,110 tons; in 30^o Elizabeth (1583) there were 176 vessels in the fleet, of which 34 were queen's ships totalling 12,190 tons burthen; in the last year of Elizabeth's reign the navy had 53 vessels of which 33 ships totalled 14,060 tons.

In view of these figures, the commissioners suggested that his majesty could increase his power merely by maintaining this establishment, replacing those discharged because of decay.

This would result in a list as follows:

		tonnage
Royal ships (1st rank)	<u>Prince Royal</u>	1,200
	<u>White Bear</u>	900
	<u>Merhonour</u>	900
	<u>Anne Royal</u> 1	800
Great ships (2nd rank)	<u>Due Reoulse</u> 2	800
	<u>Defiance</u>	800
	<u>Warspite</u> 3	650
	<u>Red Lion</u>	650
	<u>Vanguard</u> 4	650
	<u>Rainbow</u>	650
	One for <u>Elizabeth Jonas</u>	650
	" " <u>Triumph</u>	650
	" " <u>Garland</u> 5	650
	" " <u>Mary Rose</u>	650
	" " <u>Bonaventure</u>	650
" " galleys	650	
	<u>Nonsuch</u>	600
	<u>Assurance</u>	600
Middling ships (3rd rank)	<u>Dreadnought</u>	450
	<u>Speedwell</u>	450
	<u>Antelope</u>	450
	One for <u>Advantage</u> and <u>Tremontana</u>	450
	" " <u>Answer</u> and <u>Charles</u>	450
	" " <u>Quittance</u>	450
Small ships (also 3rd rank)	<u>Adventure</u>	350
	One for <u>Crane</u>	350
Pinnaces	<u>Phoenix</u>	250
	<u>Seven Stars</u>	140
	<u>Moon</u>	140
	<u>Desire</u>	80

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1. Nottingham's Ark Royal of 1588, rebuilt by Phineas Pett at Woolwich in 1610, renamed to honour James's queen.
 2. Sometimes referred to merely as the Repulse, but often, including several places in the 1618 Report the curious name Dieu Repulse.
 3. Found also as Wastespight and Wastspite.
 4. Also as Vauntguard and Vantguard.
 5. Also Guardland and Guarland.

The five year building programme for new ships was recommended thus:

1st year	one of	650 tons	2nd year	one of	650 tons
	" "	450 tons		" "	450 tons
3rd year	one of	650 tons	4th year	one of	650 tons
	" "	450 tons		" "	350 tons
5th year	two of	650 tons			

In view of the period, perhaps the most striking feature of this recommended establishment is its practical relationship to the business of the navy and the complete absence of any prestige project.¹ The commissioners justified every aspect of their proposals; they not only justified the numbers suggested, but also explained why that number should not be exceeded, and why ships of that particular size had been recommended. Not surprisingly perhaps, the first point made was that if their recommendations were carried out, the navy's total tonnage would be at least 3,050 tons greater than the peak reached in the reign of Elizabeth. Having allayed any fears that they were weakening the service, the commissioners explained their reasons. Ships of about 650 tons burden were the most economical vessels powerful enough for normal service, particularly in coastal waters. The four Royal ships could well enough uphold the honour of his majesty and also provide great power when necessary. The king's service and the safety of the country required a fleet of the size projected, but such a fleet would use all the available timber resources in building and maintenance and should not therefore be any larger.² Again, if it were, there would be difficulty in supplying enough brass

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1. As for example the ill-fated Swedish flagship Vasa, the shoddily built Prince Royal, or even the Sovereign of the Seas, which became a workmanlike vessel only after much of its upperworks had been cut away.
 2. It seems probable that the report refers merely to timber resources that were of relatively easy access.

ordnance for all the vessels. The greatest ships would impose limitations in service because of their deeper draught and lack of manoeuvrability, which made their taking out or bringing in particularly hazardous. Cables for such huge vessels were much harder to manage and also were generally less well made, and great anchors and the made-up masts necessary for the Royal ships were not easily supplied. In the past large numbers of small ships, easily set out, had been used on needless employment and with no honour to his majesty. This would be much less likely with the larger ships in which the strength of the navy was to be concentrated. Small ships would always be available on hire from merchants, whilst it was unlikely that common building in an emergency could supply more ships at less or even equal cost. Such a navy as was proposed would be able to carry all the men that the country could raise; it would be a greater force than that of any previous king of England and most important of all, it could counter unaided any foreign threat. It was doubtless with some relish that the commissioners then loosed their sharpest arrow. All this power could be obtained in five years at less cost than had formerly been required to keep the navy in such a pitiful state; and at the end of the five years, the same power could be maintained at a much reduced charge.

For the place where the new ships were to be built, the commissioners seemed to have little hesitation in choosing Deptford, for reasons that were unchallengeable. It was the only yard at that time wherein work could be carried out on two ships at the same time while the yard, docks and storehouses were fenced and the workmen and provisions were to hand.

With regard to the design of the new ships the commissioners

consulted the opinions of the most experienced and skilled seamen alive as well as the writings of others of an earlier age. As a result they resolved that the length should be three times the breadth and also about three times the depth,¹ remembering that ships drawing more than sixteen feet of water rarely sailed well and would prove hazardous in rivers and coastal waters. They should be snugly built, that is, without double galleries and lofty upperworks which tended to make the ships top heavy. Such vessels might look imposing but they were difficult to handle at sea.

To strengthen the ships it was proposed to fit three decks,² the lowest of which was to be two feet below the water-line, and was to run throughout the ship without a step or break. By this means, "though her sides be shott through keepeth it from bulging by shott and giveth easie means to stop the leake".³ The second orlop was to bear the guns and must be placed far enough above the water-line as to enable the whole tier of ordnance to be carried out in all weathers. The third orlop was the open deck stepped at the forecastle and poop, and almost certainly cut at the waist. The cook rooms were to be placed in the forecastle, a growing innovation viewed with disfavour by many shipwrights, including Phineas Pett, builder of the Prince Royal. The commissioners' reasons were sound, however. When the cook room was in the centre

1. A marginal note to be found only in the State paper copy of the report gives this second proportion as $2 \frac{5}{7}$ or $2 \frac{6}{7}$.
2. In the 17th century the word orlop or orlobe was used for what today would be described as a deck. The derivation is from "over-lope" or perhaps "over-loop" and properly described a continuous platform which ran from the ship's stem to her stern. The nomenclature of decks is very involved and is dealt with in detail by Alan Moore, "Of Decks and their Definitions," Mariner's Mirror, I, 178.
3. The commissioners condemned the practice of cutting the orlop off at the waist, *i.e.*, between main and foremast, for the sake of putting in "fine cabins". Such a business had weakened and decayed many ships.

of the ship the heat was able to do the most damage to the surrounding timbers and seams; the centre portion of the ship was more conveniently used as a hold for storing victuals; most important of all, the bearing of all the weight fore and aft with the only slight burden of the cook-room amidships tended to cause "hogging" as had been the case in the Garland and other ships that had to be discharged.

The charge or cost of the proposed shipbuilding programme was of cardinal importance in the report and it is of special interest because the commissioners, prompted by Burrell, had refused to accept the recommendations of their professional advisers. Of the ten ships to be built, six were to be of 650 tons, three of 450 tons and one of 350 tons, and the minimum rates that the shipwrights would admit in their estimate were £8.10s.0d per ton, £8. per ton and £6.10s.0d per ton respectively,¹ producing a total cost of £46,125.² Burrell however disagreed and quoted rates of £8, £7.10s.0d and £6. per ton as being sufficient, which would mean a saving of £2,800 on the total. Burrell's figures were adopted by the commission.³ The report next dealt with the furnishings to be provided. The commissioners had already shown there to be an overabundance of masts and yards (see above p. 26.). The estimate for pulleys, shivers⁴ and tops was made at £9.3s.4d per 100 tons of shipping or a total of £513.6s.8d.

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1. The report gives these as first, second and third rank prices but in this instance "first rank" obviously does not include the Royal ships.
 2. Recte £46,225 which with the difference in estimates (£2,800) subtracted, gives Burrell's figure of £43,425.
 3. There is no record of how closely Burrell's fellow commissioners examined his recommendations, but from the evidence of their attitude in other matters, it seems unlikely that they would have accepted Burrell's figures merely because they were lower, or without some real justification for dismissing the other shipwrights' estimates.
 4. Sheaves, the grooved wheels used in pulleys and blocks; tops in this context probably refers to top blocks, i.e. the blocks or pulleys used to raise or lower a topmast.

Each ship was to carry a longboat and a pinnace, the size and cost of which varied according to the size of the ship:

		£	s	d
ships of 650 tons	6 33 ft. longboats each £23.10s.	141	0	0
	6 26 ft. pinnaces each £10.10s.	63	0	0
ships of 450 tons	3 30 ft. longboats each £21.	63	0	0
	3 23 ft. pinnaces each £9.	27	0	0
ships of 350 tons	1 28 ft. longboat	18	0	0
	1 21 ft. pinnace	8	10	0
		<u>320</u>	<u>10</u>	<u>0</u>

The commissioners calculated the cordage estimate with due regard for the cost of renewing the moorings annually for each of the ships after it was built as well as the provision of new cables for the vessel being built. By this means it was calculated that over five years, the ten ships would require a total of just over 105 tons of cordage for mooring. The estimate for rigging requirements was less complicated.

	tons	cwt	qtrs	lbs		tons	cwt	qtrs	lbs
1 ship of 650 tons	13	17	0	0 x 6 =		83	2	0	0
1 ship of 450 tons	8	18	3	4 x 3 =		26	16	1	12
1 ship of 350 tons						<u>8</u>	<u>18</u>	<u>3</u>	<u>4</u>
Total weight of rigging						118	17	0	16
Total weight of moorings						<u>105</u>	<u>0</u>	<u>1</u>	<u>0</u>
						<u>223</u>	<u>17</u>	<u>1</u>	<u>16</u>

cost at £1.10s. per cwt = £6,716.1s.6d.

Similarly, for sails and anchors:

	£	s	d		£	s	d
1 ship of 650 tons 1 single suit and 3 double sails	308	16	8 x 6 =	1,853	0	0	
1 ship of 450 tons 1 single suit and 3 double sails	245	4	2 x 3 =	735	12	6	
1 ship of 350 tons 1 single suit				<u>152</u>	<u>3</u>	<u>0</u>	
Total for sails				<u>2,740</u>	<u>15</u>	<u>6</u>	
1 ship of 650 tons all anchors	276	12	1 x 6 =	1,659	12	6	
1 ship of 450 tons " "	168	16	4 x 3 =	506	9	0	
1 ship of 350 tons " "				<u>121</u>	<u>2</u>	<u>6</u>	
Total for anchors				<u>2,287</u>	<u>4</u>	<u>0</u>	

The commissioners did not include such extras as flags, waistcloths and top armour since these would be best provided as the need arose.¹

The estimated cost of the building programme could then be summarised:

	£	s	d
Building hulls and masts (with all materials)	43,425	0	0
furnishings: pulleys and tops	513	6	8
boats and pinnaces	320	10	0
cordage	6,716	1	6
sails	2,740	15	6
anchors	<u>2,287</u>	<u>4</u>	<u>0</u>
	<u>56,002</u>	<u>17</u>	<u>8</u>

for which the annual expenditure required would be £11,200.11s.6d.

The final item in this section of the report was concerned with the maintenance of the fleet. The first consideration dealt with the provision of fit and convenient places where the ships might receive attention. Since the transport of ships to Woolwich and Deptford for repairs and maintenance was a costly and time consuming business, the commissioners proposed to build a new dock at Chatham "where Don Pedros shipp was laid up". It was to be 330 ft. long and 36 ft. wide, and despite the use of timber from the Garland and the Mary Rose would cost an estimated £2,000, chiefly, as the commissioners said, "because of the lowness of the marsh, which must be raised above high tide level and the spring suspected nearby; but this charge will quickly be paid for by savings in transportation". In addition, the commissioners planned to house or in some way cover the old galley dock also at Chatham. This would not only make for the better preservation of the king's boats, but also could be put to useful service on other occasions. The covering of the dock would cost £500.

1. Waistcloths: all the cloths hung about the cage work (waist) of the ship, also called fights; top armour: the cloths tied about the top of the masts for show and which were also used to hide marksmen in an engagement.

Because of the building programme, the maintenance costs for the actual vessels would increase until the end of the fifth year. After that although maintenance costs would remain constant, the annual expenditure should drop to near normal level. The ordinary and expected expenses for the next five years could be tabulated as follows:

	£	s	d	£	s	d
1st year Charge for ships, sea-service, wages, victuals etc.	18,082	11	11			
Two new ships	11,200	11	6			
Two new docks	<u>2,500</u>	0	0	31,783	3	5
2nd year same less £2,500 (docks), £307 sails + £292.15s. (14 shipkeepers)				29,268	18	5
3rd year same plus £292.15s. (14 more shipkeepers)				29,561	13	5
4th year same plus £292.15s. (14 more shipkeepers)				29,854	8	5
5th year same plus £292.15s. (14 more shipkeepers)				30,147	3	5
6th year same less £11,200.11s.6d + yearly moorings (21 tons 12 cwt 3 qtrs) £649.2s.6d				19,595	14	5

The fourth and final part of the commissioners' report was concerned with the future administration of the navy; that is how, if they were accepted, the commission's propositions were to be executed. The considerations fell naturally into three categories: the administrative system inherited from the Elizabethan officers, the innovations that had crept in during the previous fifteen years, and the means of re-organisation necessary to make the navy efficient once more.

The "auntient Instruction" centred on three points:

- i. The Lord High Admiral of England, receiving his directions from the king, governed the officers and servyces by his authority and warrants.
- ii. The Principall Officers had their several duties: the Treasurer for monyes, the Surveyors one for the shippes the other for the victualls, the Clerke of

the Navie for the woorkes and the provitions and the Comptroller for all their accounts. And every one for his daily attendance to oversee and dispatch theis different businesses had their fees, travelling charges, botehire and clarkes allowed by patent.

- iii. The inferior offycers had also their severall chardges and trustes. One Clark of the Store received yssued and accompted for all provitions in all places and had no deputy allowed. Two clarkes of the Checke one at Deptford and another at Chatham kept journalls or books of report of the same receipts and yssues as well to charge as discharge the stores, and checke bookes of every man's due. Fower principal masters governed the shipkeepers and guided the shippes.

Three master carpenters commanded the workmen and directed the workes.

Thus the offycers were few and yet all was kept in order by their dayly attendance and contynuall accompts. ffrom these auntyent instructions the offycers declyned long synce by degrees, but of late by more confident and ordinary practise and at last by a new book of ordinances signed by themselves and offered to the state.

Having set down this outline of how the navy had been regulated in the past the commissioners referred back to the first part of their report. Of the nine causes of waste listed, eight were outward manifestations while the ninth and last had pointed to an inward cause. This the commissioners now amplified. They asserted that the principal officers had taken upon themselves the right to make regulations which removed certain rights from the subordinate officers, to embark upon costly schemes without warrant, and to award arbitrary allowances and raise unlawful fees to individuals. Second, the principal officers had changed their proper administrative duties into those of commissioners at large, each seeking advantage but none submitting himself to any service or account. Third, they had for this purpose committed the trust of their position into the hands of clerks who received, surveyed, allowed, issued and did

everything without charge, account, obligation or oath and without sufficient credit or estate to insure his majesty against their defaults. Fourth and last, the elevation of the principal officers beyond their appointment and the consequent raising of their immediate subordinates had led to the creation of a multitude of new offices, many by patent for life. By this means the king had been overcharged, the service weakened and the lord admiral dishonoured, since the right to make such appointments was his prerogative. In any case his warrants should be valid only during pleasure so that the holders might be held in some restraint.

Under these circumstances the commissioners submitted to the king and privy council that the task of restoring the navy could not possibly be performed by the existing administration.¹ Accordingly they offered their services "out of the zeale of our Duty to our Prince and country" to put their recommendations into practice if his majesty would aid them in the following eight ways.

If the king and privy council thought fit, the newly created offices and patents should be suspended thereby restoring to the lord admiral his proper prerogative. Power should be given to the present commissioners to carry out their proposals for restoring the navy as soon as they had been ratified by the lord admiral. The control of the navy (under the lord admiral) should be established in the hands of the commission so that any

1. The commissioners' attitude is again made clear "ffor though wee still forbear all personall taxation, yet the matter it selfe requireth a present reducement of their deviations to the auntyent right course."

three or more of them could execute the proper direction, with power to command money from the treasurer of the navy. Two of the commissioners should be charged with the responsibility for the building, surveying and repair of ships for all the rigging and sea-stores pertaining to them, and for the execution of the duties formerly carried out by the surveyor of the navy with the advice of the other commissioners. The commissioners should be authorised to appoint a clerk of the acts. The commissioners should be required to set down regulations for the government of the subordinate officers and the direction of each aspect of the service, the said regulations to be presented to the lord admiral for his approval. The commission should continue for the term appointed, or for as long as the king, upon the recommendation of the lord admiral, should think fit. After the execution of the commission's propositions the king might be pleased either to continue the commission in office or restore the government of the navy to the hands of the principal officers. A fixed monthly assignment from the exchequer should be established to cover the annual sums required by the propositions.

The commissioners then submitted that direction was required in four areas of administration according to propositions put forward by the commission, if the service was properly to be re-organised on a sound basis. The first dealt with disposal or discharge of both ships and men which, for various reasons should no longer be kept on as a charge to his majesty, and there followed the proposals for the Elizabeth Jonas, Triumph, Garland, Mary Rose, Quittance, Tremontana and Disdain, as set out at the

beginning of the recommendations.¹ In addition the four galleys were to be laid up in the appointed creek until their final disposal.

With regard to discharging men, the commissioners also pointed out the saving of £52.2s.8d in wages and victuall money for the two assistant masters discharged.² But in this field they were concerned mainly with the disposal of the numerous dead pays. There were five types found in the ordinary. First, wages and victuall money paid for men on ships long since disposed of but not in fact discharged:

	men	wages			victuals		
		£	s	d	£	s	d
<u>Elizabeth Bonaventure</u>	3	28	4	10	34	4	4½
<u>Advantage</u>	5	53	6	5	57	0	7½
<u>Charles</u> 3	3	24	19	8	34	4	4
	—	—	—	—	—	—	—
	<u>11</u>	<u>106</u>	<u>10</u>	<u>11</u>	<u>125</u>	<u>9</u>	<u>4</u>

Second, wages and victualling money paid to keepers of ships that had been discharged: Elizabeth Jonas, Triumph, Garland, Mary Rose, Quittance, Tremontana, Disdain, four galleys,⁴ 71 men with an annual total charge of £563.5s.1d for wages and £809.16s.10½d for victuals.

Third, wages and victuals allowed to pretended shipkeepers never in attendance:

	£	s	d
23 Pursers	178	19	10
13 Cooks	84	14	8
<u>30</u> Ord. carpenters	<u>353</u>	<u>12</u>	<u>8</u>
<u>66</u> ⁵	<u>752</u>	<u>16</u>	<u>3</u>

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1. Marginal note "agreed" for all these items, with the addition in the case of the Quittance and Tremontana of the note, "2 other of this burthen to be built".
 2. A marginal note opposite this item in the N.M.M. copy of the report reads, "Discharged unless they be continued on the Masters charge".
 3. Marginal note "discharged".
 4. Marginal note "discharged" to cover all eleven vessels.
 5. Marginal note "discharged" for all 66 men.

Fourth, wages and victualling money allowed in the names of men unknown and not serving¹ 36 names in seven vessels giving a total of £234.12s.0d wages and £410.12s.6d p.a. for victuals.

Fifth, wages allowed to officers in the names of shipwrights:

		£	s	d
Clerk of the cheque,	Chatham	23	5	0
"	Woolwich	23	5	0
"	Deptford	23	5	0
Richard Merritt	"	8	0	0
John Apslyn	"	6	0	0
Daniel Duck	"	2	13	4
John Rawson	Carpenter ²	6	0	0
		<u>92</u>	<u>8</u>	<u>4</u>

The dead pays on the sea-books fell into two categories. For the first, each of the three principal officers had received wages and victualling for one dead pay in each ship at sea. Thus with the standard guard of four ships the total wages (for 12 men) amounted to £84.14s.4d; victuals £146.³ The second category contained payments to fleet officers for dead pays in their retinues. The admiral of the Narrow Seas had been allowed wages and victuals for 16 men, the captain of the Answer the same for eight men, the total charge for which 24 men amounted to wages £169.8s.8d, and victuals £292.

By these figures then, the commissioners looked to save annually £1,894.7s.10d in wages, and £2,562.16s.4d in victuals, a total of £4,457.4s.2d. However, from these "defaultations" the

1. These fictitious names are all listed S.P.(D.), Jas.I, ci, 49.
2. Marginal note for these seven items "discharged". The MS. mentions only wages allowed to these officers, but it is surprising if they were not also receiving board wages for these dead pays.
3. Marginal note "discharged".

commissioners were to deduct the wages of the following at
Chatham:

	£	s	d
Surgeon	13	6	8
Porters (2)	26	13	4
Housekeeper	13	6	8
Boatswain of the yard (to keep plug also) ¹	<u>25</u>	<u>0</u>	<u>0</u>
	<u>78</u>	<u>6</u>	<u>6</u> ²

To this they also added the cost of the allowances to the six subordinate officers for whom pensions had been recommended.³

At the same time, the commissioners proposed to pay off and replace most of the shipkeepers, since very few were competent enough to be reliable in an emergency.⁴ Those able men who were to be discharged for other reasons however, the lord admiral was recommended to employ elsewhere.

The second direction sought from the privy council concerned the work on ships at Deptford which needed much closer supervision if the future shipbuilding programme was not to be jeopardized. In this regard, the commissioners made three recommendations: that Walter Bright, master shipwright at Deptford be summoned and charged to have current work completed by the following March; that to ensure an adequate supply of workmen, it should be ordered that the thirty workmen discharged from the Chatham ordinary might be sent to Deptford, with some small conduct money; that merchant sources should be approached to supply the timber stores necessary to complete current works,

1. Marginal note for these four items "allowed".
2. Recte £78.6s.8d.
3. John Austen, master, aged and blind; John Avale, boatswain aged and blind; Thos. Butler, gunner, aged, but could be employed as an instructor; Richard Shawe, gunner, aged and unserviceable; John Cawston, gunner, fatigued in the service; John Estridge, gunner, aged and sickly. Marginal note, "allowed".
4. Marginal note "Agreed unto as most necessary".

for his majesty's forests could not supply them at present.¹

The third direction dealt with the shipbuilding programme to begin in the spring of 1619. For two ships of 650 tons and 450 tons respectively, the yard would require:

	Loads
crooked timber (to be moulded in the woods)	600
straight timber	700
planks of all kinds	360
knees	140
deals to be seasoned	300 (spruce)
tree-nails	8000 (various)

However, his majesty already had large quantities of timber felled, part of which had been squared and then neglected, which would more than meet these immediate requirements.² Of this the contractor, White, should have completed his haulage contract by Candlemas of that year (1618). Unfortunately, misdirection from the principal officers had caused each load to be discharged at Woolwich, and the transfer from there to Deptford would cost between three and four shillings a load. White had agreed to move a quantity of that timber to Deptford and make ready in the woods all that not yet delivered so that it might be brought speedily in the spring. Accordingly the commissioners sought direction that a shipwright should be despatched to take charge and order the moulding of timber, preparing the knees and tree-nails so that only well seasoned timber might be sent.

The cost of providing sheet lead, oil, tar and hair for the two ships would amount to at least £600, but this could be provided from monies owing to his majesty:

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1. Details of these requirements are given in the text of the MS, with a marginal note "letters to be writ to East India Company".
 2. Some 3,000 loads in Buckinghamshire and Hampshire and a further 2,400 tons chiefly in the New Forest.

	£	s	d
Contract sales to various boatswains (old moorings)	676	10	0
" " " David Duck (")	245	0	0
Brown paper stuff to David Duck and Israel Reynolds	45	10	0
Launching tackle sold at Deptford	174	0	0
Cordage and canvas sold to Mr. Pruson (sailmaker)	180	0	0
Old kettles and brass sheaves sold to Nathaniel Tearne		<u>30</u>	<u>0 0</u>
	1,351	0	0
Owed by merchants for cordage delivered light in weight (1 lb per cwt in 2,761 tons)	828	6	6

The fourth and final direction sought was whether his majesty should be repaid the following sums paid out annually by him under Great Seal patents for newly raised offices:

From exchequer	£	s	d
Captain-general of Narrow Seas	481	3	4
Vice-admiral Narrow Seas at 10s. per day and 10s. per month for each of 8 servants	234	12	8
Vice-admiral for service on the Narrow Seas	182	10	0
Surveyor of tonnage	18	5	0
Storekeeper at Woolwich	54	8	4
Clearers of the roads	30	0	0
A captain and 20 soldiers at Upnor (pay)	<u>243</u>	<u>6</u>	<u>8</u>
	<u>1,244</u>	<u>6</u>	<u>0</u>

From the treasurer of the navy

A captain at Upnor Castle	30	0	0
Keeper of the outstores at Deptford	<u>66</u>	<u>13</u>	<u>4</u>

Total from such new offices 1,340 19 4¹

The complete report having been submitted by the Commission of Enquiry, the king turned to the principal officers who were present,² and asked them if they were prepared to administer the navy according to the commissioners' recommendations. Not surprisingly

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1. This would seem to be the one occasion on which the commissioners' zeal overcame their objectivity. Even if the king could have reclaimed by law monies correctly issued under the Great Seal (which must surely have been most unlikely), the actual collection of such large sums would have been almost an impossibility.
 2. Sir Guilford Slingsby, Sir Richard Bingley and Sir William Russell.

the men who were the chief objects of the report's criticism, refused, whereupon Cranfield offered the services of the commissioners, at no charge to the king, to run the navy until their propositions had been made good. The offer was immediately accepted and the principal officers suspended, being adjured by his majesty not to "meddle therein any further".¹ They who had patents granted for life would be paid, but on their death no renewal would be granted; nor would a new reversion be allowed. Future nomination would be made by the lord admiral and the tenure of office would be at pleasure only. The king also commanded that the lord chancellor and Sir Edward Coke should scrutinize the existing patents to ascertain the terms under which they had been granted. Only one query was raised concerning the report itself. The question of the reduction of ships' complements for service in the Narrow Seas and on the coasts was referred to the king's masters² and the masters of Trinity House.³

For the next ten years, the administration of the navy lay in the hands of the commission, under the guidance of Buckingham as lord high admiral. The commissioners assumed their duties at once, although in fact the warrant for their new function of government was not issued until three months later.⁴

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1. Gardiner, III, 206, states that the renewal of the commission was the immediate result of Buckingham's appointment as lord admiral, but it is evident that this was not the case.
 2. I.e. masters attendant.
 3. Acts of the Privy Council, 1618-19, pp.288-9; Adm.Lib.MSS. 12, f.130.
 4. Patent roll. 12th Feb. 1619, c/66/2167.

CHAPTER III

The Commission's Successful Years; 1618-23

Until 1640 the principal officers of the navy treated their charge rather as a private business of which they were directors. When one retired he frequently took away or kept in his possession any papers relating to the service, so that any documents of that period extant today have survived as much by chance as by design.¹ More than 200 letters of some consequence remain from the nine year period during which the commissioners held office in the administration,² enough to present a reasonably accurate picture of their activities, particularly since the majority are concerned with the last three years. The reason for this concentration is almost certainly a result of Nicholas's appointment as secretary to the lord admiral in 1624. This would also account for the majority of the letters from the 1618-25 period being concentrated from 1622 to 1624; most of the correspondence that was more than two years old on his appointment had probably already been destroyed.

Of the twelve commissioners, the leaders during the first five years were undoubtedly Cranfield and Coke. The former's eminence as lord treasurer ensured that his voice would be heard, while Coke's correspondence with Buckingham during the winter of 1618-19, makes clear his influence with the duke and therefore

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1. There are three main sources for the early Stuart period. The state papers (which provide the bulk of the material) contain those documents properly relinquished by retiring officers; private collections, e.g. the Coke MSS., and parts of the Leconfield MSS; and manuscripts that were copied by order of Nicholas or Pepys to provide a record of the administration of earlier days, e.g., MSS. in the Pepysian Library at Magdalen College, Cambridge, in the Rawlinson collection at the Bodleian Library, among the additional MSS. at the British Museum, and in the Admiralty Library.
 2. Nine years and four months, from November 1618 to February 1628.

also in the councils of the commissioners.¹ Cranfield's signature appears seldom as a navy commissioner, despite his importance. The average number of signatures per letter in this period is between seven and eight, the signatures most commonly accompanying that of Coke being those of Smythe, Wolstenholme, Fortescue, Gofton, Sutton and Osborne. Weston's signature appears only three times, that of Pitt 30 times. Understandably, Norrey's signature only appears four times since he spent his days at Chatham; Burrell, one of the most frequent signatories after 1625, found some time to attend meetings and his signature appears 23 times during the first five years, although he was preoccupied with the new work in hand at Deptford.

Whilst it must not be assumed that seven signatures on a letter is proof that those seven commissioners were all in attendance at a particular meeting, there is no evidence to suggest that letters or other documents were sent out for signature by commissioners who had not attended the meeting in which they had been discussed. If this had been the practice, there would seem to have been little point in going to such trouble to obtain seven or eight, or in some cases ten or eleven signatures, when according to the patent the minimum number required was four.² On the face of it, the evidence does suggest

1. Coke MSS. bundle 21, 7th and 17th Oct., 7th Mar. 1618; Mar. 1619. Coke's relationship with the lord admiral differed from that of many of his followers, for Buckingham had chosen Coke and had deliberately sought his services. This is made clear in the letter of 7th October which is headed, "The copie of my first letter to the Lord Marquis Buckingham", and begins,

Right honourable, your favor whereof Mr. Secretarie [Naunton] hath given mee notice, as it is beyond my expectation and merit, so I receive as a blessing of god.

2. The four signatures had to include one of the following: Cranfield, Smythe, Weston and Wolstenholme.

that the commissioners were fairly diligent in their attendance to navy business during their first five years of office, although each of them except Coke had a full-time occupation elsewhere.

It is difficult to say where the commissioners met. They seemed to have used their own houses, for more than one location is mentioned in the correspondence, e.g. Philpot Lane¹ and Seething Lane,² but, apart from Winchester House and Mill House at Chatham there is no entry in the declared accounts which suggests a permanent office. This is certainly the inference to be drawn from a letter to the lord admiral in 1627, stressing the need for a place in which to meet since private homes had been damaged on previous occasions by unruly seamen.³ Permission to rent or lease a suitable house was given at once.⁴

During the earlier years of their period in office, the commissioners were not in danger from the violence of disappointed seamen; they were however, subject to frequent harassing by Sir Guilford Slingsby, the former comptroller of the navy. Typical of Slingsby's petty jealousy was his comment to Gofton after the latter had suffered grievous loss (the tone of Gofton's letter suggests bereavement also) by fire. Gofton wrote to Cranfield,

blesse you and all my friends from the like misfortune, though Sir Guilford Slingsbie wrote to me that it was for the hard measure offered to him in his sequestration from his place.⁵

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1. Probably belonging to Sir Thomas Smythe, S.P.(D.), Chas.I, ii, 92.
 2. Probably belonging to Sir John Wolstenholme, ibid., xxxvii, 24.
 3. Ibid., lxxxv, 53. Navy commissioners to Buckingham, 28th Nov. 1627.
 4. B.M. Add. MSS. 37817, f.144. Buckingham to the commissioners, 1st Dec. 1627.
 5. Sackville-Knoles MSS. 524. Dec. 1621.

It seems to have been Slingsby who first suggested to Coke that William Burrell, the commissioner in charge of shipbuilding, was using his position to make an unfair profit by selling provisions to the crown.¹ Although nothing came of the investigation subsequently ordered by the king,² Coke persisted in the allegations against Burrell until a full enquiry was made in the winter of 1626-27. Even this, however, brought no satisfactory conclusion as far as Coke was concerned.³ Whether the charges against Burrell were false, gravely true, or merely trivial, Coke can have been in no doubt as to the nature of the man who had originally made them, for just a year later, Slingsby had threatened that if he were not restored to office by the coming Lady Day, Coke should not outlive that date.⁴

The commissioners were responsible for the administration of the navy under the direction of the lord admiral, but in practice the command structure was not allowed to remain quite so simple. On the occasions when Buckingham was out of the country the privy council and the principal secretaries were frequently in direct contact with the navy commissioners and individual commanders. Indeed, when the secretary concerned was Conway, the documents suggest that more than once he was acting entirely on his own initiative without the matter having been

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1. Coke MSS. bundles 127, 129, respectively 17th and 19th Feb. 1623. Slingsby's audacity in making the charge after the exposure of his own gross frauds while in office with Mansell must have been infuriating to Burrell.
 2. S.P.(D.), Jas.I, cli, 35. James I to navy commissioners, 25th Aug. 1623. Coke informed Conway who advised the king. The lord admiral was not concerned in this investigation, for on 17th February he was on his way to the coast with the Prince of Wales. They did not land in England again until 5th October, that year.
 3. The case against Burrell in 1626-27 is dealt with in some detail on pp. 264-5.
 4. S.P.(D.), Jas.I, clx, 43. 8th Mar. 1624.

brought to the council's attention. This is particularly noticeable in 1623 when the lord admiral was in Spain, during which period all the major decisions were either made by Conway, with or without the concurrence of the privy council, or occasionally in time of emergency by Coke, who immediately submitted his instructions to Conway for his approval.

The very structure and composition of the navy, which required that the king's ships had to be reinforced by well-armed merchant ships in times of emergency,¹ made control by the naval administration alone difficult to achieve. Since the privy council authorised the pressing of merchant ships it was natural that those responsible for providing the vessels should communicate directly with their lordships. Thus when the writs for levies for the suppression of pirates were issued in 1619, many of the recipients complained directly to the privy council.²

This was the correct procedure, for such matters were not within the province of the navy commissioners, but this interest tended to expand the privy council's activity in naval affairs beyond its proper sphere of strategy and higher direction. On occasion even ships' captains are found communicating directly with the privy council or the secretary of state and vice-versa as occurred in course of Captain Best's mission to Scotland to convoy the Dunkirker being harried by Dutch men of war.³ In

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1. At this period the navy, while frequently described as "the navie Royall", was not yet the Royal Navy; nor may one conveniently use the term Royal ship, for this was the technical description used only for the huge ships of the first rank (900 tons or more). The expression "rate", was not used early in the seventeenth century. The term "his majesty's ship" was common and is occasionally found in use as a title; it was never written in the seventeenth century as H.M.S., however.
 2. S.P.(D.), Jas.I, cxxi, 58. Mayor of Plymouth to privy council, 2nd Feb. 1619.
 3. Ibid., cxlvii, 62. Conway to Best, 25th June 1623.

April of the same year Lord Brooke wrote to Conway concerning the preparation of the fleet in which it was hoped to carry home from Spain the Prince of Wales and his bride. After giving Conway information concerning the readiness of the fleet, Brooke states that being dissatisfied with the furnishings in the great cabin, he had ordered it to be ripped out and measurements taken that he might provide more fitting furniture himself.¹ As Sir Fulke Greville, Brooke had been treasurer of the navy from 1598 to 1604, and so perhaps considered himself competent to take such drastic action. There is no suggestion that permission for these measures was either sought or given, and it seems likely that if he informed them at all, Brooke merely notified the navy commissioners of what he had done after he had done it. At all events the incident is typical of interference suffered by those responsible for the navy's administration at the hands, either collective or individual, of privy councillors.

The problem was aggravated by the appointment of noblemen as admirals while no-one of similar quality served as a commissioner of the navy.² Thus, when commanding the fleet bound for Spain in 1623, the Earl of Rutland directed messages concerning the state of the winds and his readiness to sail, not to the navy commissioners, in the absence of the lord admiral

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1. S.P.(D.), Jas.I, cxiii, 39. Lord Brooke to Conway, 21st April 1623.
 2. It is true that Lionel Cranfield, Earl of Middlesex, was a member of the commission, but two circumstances mitigated against noble commanders reporting to him. By 1621 he had already become far too busy to concern himself with naval affairs except on occasions of great importance, and then only in financial matters; more pertinent in this instance however, is that although a peer, he was distinctly a "newcomer", and still the elevated city merchant to whom members of the older nobility would hardly defer by choice.

but instead to Secretary Conway.¹ The one man who had, in theory, the right to act for the lord admiral in his absence, remained unemployed. Sir Robert Mansell retired as treasurer of the navy a few weeks before the Commission of Enquiry began its work in 1618. He was held responsible for much of the waste and corruption that abounded during his term of office, but no action was ever taken against him. On the contrary, he was promoted to the appointment of lieutenant of the admiralty, vice-admiral of England, a post which had been allowed to lapse since Elizabeth's reign. It may well be true that Mansell, as a royal favourite, was merely "kicked upstairs", to be, it was thought, out of the way. However, he was appointed admiral of the fleet sent against Algiers in 1621, and his record in that expedition appears to show a different man from the arch-embezzler of naval stores. As vice-admiral of England, Mansell was Buckingham's deputy, but there appears to be no evidence that he played any part in the navy between his return from Algiers in 1622 until after the lord admiral's death six years later.

The twelve navy commissioners were responsible for the day to day running of naval affairs, for in effect their office was merely that of the former principal officers put into commission. Cranfield, as chief commissioner, assumed the responsibilities of former comptroller; Sir William Russell, who only took office as treasurer in May 1618, remained in that capacity until 1626, but was not included in the letters patent by which the commissioners acted. William Burrell and Thomas Norreys, both shipbuilders, fulfilled the function formerly assumed by the surveyor, the

1. S.P.(D.), Jas.I, cxlvi, 93. Rutland to Conway, 15th June 1623.

former being responsible for the building and repair of ships, the latter for the surveys, and stores of all kinds. The former clerk of the king's ships, Sir Peter Buck, retained his office, the authority of which he had been able to increase because of the indolence of the principal officers. Far from being one of the commissioners after 1618 however, his position seems to have returned to the original conception of the office, that of a mere recording clerk. His signature is not to be found on any document of importance between 1618 and his death in 1625.

The commissioners carried out their duties in committee and business necessarily centred upon those who bore the special responsibilities formerly entrusted to the principal officers.

The comptroller's duties,¹ assumed first by Cranfield, consisted of general supervision. He kept a duplicate record of the treasurer's accounts and also those of the surveyor of marine victuals, and he also established, with the aid of his colleagues, the rates for provisions and wages. As well as the annual survey of ships he, or his appointed deputy, surveyed all stores to evaluate their worth and he also kept a duplicate book of all storekeepers' receipts and issues. He normally passed bills only by agreement in committee, but in emergencies he had the power to act alone. In any difference of opinion over bills, issue of provisions or allowing for waste he had the power of "the negating voice". In another account of duties Sir Henry

1. There are several accounts of the duties of the officers and officials to be found in the Admiralty Library copy of the report of the 1618 Commission of Enquiry. Adm. Lib. MSS. 12, ff.3-21. The most comprehensive account is that by Sir Guilford Slingsby, with which all the others generally agree. It is this account, which is also to be found in the Coke MSS. bundle 129, that has been used for this work.

Mainwaring states, "the comptroller is the last to admit or receive them and hath prioritie in signing bills".¹

It is difficult, in many cases, to tell whether Cranfield was being approached because of his position as chief commissioner of the navy or because of the influence he wielded at court by virtue of the numerous offices he held.² When Mansell was preparing his fleet to sail for the Mediterranean, he found himself short of sails and gunners, and begged Cranfield to use his influence to help obtain them.³ Mansell's reports from the Mediterranean are addressed to Cranfield with little mention of the lord admiral, although the queries are on questions of policy rather than administration.⁴ In 1623, while Buckingham was in Madrid with the Prince of Wales, there arose the need to send an escort for a Dunkirker trapped by the Dutch in Scottish waters. Two ships were appointed under Captain Thomas Best, as admiral, and Sir William St. Leger. The navy commissioners felt that Best should be in command, and since he had recently been acting as admiral of the Narrow Seas there would be little dispute over precedence.⁵ As Cranfield was the chief commissioner, St. Leger wrote to him giving several reasons why he should have precedence over Best or at least be permitted not to serve,⁶ but neither Cranfield nor any other commissioner wanted to become involved in such a matter. The commissioners made it clear to Conway that they had no part in deciding upon either appointments or

1. S.P.(D.), Chas.I, xii, 63.n.d.
2. 1613, surveyor general of customs; 1616, one of the masters of requests; 1618, master of the great wardrobe; 1619, master of the court of wards; 1620, a member of the privy council; 1622 as Earl of Middlesex, lord treasurer.
3. Sackville-Knole MSS. 311. Mansell to Cranfield, 6th Aug. 1620.
4. Ibid., 6755, 6874. Mansell to Cranfield, 15th Mar. 1621 and 22nd Jan. 1622.
5. S.P.(D.), Jas.I, cxlvi, 103. Navy commissioners to Sec. Conway, 16th June 1623.
6. Sackville-Knole MSS. 1145. St. Leger to Cranfield, 21st June 1623.

precedence¹ and it was left to Conway to find a solution to the problem.

No official change is evident but it is clear that as Cranfield found less and less time for the navy's affairs, the role of chief commissioner or comptroller was assumed by Sir John Coke, who had been one of the most energetic members of the commission since its inception. In many letters he is clearly the spokesman for his colleagues, and in the absence of the lord admiral in 1623, it is Coke who states to Conway, in unequivocal terms, the very limited powers the prince's chief officers will have in the ships to be despatched to Spain for Charles and the lord admiral.²

The commission must be judged by how well it fulfilled the propositions made to the king and privy council in November 1618. In their report, submitted five years later, the commissioners argued that their recommendations had indeed substantially been put into effect with success--a claim that seems justified by a detailed account of the events.

At first it seemed that the commission's hopes might be entirely fulfilled. In 1619 the ordinary charge was a mere £5,080,³ and the shipbuilding costs were reduced to £8,954; but this saving of £5,265 was only transitory. The uncompleted dockworks had already cost more than £800 over the estimate; to this was added £1,642, part of the unlooked for expense of fitting out Mansell's fleet for the Mediterranean, and the rest was absorbed in the completion of the extensive repairs to the

1. S.P.(D.), Jas.I, cxlvii, 2. Navy commissioners to Sec. Conway, 17th June 1623.
2. Ibid., cxxxix, 108. 16th Mar. 1623.
3. Declared accounts, Pipe Office 2257.

Rainbow and Antelope. Work on the former had been in progress since 1616,¹ and on the latter since 1617.² The year ended with expenses totalling £32,610, an excess of £827 over the estimate. The commissioners might well have congratulated themselves, for if the debit balance was a little disappointing, the total expense was lower than for any previous year of the reign except one, and the estimate was more accurate than hitherto. Much more important, the administration was at last under strict supervision; the fleet had been enlarged and dockyard improvements begun.

The annual account for 1620 shows another decrease in the ordinary charge by a little over £400,³ and a saving on the shipbuilding of a further £3,025. The cost of dock construction had been sadly underestimated however. A further £2,342 was needed to complete the work. The year's expenses amounted to £35,872 as compared with the estimated £29,268, showing an excess of approximately £10,000 if the £3,458 saved is considered. The largest single item accounting for the imbalance is £5,916 spent on the Mediterranean fleet. The account also shows £5,936 spent on cordage from Woolwich, but of this it is impossible to say how much was in the original estimate.

In 1621 the ordinary charge was £2,618 more than estimated although shipbuilding costs were close enough at £11,212.⁴ Costs for the Algiers expedition soared to £17,665, and the preparation of "a fleet for a voyage southward", £1,500. An excess of

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1. Declared accounts, Pipe Office 2254.
 2. Ibid., 2255.
 3. Ibid., 2258.
 4. Ibid., 2259.

£21,473 is shown over the year's estimate of £29,561.¹

The following year saw some improvement in the overall picture,² although the ordinary charge again increased. An excess of £3,560 over the estimated £8,099, and an increase of nearly £1,000 over the ordinary charges for 1621. Shipbuilding costs were again close at £11,295 but the return of Mansell's fleet led to repairs totalling £9,667. The fleet in preparation the previous year was not sent southward but was employed in extraordinary service hunting pirates. Its costs added to the burden, and the year's expenses totalled £45,449 compared with the (1618) estimate of £29,854.³

In 1623 the ordinary was again more than £3,500 in excess,⁴ but the last two of the ten ships built were completed for only £8,465, some £2,735 less than the estimate. Total expenditure reached the highest level since 1597, £62,019, an increase over the estimate by £31,872, to which should be added the £2,735 credit balance from the shipbuilding. The final item in the bill of repairs for the Algiers fleet was £2,544, but the greatest single amount which caused the increase was the charge of £20,719 for preparation and sea-service of the fleet sent to Spain for the Prince of Wales and the lord admiral. In addition debts amounting to £9,202, outstanding since 1615, were finally paid.

Inevitably, it was the large extraordinary charges that confounded the planning. If they are deducted from the totals there is some justification for the commissioners' claim that they

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1. An estimate submitted on 30th January 1621 bears a slightly different figure, £29,688. S.P.(D.), Jas.I, cxix, 56. The difference of £127 probably represents the increase in price of certain materials during the two and a half years that had elapsed since the estimate of August 1618.
 2. Declared accounts, Pipe Office 2260.
 3. S.P.(D.), Jas.I, cxix, 56. 30th Jan. 1621.
 4. Declared accounts, Pipe Office 2261.

had successfully fulfilled their pledge, and had in fact maintained the navy and added ten new ships in five years at a cost of about £30,000 p.a.¹ That the commissioners could not know what specific extraordinary charges might appear is obvious; but it might well be asked whether their trust did not demand that some provision be made for the very occasions that could not be foreseen. On the other hand the commissioners were all men of the world, merchants or crown servants used to handling money and dealing with people. It seems unlikely that men as astute as Cranfield, Coke or Smythe would overlook such an obvious point; rather they may have looked at it and set it aside. In 1618 money was hard enough to find for specific causes, much harder then, to provide an emergency fund for the navy. Equally to the point is the probability that even had money been available to provide for such a fund, the knowledge of it would have courted corruption. Coke wrote to Secretary Conway in 1623² that the preparation of the fleet for the Mediterranean had been a means by which corruption had obtained a foothold again, and he may well have been right. Certainly the accounts did not really go astray until the preparation of the fleet had begun. The greater volume of work in the yards with the use of ever increasing manpower, even though, or perhaps because, much of it was pressed, presented increasing problems of supervision and control. This also seems the likeliest reason for the excess over the ordinary estimate, from 30%-45% from 1621-23. Rising costs would have made the 1618 estimates incorrect but there can be little doubt that this

1. S.P.(D.), Jas.I, clvi, 12. Nov. 1623.

2. Ibid., cli, 35. 22nd Aug. 1623.

is the reason for the changes made at the beginning of each year; changes which range from $1\frac{1}{2}\%$ in 1621 to $3\frac{1}{2}\%$ in 1623.

In addition to the shipbuilding programme, the repairs to the older ships, and the dockyard improvements, the commissioners had also prepared the fleet sent to the Mediterranean, ostensibly to subdue the pirates based on Algiers.¹ In this it undoubtedly failed, partly because of missed opportunities and partly because of ill-luck in the dropping of the wind at a crucial moment in the attack on the anchored pirate fleet. The long-term effects of this expedition are important for it was England's first incursion into the Mediterranean, and it clearly disturbed Spain.²

Finally, all those points that had been queried when the commission of enquiry submitted its recommendations in 1618 had been justified and put into effect; all, that is, except one: the continuation of payment by the exchequer on patents issued. In this the commission, and even Buckingham, had to admit defeat. They could not shake the arguments of precedent against the revoking of patents, but at least no further reversions seem to have been granted. The failure to implement this one recommendation in no way detracted from the excellent service the commission had rendered. Indeed, it might be said that the privy council's very act of querying it placed the matter outside

1. The voyage lasted from 12th Oct. 1621 to 3rd Aug. 1622. The fleet consisted of the Red Lion (Mansell), the Vanguard (Sir Richard Hawkins), the Rainbow (Sir Thomas Button), the Constant Reformation built 1619 (Sir Arthur Mainwaring), the Antelope (Sir Henry Palmer), the Convertine (Sir Thos. Love), and 11 merchant ships. The Goodwill joined them later as a hospital ship.
2. A detailed account of the expedition and its strategic consequences is given by Sir Julian Corbett, England in the Mediterranean (London 1904), vol.I, pp.110-113.

the scope of the commission, for if the objection were on a legal point, a solution was impossible without the passing of a special statute. One fact stood out when the report of the commissioners' first five years had been completed: the navy was prospering and was in a healthier state than at any time during the previous twenty-five years. Under the circumstances Buckingham can have had little hesitation in recommending an extension of the commission's patent, and accordingly it was renewed for an unspecified period.¹

1. This can only be assumed. The only patent to be found concerning the navy in 1623, is undated except for the year, and it directs Buckingham and others to enquire into the state of the navy (patent roll C/66/2304). Undoubtedly this was issued some time before 3rd November, when the commission's five year term ended. The commissioners remained in office until 20th February 1623. On their removal from office on that date there seems to be no evidence that they protested that their patent had been granted for any specific period.

CHAPTER IV

Finance

By far the most influential section of the administration was that dealing with the navy's finances. If the officers responsible were diligent and honest, the navy could, and probably would, be efficiently run. If they were not, however, no amount of toil and trouble in other departments could make good the deficiency, and the service was bound to suffer accordingly. That this truth was appreciated in 1618 is made clear by the commissioners appointed to enquire into naval affairs, no fewer than seven of whom were considered to have special abilities in accounting and financial matters generally.¹

Sir William Russell's term in office under Buckingham followed a period of such gross corruption that he could hardly fail to benefit from any comparison. But such an acknowledged does justice neither to Russell, nor to the reformed administration of which he was a part, for between 1618 and 1627 the finances of the navy were probably more efficiently controlled than at any other time between the death of Hawkins in 1596 and the latter part of the civil war. Russell was treasurer from 1618 to 1627 and then from 1630 until his death in 1642.² Thus in the sixteen-thirties he was responsible for handling the large sums brought in by ship-money and of this it can be said at least that the financial administration was adequate. In his earlier period in office Russell had much more cause to be efficient. When the principal officers were suspended in 1618, although he was retained as treasurer he had very little power. He was not appointed to the commission until 1625 when the patent was renewed on the accession of the new king,

1. See above, pp. 4-5.

2. The office was held jointly with Sir Henry Vane the younger, 1639-41.

and consequently until then he had no authority without the signatures of at least two commissioners.¹ Nor was his exclusion from authority a mere technicality. A letter from Coke to Buckingham in March 1619 shows clearly that Russell was not admitted to all the deliberations of the commissioners.²

In addition Coke himself kept a close watch on the accounts and apparently checked the quarter-books regularly. Irregularities were drawn to Russell's attention by memoranda written by Coke such as those commenting on the quarter-books for 1619, 1620 and even as late as 1625. In 1619 discrepancies ranged from errors of one in the complements of the Due Repulse and the George to the entry of payments below the signature of the clerk of the cheque. Coke also pointed out that bills amounting to £340 from one John Watt had not been signed by him (Watt), and he further ordered that henceforth no bills were to be paid if the accounts had been blotted.³ The criticisms of the quarter-books for 1620 are similar and concern bills paid without signature, imprests allowed with no account, deviations from administrative procedures established by the commission as well as simple miscasting of totals.⁴ There are 33 items in the comments on the quarter-books for 1625, ranging from a request for an explanation of an unwarranted increase of ld. per day on the wage of carpenters and an enquiry concerning the whereabouts of silk flags valued at £41 to an item concerning four prestmasters who had not accounted for their imprests.⁵ It is obvious that none of these errors or omissions suggests deliberate and systematic peculation on the scale of earlier years. At the

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1. Or, of course, a warrant from the lord admiral.
 2. Coke MSS. bundle 21.
 3. Ibid., bundle 127.
 4. Ibid., bundle 57.
 5. Ibid., bundle 128.

same time, if these were the worst faults that Coke could find and correct, the inference is that a high standard of financial administration obtained at the time.

Although Sir William Russell was granted the office of treasurer of marine causes for life,¹ he surrendered it in April 1627 in favour of Sir Sackville Crowe, a member of Buckingham's household. The reason for this is obscure. Evidently it was not because of any insufficiency on his part, otherwise it is unlikely that he would have been re-appointed again later. Nor is there any evidence that Sackville Crowe received the office merely because he coveted it and was close to the lord admiral, for had this been so there was no reason why he should have waited until 1627 when financial difficulties were so great. In any case Russell's personal wealth had rendered the lord admiral and the navy good service on more than one occasion and there is no reason to suppose that the treasurer had forfeited Buckingham's favour. The likeliest explanation seems to be that Russell was a sick man from 1627 to 1630. Certainly his handwriting can be seen to have become feeble and wavering during the latter part of 1626, when his signature clearly looks to be that of a sick man, and in several letters he complained of illness that made difficult the execution of his duties.

The navy accounts were divided into two charges: the ordinary included all the costs that remained constant, such as wages and provisions for permanent employees, and the maintenance of buildings and dockyard installations; the extraordinary charge included the expense of all sea-service, the building and repair of

1. Patent roll 2182.

ships and, indeed, all costs not borne upon the ordinary. Debts upon the ordinary were to be paid quarterly. The clerks of the cheque prepared certificates of the amounts due. These were signed by the officers and the lord admiral, who sent them to the exchequer, from whom the treasurer received the appropriate sums of money and made payment accordingly. By a similar procedure the ships serving on the coasts were to be paid half yearly in March and September.¹ The treasurer paid all bills signed by at least two of his colleagues, and had power to take up presting, provisions "and all things necessary for his majesty's service". He also paid the ordinary and extraordinary wages and all discharged men on presentation of tickets made out by a clerk of the cheque or a purser, countersigned by one of the principal officers. The navy's accounts were to be submitted to the exchequer annually, within six months of the December ending the year accountable. They were first copied into a ledger, each page being certified correct by the signature of each of the other officers. The treasurer then cancelled any bills or books already paid by his colleagues, and delivered the whole with an imprest certificate from the auditor of exchequer receipts to the auditor of the prest. Upon the accounts being accepted he would obtain a declaration to that effect signed by the lord treasurer, the chancellor of the exchequer, one of the barons of exchequer and also one of the auditors.² Finally the treasurer was to keep his office constantly either in Deptford or London, so that any who needed to see him on navy business would know where he might be found.³

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1. Naval Tracts of Sir William Monson, ed. M. Oppenheim, III (N.R.S. XLIII, 1913), 404.
 2. E.g., the Declared account for 1620, submitted 1623, is signed by Middlesex, Weston, Ed. Bromley and both auditors, Gofton and Sutton.

It is impossible to say with certainty how far Sir William Russell fulfilled these requirements. He was expected to be present at all meetings of the commission, but there is no means of knowing which meetings he attended; nor can one establish his presence at or absence from such meetings as are evidenced by correspondence. Since in the first six years of his treasurership Russell was not a commissioner, he was excluded from signing any documents other than those specifically concerning him as treasurer. His name properly appears on such bills as have survived, and there is no complaint recorded that he could not be found when necessary, as had occurred in Mansell's day. It is true that the ordinary pay was not regularly made each quarter, nor was the sea-service paid regularly every March and September; but this fault was the result of the shortage of money available for payment, rather than of neglect on Russell's part. He does seem to have been slow in rendering his accounts. Those for 1618-20 were submitted at the end of 1623,¹ probably as part of an uncompleted effort by Cranfield to bring things up to date. It would appear, however, that the lord treasurer's disgrace in the following year arrested the reform, for the remainder of Russell's accounts, to 1627, were not submitted until 1630 (1621-24), and 1632 (1625-26).²

The bulk of the information on naval finance during this period comes from the declared accounts. Unfortunately, however, while they are no doubt accurate in details of prices and wages, these accounts provide little real indication of the state of the navy's finances at any given time. The reason for this is that whatever the theory behind them, in their practical application they

1. Declared accounts, Pipe Office, 2256-58.
2. Ibid., 2259-64.

are in no sense accounts of income and expenditure which can provide a balance sheet. They are essentially accounts of charge and discharge which show one thing only: how the accountant has used certain monies issued (and therefore charged) to him, the significant factor being that even in theory they only show the state of affairs between the accountant and the exchequer at the time the account is rendered. Had the exchequer enforced its regulations in the early seventeenth century the latter point would have been of little consequence, for most accountants were normally required to present their accounts within six months. In practice however, this rule was rarely if ever enforced and accountants were almost invariably several years behind.¹ It is therefore impossible to determine the exact state of the navy's finances during the crucial years 1625-28.

For the years before the financial pressure became extreme the annual accounts probably present a fairly accurate picture of the navy's finances on the last day of the year accountable, even though they were not declared until two or three years later. This is almost certainly true of the declared accounts for 1619-21 and to a great extent for those of 1622 and 1623 also. Thereafter, until the sixteen-thirties it becomes increasingly difficult to estimate how accurate the declared accounts are. In that for 1625 for example, payments are shown as having been made to 104 out of a total of 117 ships for periods of sea-service ending in 1626. There was no known precedent for paying seamen in advance, and even

1. E.g. for the thirty years following 1603 the accounts of the surveyors of marine victualling were declared in 1611 (1604-1609), 1618 (1610-1615), 1624 (1616-1620), 1627 (1621-23) and 1637 (1627-1628). The accounts of the treasurer of the navy: Mansell 1617 (1613), 1618 (1604-1612), 1639 (1614-1617); Russell 1623 (1613-1620), 1630 (1622-1624), 1632 (1625-1626); Crowe 1635 (1627-1630).

had the funds been available for such a quixotic and unbusinesslike gesture, it was but rarely that ships were able or allowed to return to port exactly on the day planned in the estimate. Indeed, the mind boggles at the number of complications likely to follow a complete payment in advance. A probable explanation is suggested by the actual dates to which payment is shown. By far the greater part of the vessels were paid until the 24th April 1626, the date of the last day for payments at the old rate of 10s. per day for seamen. It therefore seems likely that the date given is not in fact the day the service ended, but is merely as an indication of how much had to be paid at the old rate. The next largest number of ships were those paid until dates in January and March--almost certainly the dates on which the service actually ended. A few ships in the ordinary are entered as having been paid until June, presumably because their service was of a more fixed duration, and the ordinary expenses were more certain of being met.¹ In 1626, the treasurer's expenditure is shown to have exceeded his income by more than £16,500, yet he is discharged of all bills entered, and there are no debts to account for the debit balance.²

Thus by 1626 the declared accounts seem to have become an indication of the position the treasurer had hoped to achieve. That they still had some relationship to fact is shown in that certain payments are actually entered as having been made in arrears, as for example that of nearly £20,000 in 1630 for sea-service

1. Declared accounts, Pipe Office 2263. It is true that the ordinary assignment was frequently used when ready money was required to prepare for an extraordinary service, but letters demonstrate that the lord admiral and the commissioners were keenly aware that the maintenance of the ordinary service was vital. Although concern was expressed on occasion, the ordinary guard was never, in fact, jeopardised. There seems to be no instance of the ordinary assignment having been used for extraordinary purposes other than preparation; certainly it never provided extraordinary wages.

2. *Ibid.*, 2264.

completed in 1627-29. Yet despite their factual basis it is clear that even the theoretical aim was no longer achieved, for even when an account had been declared and audited some years later, the treasurer's financial position at the end of that year was not shown.

The various dockyard quarter-books from which many of the figures in the declared accounts were drawn would prove the only reasonably reliable guide to a balance sheet of the navy at any particular date. There were probably about thirty of these for each year since separate books were kept for both the ordinary and extraordinary charge of each dockyard. However it seems to have been the practice to destroy such quarter-books after the account had been declared, for few copies remain. Those that do exist are of little value as they represent such a small fraction of the whole that it is seldom possible to identify the details in the declared account. Analogous to the dockyard quarter-books are the ships' books, kept by the pursers, containing for purposes of the paymaster, the details of each man's service. During the war years these books provided the greatest demand upon the navy's finances but unfortunately they too, seem to have been destroyed as soon as the treasurer's ledger (from which the declared account was made) was complete. In one aspect at least, the declared accounts remain something of an enigma. From 1618 to 1628 the treasurer of the navy only twice had a balance of expenditure over income: £1,712 in 1619 and £16,576 in 1626. Each year, during this decade when royal finances were being increasingly hard pressed, the tellers of the exchequer paid the required sums to the navy treasurer. This at least is the evidence of the declared accounts backed by the tellers' rolls and the parchment strips which made up the tellers' receipts. It is inconceivable that such evidence is

not to be trusted, yet on the face of it, this suggests that there was certainly sufficient money for the navy's requirements, as the declared accounts show a surplus of receipt over expenditure in every year but two. Yet not only were men in desperate straits for want of their pay, even going to such lengths as threatening the commissioners and rioting in London, but also the dockyards and storehouses were almost bare of the vital naval stores without which little could be done.¹

The immediate conclusion which offers itself is that the treasurer received the money and contrived to keep it, or a large part of it, for his own use. However, it is unlikely that at a time when the attention of everyone concerned with public affairs was concentrated upon the navy, and when its needs were a matter of public knowledge, the treasurer would have been able to divert between £30,000 and £40,000 a year to his own purposes, without being called to account or even being accused of having done so. If these reasons are thought insufficient evidence against embezzlement on a large scale, one might remember also the watchfulness of Coke and even the lord admiral himself, who desperately wished the expeditions to succeed. Later, successive treasurers were accused of defrauding the Chatham Chest during this period. Of the two involved, certainly Crowe (1627-30) might be considered suspect in the wider sphere of finance since he was successful in extracting £3,000 of the Chest's money for his own use. However, £3,000 is a small sum in view of the total amounts involved, and defrauding a charity by the quasi-legal withholding of part of the seamen's wages was a simple act compared with refusing payment entirely, and avoiding the purchase of

1. S.P.(D.), Chas.I, liii, 29.

stores when the need was so great and so obvious. As far as Russell is concerned there is no evidence that he was at any time involved in embezzlement. The reason given in his reply to allegations made against him is not merely plausible but under the circumstances laudable.¹ Again one must remember Coke's inquisitive, even suspicious nature,² and the fact that Russell not only returned as treasurer in 1630 but also remained one of the more respected of the principal officers until his death in 1642.

The basic item of expenditure in the navy's financial year was the annual ordinary charge, which was estimated at the beginning of each year, usually before the end of January.³ During Mansell's period in office the amount fluctuated considerably year by year: £3,867 in 1612, it rose to £10,099 in 1613, sank to £3,808 in 1616, and a year later was a mere £1,001. The criticism of Mansell's administration in this respect is not that the charges were excessive but that they were haphazard and formed no part of any plan.⁴ On the other hand, the commissioners committed themselves to a firm plan over five years, and set the ordinary charge at £3,099.

1. See below, pp109, 144-5.

2. E.g. Coke's repeated allegations against William Burrell, the navy commissioner and master shipwright to the king. The charges were first made in 1623 and then again in 1627 (see below, pp.264-5). Thus, since Coke became much more powerful after being appointed a principal secretary in 1625, while still retaining an interest in naval matters, it seems improbable that the treasurer could have embezzled vast sums undetected.

3. The treasurers of the navy had long since worked on a financial year which ran from 1st January to 31st December, as the earliest Elizabethan declared accounts show.

4. This must be conjecture only, since there is no evidence as to how or why Mansell set the figures that he used. However, what is known of Mansell in other respects as treasurer suggests that planning would have been unlikely.

It was the extraordinary charge, a source of vexation to the honest treasurer and of delight to the corrupt, that provided most of the difficulties. The looser, oft-changing terms of the extraordinary estimates which frequently dealt with very large sums of money, enabled and often invited, the dishonest treasurer to enrich himself at the expense of the crown, while the stricter treasurer found that the same type of estimates, with their tendency to develop into great sums, frequently taxed the resources of the service. At the same time he found it increasingly difficult to obtain the extraordinary payments from the lord treasurer.

The navy treasurer was fortunate when the lord treasurer himself was clearly associated with the fortunes of the navy as were Cranfield (lord treasurer and chief commissioner of the navy, 1618-23) and Weston who was also lord treasurer when appointed chief admiralty commissioner in 1628.¹

The obvious benefit accruing from a naval-minded lord treasurer was that the navy's assignments received a certain priority, a most valuable asset when extraordinary charges were high and all the departments of state sought to press their claims upon the exchequer. The advantages of even this situation had their limits however, and during the preparations for Mansell's expedition to the Mediterranean, Cranfield frequently complained to Secretary Conway about the danger of such extraordinary charges, and how they quickly absorbed the ordinary assignment, because the

1. In neither instance was the double appointment coincidence; James I, his son, and their privy councillors were certainly aware of the advantages to be gained. It is very probable that Sir William Russell's success as treasurer of the navy owes much to his being in office while first Cranfield and then Weston was at the height of his public career.

money was readily available; and yet they were often so large that the ordinary assignment aided the extraordinary charge only slightly while greatly prejudicing the necessary repairs to the fleet and the preparation of the next year's guard, on which both king and country depended. The navy commissioners echoed the same fears in 1622, presumably with reference to the provision of a ship to carry Lord Digby to Spain (in January), and two months later the provision of two vessels to carry home Gondomar, the Spanish ambassador.

On the 27th March 1622 seven commissioners signed a letter to Cranfield pointing out that the recent request for £7,453 was only part of the navy's requirement, but without it, affairs could not proceed since because £3,200 had been passed from the ordinary assignment to pay for extraordinary charges, they could not provide for the ships already appointed to the seas, they could not pay mariners discharged daily (thereby giving the king's service ill-repute), they must deprive his majesty of the use of six ships—no matter how urgent the occasion, and they would have no other time during their commission to complete the plan to restore the navy to a serviceable state.¹ Two weeks later nine commissioners (i.e. all but Cranfield, Weston and Thomas Norreys) signed a similar letter to the lord admiral, asserting that the frequent need to provide for extraordinary services which had not been allowed for was greatly prejudicial to the service. More than £3,000 of the ordinary assignment as well as stores and newly-built or repaired ships had been used on the Algiers expedition, and now needed repair or replacement. Further, if estimates already allowed were not to be paid then the workmen

1. Sackville-Knole MSS. 768.

might have to be discharged just when they were most needed, provisions would not be obtained at the most opportune and economical time, the weatherbeaten ships of the Algiers expedition could not be repaired and they would have to endure the clamour and even mutiny of crews who must be discharged. The commissioners were appreciative of Buckingham's problems, but they earnestly sought his advice on these matters.¹ Cranfield was again reminded of the problem a month later when the navy commissioners pointed out that the total extraordinary charge since Christmas had already reached £10,733.²

Unfortunately, despite such warnings the expensive extraordinary services were continued. These were the charges that were making a mockery of the commission's attempts under Buckingham to run the navy efficiently and economically. However, few people in the seventeenth century would have denied that such use of the navy proper was to uphold the honour of the king; probably none of the commissioners who complained, saw any real solution or considered that James I could have ordered other than he did.³ It was inevitable that the same thing should happen on a much larger scale when the Prince of Wales, accompanied by Buckingham was to be brought home from Spain, with it was hoped, a daughter-in-law for the king. That particular extraordinary service cost the exchequer £20,719. By this standard, the great

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1. Sackville-Knole MSS. 769. 10th Apr. 1622.
 2. Rawlinson MSS. A 455, f.127. 11th May 1622.
 3. It was unnecessary for the king to provide Gondomar and six servants with two ships of the second rank when Lord Digby, his own ambassador to Spain had one. However, that Gondomar was undoubtedly a favourite with James probably accounted for the difference, and in such matters it is unlikely that anyone, even Buckingham, could have persuaded James that his action was neither necessary nor tactful. The king's wrath then may well be imagined had anyone suggested that the deference accorded to Gondomar was both wasteful and redounding against the state's honour.

extraordinary charges of 1625-28 are much more understandable, for they were at least made for a country at war. Understandable or not, they still created difficulties for the navy commissioners, and at the height of the preparations for the Cadiz expedition, Coke warned Conway that the whole business would "fall to the grownde" if some means of limiting expenditure were not found.¹

A month later in August Coke was doubtless even more disturbed, for a statement from the navy commissioners informed him of sixteen ships no longer in service bearing 1,565 men, who were currently costing the king over £1,000 per month for want of £11,500 to discharge them.²

There were two major extraordinary fleets set out in 1626. The first, containing 11 king's ships and 24 merchant ships to transport the king's bride, Henrietta Maria from Calais, cost the state £35,986.³ The second, although much larger, did no more to enhance the prestige of England, Lord Willoughby's ill-starred expedition costing the navy alone some £102,563. Putting to sea at last in October, it was ignominiously defeated by the autumn gales which it met as it attempted to round Cape Ushant, and as a result limped slowly back to Plymouth. The great voyage "to the southward" was abandoned and those ships that remained serviceable were used in hunting pirates. The estimate for this expedition was set at £98,487 but in the event the total cost amounted to £90,283, the difference probably being accounted for

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1. S.P.(D.), Chas.I, iv, 36. 11th July 1625.
 2. Coke MSS. bundle 62. 17th Aug. 1625.
 3. S.P.(D.), Chas.I, xxvii, 85. This account is not to be found in the declared account for 1625. Presumably, since the document quoted is signed by the auditors of the prest, the account was made directly to the exchequer, and the costs not charged to the navy treasurer.

by the shortened sea time and therefore the substantially reduced wage bill.¹

Until 1627 the ordinary assignments, paid in monthly instalments, were made from casual payments into the exchequer, a practice which was sound enough in peace-time but which could only meet the high war-time expenditure provided that the payments into the exchequer were continuous and frequent. The ordinary had been set at £8,099 p.a. in 1618, but it rose to more than £10,000 in 1624 and £17,000 the following year; it continued to rise, so that by 1626 the ordinary assignment had reached almost £20,000.² In April 1627 the ordinary assignment was raised to £30,000 with an extraordinary assignment of £10,000.³ A month later, the privy council decided that in times when the exchequer's receipts were uncertain, the provision of such a large sum for vital needs should not be left to chance. Henceforth the ordinary was to be settled on the Great Farm of Customs, as was the £10,000 p.a. extraordinary assignment, although it had originally been intended that the latter should be paid from the sale of French prize goods.⁴ The advantage gained by this order was that future assignments could be more certainly anticipated. On the 10th February, £2,000 had already been paid into exchequer receipts for the treasurer of the

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1. B.M. Add. MSS. 9294, ff.191-2, (the estimate); declared accounts, Pipe Office 2264 (the actual cost).
 2. B.M. Add. MSS. 9297, f.59. 28th Mar. 1626. The total given in the document, £28,758 includes some payments to the surveyor of victuals. Unfortunately the items listed amount only to £25,758, which figure is probably the correct one for that statement since the declared account for 1626 gives the ordinary charge as £19,238, and internal evidence suggests that the allowance included for the victualler was probably £6,400. The funds for 1626 were to be provided chiefly by the Great Customs, Petty Customs and the Alum monopoly.
 3. Order by the privy council on a motion from the lord admiral. S.P.(D.), Chas.I, lxi, 26; Acts of the Privy Council, 1627, p.247. 25th Apr. 1627.
 4. Acts of the Privy Council, 1627, p.232. 18th May 1627.

navy "to be charged on Sea coles Midsummer next".¹ Perhaps it was this anticipation which led to the council's new order. It is interesting and perhaps significant as an indication of the lord treasurer's caution, that despite the great and urgent need of money, the navy assignments at no time in this immediate period anticipated more than one, the next, payment.²

The new assignment was hardly set too high. In a letter to the lord admiral the navy commissioners requested that the ordinary assignment for 1628 be settled before he sailed with the expedition to Rhé. An abstract of the account shows items under nine general headings amounting to a total of £28,120. If this were not provided in time the guard for the next year might be endangered, so that they respectfully suggested that the treasurer, Sir Sackville Crowe, might be given special order to procure the necessary funds. At the same time the commissioners reminded Buckingham of the need to make provision and order, before he left, for the large sums that would be required to settle the wages bill on the expedition's return.³

Occasionally, abstracts of accounts (the most common surviving form) are meaningless, because monies belonging to the surveyor of marine victuals have been included in a combined sum with monies belonging to the navy treasurer, as frequently happened in estimates. Assignments made each month from the exchequer were also joint payments in the proportion of roughly one-third to the navy treasurer and two-thirds to the victualler.⁴ The reason is logical enough,

1. S.P.(D.), Chas.I, lxiii, 114.
2. E.g. Acts of the Privy Council, 1627-8, p.473. 31st May 1628.
3. S.P.(D.), Chas.I, lxi, 33. 6th June 1627.
4. E.g. the estimate for Pennington's squadron, submitted 31st January 1627, shows a total of £17,085; £1,756 payable to the navy treasurer before the service, and £6,389 payable to the victualler before the service. The remaining £9,120, of which £6,845 comprised wages, was to be paid to the treasurer on the squadron's return. S.P.(D.), Chas.I, lii, 25.

for whatever the service being prepared, whether large or small, the victualler's expenses for food, beer, casks and transport had to be met before the fleet sailed. The navy treasurer, on the other hand, needed only enough to meet the expense of pressing men and getting the ships ready for sea. A large part of the treasurer's costs lay in wages, which would not in any event be paid until the end of the service. Thus it follows that whenever there was a shortage of funds it was the treasurer's expenses that had to suffer, and of those expenses, inevitably the wage bill was the hardest hit; a cruel and perhaps immoral logic, but logic nevertheless. Further, this fault was compounded by human failings, for the return of one fleet or squadron seemed to evoke only the desire to replace it by another in the king's service, so that the vicious circle began again as considerations of preparation took priority over those concerned with past service. Thus the greatest problem facing the naval administration was the provision of money for seamen's wages.

The whole wage structure of officers and men serving at sea was based upon the "medium", which was the per capita allowance for the ship's complement. This system seems to have grown from the practice that became established early in the sixteenth century. The seamen's wage was then 5s. per month as it had been since 1463. The officers were also paid 5s. per month, but in addition each, according to his rank, was granted so many of the dead shares (each 5s. per month) allotted to the ship. Thus on the Henry Grace à Dieu a master's mate had four shares, a quartermaster three, a cook one, and so on.¹ The use of the "medium" would seem to have been a logical development. For example in a ship of 150 men and 10

1. Oppenheim, p.75.

officers (i.e. 160 ordinary shares) there might be allotted 40 additional shares for the officers. The total value of shares, 200 x 5s. = £50, might be divided by the number of seamen (150) which would give a "medium" of 6s.8d. per month.¹

At the instigation of Hawkins in 1585, the medium had been set at 14s. per month, of which the seamen received 10s. per month, the level at which seamen's wages remained for forty years. During this period, far from keeping pace with the rising cost of living, the seaman's actual pay was reduced by deductions over which he had no control. Admittedly the deductions were, in theory at least, for his benefit; in practice however, he derived little benefit from them. From 1590 onwards sixpence a month was taken for the Chatham Chest, later twopence was deducted monthly for the services of a barber-surgeon, and when the rates were increased in 1626, a further fourpence was deducted to provide the services of a chaplain. The report of the Commission of Enquiry in 1613 demonstrates an awareness of the need to increase wages, but being charged with the duty of arresting corruption while setting the service on an economical footing, the commissioners confined their increases to the wages of the responsible subordinate officers. The rates of 1626 therefore were long overdue, and should not be dismissed as a nominal raise cynically made by authorities secure

1. It seems significant that in 1626, in a letter to the navy commissioners, the privy council should refer to "the mariner's single share". Acts of the Privy Council, 1625-26, p.223. 7th Feb. 1626.

in the knowledge that funds for payment could never be provided.¹

There were two ways by which service to the navy could be paid. The first, more general and more obvious, was by payment from the navy treasurer, the second was by direct assignment from the exchequer. A few men were even fortunate or influential enough to receive both for the same service. This anomaly was unwittingly created by the establishment in 1546 of a separate office accountable for the navy's finances. Until that time, since the exchequer was directly responsible for the navy, it was perfectly correct that anyone who had claim to payment from the exchequer should have a patent to prove his right. Indeed, in law there was no other way. However when Henry VIII transformed the navy from a medieval institution into something approaching the modern conception of a fighting service in 1546, three steps should have been taken with regard to the payment of rewards. First, all wages and emoluments should have been payable by the new treasurer of the navy, with the possible exception of those due to the lord admiral and his principal officers; second, all posts should have been placed in the gift of the lord admiral; and third, all existing patents should have been cancelled, with compensation if legally advised. In fact the first two principles were introduced,

1. This is the impression given by Oppenheim, op.cit. p.225. In fact Oppenheim's research on wages seems to have been rather more superficial than was his habit. He makes no reference to the medium, the key factor of the wage structure, and indeed seems to be unaware of the difference between the ten shillings the man was supposed to receive (subject to deductions), and the fourteen shillings (before 1626) on which it was based; he writes, "Seaman's wages remained unchanged till the end of the reign [James I] when the rate reached fourteen shillings a month." (p.197). Again, on P.225 he writes, "The seaman's monthly pay, ten shillings during the reign of James, had been temporarily raised to fourteen for the attack on Cadiz", statements not borne out by any financial account of the period. It is true that "14s. per mensem" appears in several estimates of 1625, but since the whole ship's company had to be paid and estimated for, the simplest method of computing the wage bill was to use the "medium".

but they were gravely weakened by the omission of the third. As a result, the subordinate officers concerned not only accepted the pay established by the first point, but also, and quite legally, sought their fees from the exchequer. Certainly those who had been granted patents for life could not legally have had them withdrawn without some form of compensation. This particular difficulty might have resolved itself as the holders of the patents died, but the failure to implement fully the second principle, the granting of positions by lord admiral's warrant on good behaviour only, perpetuated the problem. There were always those who, with influential support, were able to plead a precedent for a new patent or reversion, several of which had doubtless been granted before 1546. So the anomaly grew, and of course, since it wasn't cut off at birth, the longer it existed, the more difficult it was to remove. Probably the timing made the solving of the problem more difficult. It seems likely that Henry VIII would have dealt with the business summarily, but the difficulties had hardly become apparent before his death in 1547. The next few years were far too full of other problems for the successive sovereigns to concern themselves with an item of naval administration; thus the patents were continually renewed or granted afresh, so that by the time Elizabeth could turn to such matters, precedents had grown for the receipt of both forms of wage under the new system. There was a decline in the number of such patents in the latter part of Elizabeth's reign, but sufficient remained to enable office holders, plausibly to cite precedents and re-create the whole problem under the lax administration of the early years of James I. The Commission of Enquiry in 1613 demonstrated moreover, that the practice had recently been extended by the creation of nominally new posts simply by the process of giving a senior officer an additional title.

Although not presuming to advise on a matter so clearly a question of prerogative, the commissioners made abundantly clear the faults of the system and their views on the practices, and it is perhaps pertinent to note again the measures ordered by the king. Payments would continue to those with patents for life, but neither renewal nor reversion would be granted. Future appointments would be at pleasure only, and on nomination by the lord admiral. All existing patents were to be scrutinized to ascertain the terms under which they had been granted.

Few sea-going officers held office by patent, chiefly because such appointments were to particular ships for specific services, the personnel being discharged or re-appointed to another vessel on their return. The permanent subordinate officers were the dockyard officials among whom the only ones likely to serve at sea were the masters attendant.

The lord admiral and the principal officers were paid under patent of course,¹ and as the king had allowed, the principal officers continued to receive their fees during the period of their suspension.² Payments were usually made twice or four times a year and, in a few cases, once annually, although the exchequer clearly preferred to make four smaller payments. The dates on which pensions and fees

1. Book of Fees, Pensions and Annuities, 1616. The pomp and ceremony associated with one of the highest offices in the realm apparently made little impression upon the clerks of the exchequer, for the change in the recipient of the fee for the post of lord admiral is acknowledged merely by the name Buckingham being written above a deleted Nottingham.
2. *Ibid.*, 1623-24. The character of Sir Guilford Slingsby, former comptroller, would hardly seem to have been such as would endear him to many. Nevertheless, he apparently had influence among exchequer officials. For a period beginning in October 1621 all pensions were stayed as an economy measure. See warrant to Sir Robt. Pye signed by Cranfield and Brooke, Warrants and Letters for Privy Seal 1620-23, f.8. When payment began again, many men, including of course some of those serving, had difficulty in obtaining even the current year's payment. Slingsby however among others received an additional year's fee to make up the payments outstanding.

became due were always the quarter days, 25th March, 24th June, 29th September and 25th December.

The actual offices held by patent, and those held only by warrant from the lord admiral were listed as part of a survey prepared for the lords commissioners of the admiralty in 1629. There were at that time four instances of subordinate officers receiving money from both the exchequer and the treasurer of the navy.¹ The first was the result of joining the posts of keeper of the stores and keeper of the outstores at Deptford into a new office of storekeeper general. Of the two older offices, the former had been held by patent, the latter by lord admiral's warrant. The second and third cases concerned the clerk of the cheque and the storekeeper at Portsmouth. Each of these offices, originally held by patent, was granted extra payment by Buckingham in acknowledgment of the greatly increased activity at Portsmouth during the years following 1625. The fourth exception concerned the master shipwrights. The exchequer paid the fee for their posts as principal shipwrights to the king, but they were also entitled to payment for such extraordinary service as they performed.

Not surprisingly, the navy commissioners were frequently being pressed by groups of officers and individuals who felt that they had particular cause to be paid above the normal rate. However, men such as Sutton, Gofton, Pitt or Osborne were not as naive as perhaps the suitors hoped. The captains of ships in Mansell's expedition to the Mediterranean complained to the privy council that because of the large sums they had been compelled to find from their own sources in preparation and execution of the expedition,

1. S.P.(D.), Eliz. cccxxvii, 76. 20th Feb. 1629.

the normal 2s.6d. a day paid to a captain was unjustly inadequate as compensation. The council, therefore, ordered that their case should be looked into by the commissioners; meanwhile the captains were to receive £10 per month of 30 days (normally the lunar month of 28 days was the unit), i.e. 2s.6d per day and the remainder in compensation for their long and chargeable attendance since their return.¹ Five months later the commissioners wrote to Cranfield of their reluctance to increase the pay beyond 2s.6d a day for fear of creating a precedent, and they pointed out that any such increase would have to come from the exchequer rather than the treasurer of the navy, for the "medium" would not bear it. However, a new privy seal granted an extraordinary allowance of 5s. during the Algiers service.²

Others were not so fortunate. John Roper, who commanded Mansell's flagship the Vanguard was not allowed the increase. There was no reasonable precedent for allowing a full captain's pay for the flagship of an admiral below the rank of a peer of the realm.³ The commissioners then pointed out with rather more deference to equity than to logic perhaps, that Roper had already been favoured by the allowance of the ordinary pay of a captain, to which he was not entitled, for in such cases, the commander in his position would normally be accounted as a lieutenant and inferior to the other captains in the fleet.⁴ Also unsuccessful were the

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1. Acts of the Privy Council, 1621-23, p.140. 21st Feb. 1622.
 2. Sackville-Knoles MSS. 771. 27th July 1622.
 3. Ibid., MSS. 8380. Navy commissioners to Cranfield, 9th Oct. 1622. The single exception quoted is that when Sir Richard Leveson was admiral, he was allowed a captain. However, as the commissioners stated, Leveson was the son-in-law of the lord admiral (at that time Nottingham). The point at issue was that such a captain was acknowledged as being senior in rank to the other captains.
 4. Accordingly, in the declared account for 1621 Roper is shown as a lieutenant, although at 2s.6d per day. Pipe Office 2259.

pleas of Sir Thomas Button of the Phoenix and Captain Christian of the Dreadnought. The commissioners refused to allow Button 20s. per day as admiral, when his vessel had no consort and similarly refused Christian 10s. per day as vice-admiral to Captain Best in 1623 when the squadron consisted of only two ships.¹

During 1626, when Captain John Pennington's squadron was in the Channel blockading Dunkirk, Buckingham made his warrant out for £3. per day. Once more the fear of precedents disturbed the commissioners who wrote to the lord admiral protesting that the only previous occasion of so large an allowance had been in respect of the Earl of Oxford's rank when admiral of the Narrow Seas; Sir Richard Leveson, nearest in rank in recent precedents had received only 30s. per day and it was suggested that Pennington should receive the same.² Buckingham's reply is not known, but Coke supplied the solution later. He suggested to Edward Nicholas, the lord admiral's secretary, that Pennington should be paid 30s. per day and 30s. travelling charges. Thus Pennington, who had earned his salary, would not suffer, and the navy commissioners would not be embarrassed by an unfortunate precedent.³ Pennington was again unwittingly involved in a similar situation two years later. He had been issued a warrant as admiral commanding a fleet for the Banks; the Earl of Denbigh had also been appointed to command a fleet to sail for the coast of Spain; later the separate voyages had been cancelled and the fleets amalgamated for the expedition to Rhé. The commissioners wrote to Nicholas that there was no precedent for two equal admirals in one fleet. An admiral might

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1. Bodleian Rawlinson MSS. A.455, ff.122-3. Navy commissioners to Cranfield, 6th Mar. 1622.
 2. B.M. Add. MSS. 9301, f.3. 13th Mar. 1626.
 3. S.P.(D.), Chas.I, xxvii, 37. 21st May 1626.

be appointed to command a detached squadron, but on its rejoining the main fleet, the temporary commander had to revert to the rank of captain once more. This particular problem was solved by the king himself, who ordered that Denbigh should receive £3 per day and Pennington £2 per day.¹

The attitude of the commissioners with regard to unprecedented claims seems to have been just--if only to save themselves from embarrassment later. No such danger lay with their recommendation for Roger Farr for whom they sought a gratuity of 100 marks (£66.13s.4d). According to the letter to the lord admiral, Parr, a clerk to the commissioners had first been employed in 1619 at £30 p.a. with leave to carry on his own affairs. Since 1624 he not only had had no time for his personal business but had also found it necessary to employ a clerk. Further, Parr stayed with the office of the navy in London when all others had fled during the plague, and since the death of his fellow clerk he had borne the whole service.²

Payment of seamen was made according to the ship's book, kept by the purser. The entry for each man recorded his name, the gross amount earned and in the next column the net amount he was to receive. At the end of the book was kept the account recording the amounts owed by each man for clothing supplied. This at least is the form of the ship's book of the James of London, a merchant vessel hired by the king for service from 21st June to 15th November 1628. There were one hundred men in the ship's

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1. B.M. Add. MSS. 9301, f.15. 18th Jan. 1628, and ibid., 9294, f.214. Chas.I to Buckingham, 10th Feb. 1628.
 2. The date on this document, which is original, is puzzling. The letter from the commissioners is dated 14th Feb. 1626 (1627 N.S.); but Parr's gratuity occurs in the declared account for 1626, Pipe Office 2264, which covers the period from 1st Jan. 1625/26 to 31st Dec. 1626.

company, sixteen of whom are shown as having died during the time of hire and others having been put into their places.¹ Payment was usually made by the senior clerk in the navy treasurer's office, with assistance from his colleagues. This senior clerk was known unofficially as the paymaster of the navy but officially there was no such post.² Of course, on occasions others had to be employed on this service—for example in July 1626, Denis Fleming, the clerk of the acts, and Joshue Downing, the surveyor, were ordered to attend Portsmouth immediately in order to pay the seamen up to the date of the proclamation raising the pay.³

It is interesting to note that the paymasters paid the seamen themselves, i.e. there is no suggestion that a lump sum was ever paid to the captain or the purser of a ship in order that he might pay the crew.⁴

Although Buckingham seems to have formally proposed the motion in the privy council to raise seamen's wages in 1626,⁵ it would appear from a letter written by Coke to Lord Edward Conway (principal secretary) that perhaps the king originally raised the suggestion:

. . . the proposition being his own, and he giving way to have it decided (as you know) at the board: it will be no less requisite that his Grace bee ther also when it shal be considered of.

Coke disapproved of the measure, for he continued:

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1. B.M. Add. MSS. 9294, ff.212-215.
 2. Kenrick Edisbury who began his career in the treasurer's office and later, in the thirties became surveyor of the navy, was frequently referred to as the paymaster of the navy.
 3. Acts of the Privy Council, 1626, p.78. 11th July 1626.
 4. E.g., S.P.(D.), Chas.I, cxii, 61. Sir Sackville Crowe to Buckingham, 10th Aug. 1628.
 5. Acts of the Privy Council, 1625-26, p.198. Privy council to navy commissioners, 29th Dec. 1625.

The fleet returns and in their miserable state the men must be paid off. For gods sake (my good lord) lett us first see how possibly we can raise monies to discharge this unfortunat armie and fleet . . . before there be anie debate or mention of increasing more charge.¹

The privy council requested the navy commissioners to propose an increase in the rate, the result being the suggestion to increase the "medium" from 14s. to 20s. The commissioners also drew up a table of the establishment and the monthly payments required for each of the 34 ranked ships.² This proposal was moved by the lord admiral in the council on 27th January 1626, when it was decided to submit the plan to the king. Rumour of the intended increase seems to have got abroad, as a day or so later Buckingham was presented with a petition from the wardens and brethren of Trinity House requesting such a raise for seamen.

It is difficult to follow the actual course of the proposal from this point. The king's approval was of course obtained, but the new rates were not officially approved until an order of the privy council dated 4th September of that year. On the 9th September, Buckingham wrote to Coke ordering that the new rates were to be put into effect immediately for time served from that date.³ However, it seems likely that the king had in fact approved the proposals much earlier, probably on the 24th April, and that the approval had become common knowledge. On 22nd August 1626, the privy council had issued an open warrant to Sir William Russell to pay wages at the old rate until 24th April, and also to send others on conduct (i.e. paid travelling charges)

1. S.P.(D.), Chas.I, xi, 64. 14th Dec. 1625.
 2. B.M. Add. MSS. 9294, f.195. Jan. 1626.
 3. S.P.(D.), Chas.I, xxv, 54.

to Portsmouth or Chatham where they might receive their due proportion of the new rate.¹

As far as the seamen were concerned the increase meant a net gain of 4s.8d. per month, for with the new rates of pay came the recognition for the first time of a chaplain on board each ship, whose pay was to be found by the contribution of 4d. per month from the whole ship's company.

There was considerable hardship among the seamen because of the slowness or failure of payment, but historians generally have tended to concentrate on this fault, bad as it was, without any reference to the attempts made to make payment. On 26th August, the privy council ordered that all mariners of the Portsmouth fleet should have two months' pay (at the new rate) before again being sent out, or if they needed clothes, one month's pay and the equivalent again in provision of clothing.² Thirteen days later, on a motion from the lord admiral, the council ordered that of the £3,000 provided to pay the fleet at Portsmouth two months' wages were to be used for "poor mariners only" and that any surplus should then be applied to the poorest of the officers.³ There is no doubt however, that these payments were hastened by the militant actions of many of the aggrieved seamen. A series of entries in the privy council register shows how disturbed the council became. Hearing of the approach to London of seamen marching from Portsmouth to demand their pay, on 27th June the council ordered the bailiffs of Kingston to turn the men back. When the bailiffs at least managed to

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1. Acts of the Privy Council, 1626, p.206. A similar order is to be found on p.228, 26th Aug. 1626.
 2. Ibid. p.206.
 3. Ibid., p.254. 8th Sept. 1626.

halt them for two days, the council commended their zeal and ordered that the men should be reconveyed to Guildford, for which a charge of £5 would be allowed. At the same time, the deputy lieutenants of Surrey were ordered to convey the seamen from Guildford to the Hampshire border, using the trained bands if necessary; such charges as were incurred were to be met by a levy on the whole county. The council also ordered the deputy lieutenants of Hampshire to receive the seamen from Surrey and then convey them to Portsmouth and keep them there. Although on the 19th July an order was made granting the lords lieutenant of Surrey and Hampshire the power of executing martial law on the sailors, there is no evidence that any man received the extreme punishment of death in any of the disorders over pay.¹

The authorities managed to keep the seamen from Portsmouth away from London, largely perhaps because of the distance the men had to travel. They were less successful five months later, when in November 300 seamen from Chatham marched to London and created a riot outside the navy office and also the home of the treasurer, to the extent that the privy council ordered the lord mayor to place a guard on Russell's house. This particular march led to a payment being made to seamen at the Clothworkers' Hall, on this occasion the funds being found by £2,000 from the Alum works, moneys payable on the recent loan, and ready cash from the prize Golden Herring, offered by the lord admiral.² At the same time Russell was ordered to pay only those men who held discharge certificates.³ In fact between 22nd November and 6th

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1. Acts of the Privy Council, June-Dec. 1626, pp. 34, 36-7, 40, 43, 101.
 2. Ibid., pp.360-1, 386, 397.
 3. S.P.(D.), Chas.I, li, 9. Certificate signed by Edisbury showing Russell's receipts and payments in that period ending 22nd Jan. 1627.

January Russell paid out £4,600 in wages, all to seamen except for £350 in boardwages to workers at Chatham Dockyard.

Not unnaturally, the success achieved by demonstrations encouraged other seamen to use the same method to gain their pay. Consequently early in February 1627, it was found necessary to issue warrants to Sir Allen Apsley, lieutenant of the Tower and captain of the city trained band, and the lord mayor to order out the bands to prevent mariners from entering the city. Rather ominously, the warrants provided discharge of those concerned, if in carrying out their duties, the bands had to take violent action.¹ The men demonstrating were being joined by others from the Red Lion, the Vanguard and the Constant Reformation, although Peter White, master of the first-named, stated that these ships were not short of victuals.² The earlier rioters had complained in justifying their action, that they neither had food aboard their ships nor money to buy for themselves. It was probably inevitable that men short of pay only, would join in taking such steps if it seemed that they might succeed. Once more the demonstrations had indeed been successful and a list was issued stating the order in which ships would be paid.³

In the case of some ships, pay was occasionally advanced by the captain, as in the case of Captain Christopher Harris of the Phoenix who wrote to Nicholas in connection with the paying out date, "I have so far committed my own money for my men that I must be present or risk great loss". One hopes that such officers acted out of compassion for their men. Certainly some

1. S.P.(D.), Chas.I, liii, p.9-10.

2. Ibid., f.66. Navy commissioners to Buckingham, 9th Feb. 1627.

3. Acts of the Privy Council, 1627, p.100. 23th Feb. 1627.

of the professional sea-captains at least, such as Pennington, were greatly distressed by the hardship the men had to suffer. However, one may be equally sure that some captains took advantage of their seamen's plight and offered advances only at a great and very profitable discount. Whether Harris was one of these, there is no way of knowing.¹

The impression left by most historians of this period seems to be that virtually no wages were paid to seamen from 1625 until early in 1629, when Lord Treasurer Weston, as chief admiralty commissioner, caused payment to be made.² However, not only is the suggestion of no payment entirely false, the attention given to Weston's act is misleading for, as will be seen, Buckingham was concerned with much of the work in the provision of the funds from which the 1629 payment was made.

In fact more than £82,000 was paid to ship's companies in the years 1625-28, 32% of the total owed, a figure based only on payments for which there is clear evidence. For the purpose of ascertaining amounts actually paid the declared accounts are unreliable; but what they do show is the amount that the navy treasurer owed in wages. The evidence of payment apart from an occasional passing reference in a letter or a certificate among the state papers, rests entirely upon the accounts of the Chatham Chest. Because of an enquiry into the administration of the Chest ordered in 1637, an abstract of its accounts from 1617 (the year of a previous enquiry) to 1636 was prepared, showing all receipts and expenditures within that period.³ Since each man contributed 6d. a month, it follows that every 6d. recorded

1. S.P.(D.), Chas.I, lx, 44. 17th Apr. 1627.

2. The payment made by Weston is as widely quoted as those made by Buckingham are ignored.

3. S.P.(D.), Chas.I, ccclii, 81.

as having been received into the Chest represents a wage payment of either 14s. or 20s. (according to the date of the service) by the treasurer.

When the Chest was founded, the original plan was that one or more of the governors should be present whenever a wage payment was made, in order that the contributions to the Chest might be received at the same time. In practice this was not merely inconvenient, but at times was likely to prove impossible, so that the practice grew up whereby the treasurer withheld deductions and paid them to the Chest in a lump sum--occasionally more than a year in arrears. The Chest accounts for 1624 and 1625 show no receipts from wages, but the entry in the Chest accounts for 1626 shows payment by Russell of £135, deducted from wages paid in 1624, i.e., representing £5,181 paid during that year.¹ Since the financial difficulties had not at that time become acute, and since 1624 was not a particularly expensive year for the navy--the wages bill for sea service being little more than £5,460--it seems reasonable to suppose that the wages had indeed been paid on time.² The account for 1626 also shows £390 paid to the Chest out of wages paid for 1625. These too may have been paid in full or in part during the year they

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1. S.P.(D.), Chas.I, ccclii, 81. Unless otherwise cited, all references to the Chatham Chest accounts are from this source.
 2. Declared accounts, Pipe Office 2262. For this purpose the term sea-service embraces all the work performed by those who contributed to the Chest. Work performed in the dockyards is, therefore, included, but forms a very small part of the total, particularly in war-time. It should be made clear that none of these figures can be exact because of the nature of the accounts available. E.g., in addition to the £5,460, paid in 1624, another item in the declared account shows £1,442 paid to shipwrights, caulkers, scavelmen, labourers etc. It is impossible to say how much of this sum went to shipwrights and should, therefore, be represented in the Chest accounts, but such margins for error have been reduced to a minimum. Thus although very few of the amounts quoted can be claimed as exact, the error is sufficiently small that the general conclusions drawn are valid.

were due, but the declared account for 1625 shows the navy's financial situation to have changed drastically. The total owed for sea-service had risen to £67,154, plus a certain amount from a total of £6,330 of which wages affecting the Chatham Chest comprised a small proportion.¹ The deductions of £390 represent wages amounting to £10,920, and under the circumstances it seems likely that most, probably all, of this sum was not paid until 1626.

The minimum total of all wages paid in 1626 for sea-service is represented by a sum of £2,370 and although one cannot be certain, it is probably also the actual total paid. Kenrick Edisbury deducted this amount from wages, but instead of paying it to the governors of the Chest he used it later to pay seamen when other funds became unobtainable. The governors of the Chest sued Russell in Chancery for the debt which he freely admitted, although of course, he insisted that the money had been kept and later used for paying wages without his knowledge of its origin.² Granted an assignment in 1629 to repay the money, he had undertaken to replace it in three instalments, and had already returned £1,000 by the time Lord Treasurer Weston was finally able to pay him the sum from the exchequer on 31st December 1631. One more piece of evidence seems to prove that this debt was incurred during Russell's first term as treasurer (and therefore, within the crucial years 1625-28 under discussion) rather than the second. On the 8th August 1628, presumably as a result of the lawsuit, although possibly because of governors' last appeal before resorting to legal action, the privy council ordered both Russell and Crowe to render account of all amounts deducted for the purposes of the Chest, and to deliver to

1. Declared accounts, Pipe Office, 2263.
2. S.P.(D.), Chas.I, cccxxxvii, 53.

the lord treasurer all such monies not yet paid in order that they might be so paid.¹

The Chest accounts show no further sums that can reliably be ascribed to the years 1625-28. The debt owed by Sir Sackville Crowe came to just over £3,000 and although it was chiefly concerned with service in 1627 and 1628, the larger part of the actual deductions almost certainly came from the payment made in 1629.²

The other evidence of payment exists in those single documents which refer to the subject. As might be expected, they are confined to the early months of 1627, after which the accent was once more on providing funds for preparation. There is no evidence or suggestion of payments in 1628, except in the declared account for that year. It may indeed have some basis in fact as has the account for 1625, but as it is obviously unreliable it has not been used here as giving proof of any payment of wages whatsoever.

On the 30th January 1627, Russell wrote to Nicholas that he had planned to pay Captain Driver's ship from Hamburg next after the Happy Entrance, but the lord admiral's order to pay the Red Lion altered things.³ A certificate from Edisbury to Russell two weeks later shows vessels employed in his majesty's service. Twenty-six ships had already arrived or were daily expected in the River, and of those already present, seven had just been paid. Four ships are listed to be paid on the next day: the Mary Magdalen, and the William of London, the Convert and the

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1. Acts of the Privy Council, 1625-29, pp.39-90. The actual amount demanded from Russell here is £2,600, an additional £270, representing a payment of £2,970, not included in the total previously mentioned.
 2. Crowe's debt has little or no bearing on the point being made here, i.e., wages paid 1625-28; for a detailed account see above, p.
 3. S.P.(D.), Chas.I, lii, 7.

Hopewell.¹ The last piece of evidence is less reliable, it being a warrant to pay £950 to the treasurer of the navy, but it has been included because not only is the date of its issue one at which a payment is likely to have been made, but also it is a fairly small sum explicitly directed to "seamen continued in the king's service after the late expedition".² It is perhaps not unreasonable to suppose therefore, that a sum in excess of £40,000 was disbursed in 1627 in payment of wages.³

As has already been said, there is no evidence of payments being made after the few instances cited for 1627 until the large payment made by the admiralty commissioners in 1629. It is clear, however, that Buckingham did much to prepare for that payment and make it possible. Early in 1623 the privy council, on a motion from the lord admiral assigned funds to the navy treasurer: on the 12th January, £16,000 from the sale of land to the City,⁴ on the 1st February, £6,000 payable from the import duty on currants,⁵

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1. S.P.(D.), Chas.I, liii, 92-3. 12th Feb. 1627. It may be that part of the money paid in these early months of 1627 was provided by the £2,370 Edisbury had already deducted for the Chatham Chest. However, such a step would hardly have been taken except in a case of extreme urgency, a situation more likely to have arisen later in 1627 after the return of the fleet, or in 1628.
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 3. A payment for 2 months for the four ships named whose total complement came to 197, would have amounted to £15,760. Of the seven other ships marked as having been paid already, only one has the number of its crew listed, although from other sources the normal complement is known of each vessel named. Since the crews that are shown are each only two-thirds of the normal number, even if that proportion is taken as general, at wages for two months the total for that service alone amounts to £26,480.
 4. Acts of the Privy Council, 1627-28, p.232. Of this sum £5,000 was originally to have been for the provision of clothing or wages for seamen setting out. Clothing may have been provided, but it would seem that no advance wages were paid.
 5. Ibid., p.263.

and on 25th February, £20,000 also contributed by the city.¹ Thus Buckingham was responsible for the provision of much of the wages paid in January 1629, sole credit for which has hitherto been given to Lord Treasurer Weston. Yet that the lord admiral should have made such provision merely confirms what the evidence on wage payment shows: that despite great financial difficulties Buckingham did his best to secure payment for the seamen and that under the circumstances, he had some measure of success. By the conservative estimate of figures which can at best only be approximations, and for which the evidence is either irrefutable or at worst substantial, more than 51% of the wage bill for the years 1625-28, was paid, and the unknown quantity in excess of that amount might well have been considerable. Not that the situation was such that it could call for great satisfaction from the lord admiral and the navy commissioners, but it is quite different from even the pictures painted by Oppenheim or Gardiner, who might be counted among the more perceptive historians of the period.

The payment of freight (*i.e.*, hire) charges to merchants received even lower priority than wages, except where payment of such charges was the only way by which owners could be induced to refit their ships to return once more into royal service. To avoid the needless use of precious cash, an attempt was made to pay merchants in land, which in view of the tendency of merchants of this or any other period to wish to become landed gentry, one would have thought might have proved a solution. However,

1. Acts of the Privy Council, 1627-28, p.315. It has been difficult to trace the source of this sum. It may have been from the further sale of lands, although it seems more likely to have been an instalment of the £120,000 which, on 17th December 1627, the City of London agreed to pay on security of the king's rents from landed property. See S.R. Gardiner, History of England VI. 220.

merchants rarely risked disaster by owning the whole vessel. The natural and logical course was to spread their investment over many ships, so that the loss of one would not mean financial ruin. Of the many reasons given in a statement signed by no fewer than 37 of them, the multiplicity of owners of any one ship is certainly the most valid.¹

Wages constituted the great proportion of naval expenditure during the war years and therefore have been most prominent in this survey. The cost of provisions rose with the greater amounts required, but individual items do not seem to have risen in price by any significant amounts. The totals of the annual ordinary charges shown in the declared accounts may be of some dubious value in that they were almost certainly met, but beyond demonstrating that the yearly charge at the end of the period was greater than at the beginning, no significant pattern can be established.² As far as the extraordinary charges are concerned it has already been shown that the declared accounts are valueless as an indication of annual expenditure. Nor is it possible accurately to determine the precise cost of any one expedition, as charges for different years are inextricably mingled when they are shown as being paid in arrears.

As might be expected perhaps, the fortunes of the administration of the navy from 1618 to 1628 may be gauged by the declining financial situation. The increasing difficulty of maintaining an efficient service as the size and scope of the operations increased, is accurately reflected by the rapid growth of problems directly attributable to the decreasing ability to

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1. B.M. Add. MSS. 9301, f.18. Navy commissioners to Buckingham, 22nd Dec. 1627.
 2. For the table of ordinary and extraordinary annual charges, see appendix

meet debts or establish credit. Although the problem was eased slightly by the end of the war, the dismissal of parliament meant that the navy's finances continued in a precarious state until the first ship-money collections, levied on the whole country, were available in 1635.

CHAPTER V

The Problems of Manning and Discipline

The great problem confronting the administration during the war years was the difficulty of getting and keeping able men, a difficulty caused chiefly by the high incidence of disease in the ships sent on the expeditions, and to a lesser extent, the lack of funds available to ensure regular pay. The use of the press before 1625 is no evidence of real manning problems at that time for there was no standing body of men waiting in a naval barracks.¹ Indeed there were no such institutions, for as is still the custom in the merchant service today, the men were paid off and discharged at the end of each voyage, the only permanent seamen employed by the navy being the shipkeepers.² Thus the demand for large numbers of seamen for extraordinary service always meant that the press had to be used. The significant point as to whether a serious manning problem existed is that until the despatch of the great expeditions there seemed to be few complaints of desertion on a large scale, and it was only after the return of the fleet from Cadiz, with its tragic tale of fatal sickness that men would go to almost any lengths to avoid the press.³

The surprising facet in the character of the seaman, even the pressed man, is the spirit with which he fought, once he had

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1. The term press almost certainly originated from the officers of the prest, i.e., those commissioned to detain men for the royal service by means of issuing an advance of pay, the imprest money. Since this was invariably accomplished by the use of persuasion and physical force, the corruption of "prest" to "press" was inevitable.
 2. Even their conditions of service were rather tenuous for there was no contract signed or understood, except that implied by the acceptance of imprest money. The shipkeeper, therefore, could demand his discharge, or else quit his ship without his pay, at any time he pleased. If the exigencies of the service demanded it, however, he was then immediately prey to the press.
 3. See below, p. 168-9.

resigned himself to his lot. There are few cases of cowardice shown by seamen, few even of a reluctance to fight. When such instances have occurred it has generally been traceable to merchant ships, and then not to the seamen so much as the captain or master, who being at least part owner of his vessel was reluctant to hazard her in close fight.¹ Yet the mariner's life was no easy one. He was worked hard in all weathers, and at best was fed but adequately. More often than not he was cold, hungry and frequently wet. The navy had long realised the need for a certain standard of cleanliness, so he had to keep himself and his quarters in a presentable state, a duty in which he was aided, either by threats or encouragement from the swabber and his mates. The quarters mentioned consisted of a bunk, described as a wainscot bed, and a wooden box called a locker (although probably very few ever had a lock attached).² During this period however, the wooden bed was being replaced by the hammock, which had several advantages. It did not trap the dirt so easily, it could be stowed away, it was more comfortable to sleep in and it was not apt to be a source of dangerous splinters during a battle.³

The punishments meted out to erring seamen varied from what may be termed the ludicrous to the barbarous. Petty offences were punished by whipping, the victim being tied to the capstan, whilst the misdemeanours of the ship's boys were met by the boatswain's cane.⁴ The more serious punishment lay only in the

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1. E.g., in the attack on the Spanish ships caught at anchor in Cadiz bay.
 2. Boteler's Dialogues, ed. W.G. Ferrin (N.R.S. XLV, 1929), pp.11-12.
 3. Ibid., p.257
 4. Documents refer to the boatswain's cane, but doubtless a rope's end (the "salt-eel") was a frequent substitute.

hands of a special commission or court martial. Boteler lists several offences that he terms "capital", but admits that they were so prescribed in Elizabeth's time.¹ For example, a murderer was bound to his victim's corpse and with it cast overboard; any man who drew a weapon in a shipboard quarrel was to lose his right hand. A man caught stealing from his shipmates was ducked three times from the bowsprit, then towed ashore behind the ship's boat and abandoned with a loaf of bread and a can of beer. Anyone found guilty of conspiring to steal one of the king's ships² was to be hanged overboard by his heels, his hands tied behind him, until he had been battered to death against the ship's side, whereupon he was cut loose to fall into the sea. The first occasion on which a man was discovered sleeping on watch, he would have a bucket of sea-water poured down the neck of his shirt; the second time he would be hauled up by the wrists and the water poured down his sleeves; the third time he would be bound to the mainmast with heavy weights tied to his neck and arms. If there were a fourth time he would be bound to the bowsprit with a loaf of bread, a can of beer and a knife so that ultimately he might choose between staying bound and dying from starvation, or cutting himself free to drown below. The punishment for desertion was death by hanging.³ Keelhauling was sometimes substituted for the ducking from the yard-arm, while blasphemy was rewarded by tongue-scraping. But the more frightful of these punishments can have been only rarely applied,

1. Boteler's Dialogues, pp.18-19.

2. Not so unlikely as it might seem at first glance, for the act of cutting a ship adrift would almost certainly have been covered by this regulation.

3. The term deserter seems not to have been used in the early seventeenth century. The act was simply termed running away and the men, logically, runaways.

for none is mentioned in any of the several detailed diaries kept of voyages during the ten years under consideration. Had these punishments been so common as Oppenheim assumes,¹ it is possible, if improbable, that the author of the account of the Algiers voyage thought them not worth comment, for the writer was obviously accustomed to the sea.² The author of the most detailed and reliable eye-witness account of the Cadiz voyage was not a seaman however, and he was not hardened to such occurrences.³ It seems much more significant, therefore that in this account of the expedition of 1625, when there was more discontent than at any other time, there is no reference to courts-martial or punishments of any sort.⁴

The only evidence of actual punishment of as serious a nature as these occurs in a report from Sir Sackville Trevor who had commanded the squadron blockading the Elbe. Captain Skipwith of the Assurance had complained of mutinous conduct by his ship's master William Rudes and the boatswain, Thomas Rudes, his brother. An enquiry held by Trevor with the captains and masters of the squadron, found the charges proved. The boatswain was ducked three times at the yard-arm and turned ashore in the prescribed fashion; the master was held at the lord admiral's pleasure.⁵

Pennington's instructions to his captains in March 1627,

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1. Op.cit., p.168, citing Boteler.
 2. S.P.(D.), Jas.I, cxxii, 106, and Purchas, op.cit., VI, 139. The author is believed to have been Sir Thomas Button, captain of the Rainbow.
 3. John Glanville, op.cit. Glanville was the Recorder of Plymouth.
 4. Boteler also states that it was the custom to discharge a "Great cannon" over the victim's head as he cleared the water after having been hauled under the keel, the chief purpose being to frighten the man rather than to attract the attention of the rest of the fleet, to the punishment as a warning. One might think that under the circumstances the victim would be beyond fright; if this were the case and Boteler was mistaken, perhaps his error indicates that he had no personal knowledge of keelhauling, and that he was speaking from hearsay.
 5. S.P.(D.), Chas.I, lxii, 59. Trevor to Buckingham, 6th May 1627.

seem to contain a catalogue of the accepted punishments of the day. A man absenting himself from watch, except in cases of sickness would receive 24 hours in the bilboes. Anyone found asleep in three watches would have three buckets of water poured over his head and into his sleeves, his arms being held upward. For striking another when not being an officer authorised to do so, or for provoking another, a man would be ducked at the yard-arm three times, towed ashore behind a boat and there discharged losing any pay or privilege accruing from the voyage. If a man struck an officer he was to be tried for his life by 12 men. Articles found were normally handed in to the boatswain who hung them by the mast on the spar deck for the claimant to see. If a man found an article not his own and did not hand it in he would be ducked three times at the yard-arm. For common theft the culprit would be stripped and bound to the capstan, to receive five lashes on his back from all hands in turn using a three stringed whip. He would then be abandoned ashore losing the voyage. For entry into the hold without permission, for dicing or playing cards (unless he were a gentleman volunteer or an officer), for using candles after the cookroom fire had been doused by the quartermaster when the watch was set, or for overstaying when sent to work ashore, the punishment would be 24 hours in the bilboes. A man found drunk would be committed to the bilboes until sober, when he would be punished according to his actions while drunk. A runaway would be held in chains and delivered to the admiralty prison to be tried for his life according to the proclamations and anyone breaking into prize goods would be imprisoned during the voyage and then committed

to the court of admiralty for the lord admiral's punishment.¹

The most usual form of punishment seems to have been a period in the bilboes or leg irons, probably situated somewhere in the hold of the ship. Flogging seems to have been much less common than in the eighteenth century, although the boatswain's cane was doubtless used as a "starter". Generally, the common punishments seem not to have been as barbarous as one might imagine, although the threat was always present.

In view of the conditions under which the seamen lived it is remarkable not only that the press had to be used chiefly for the great extraordinary services, but that even in normal times, having been pressed, the men accepted their fate philosophically and made the best of it. Part of the reason for this was that until 1625, the men pressed were generally sailors anyway, as the instructions to the pressing officers make clear. The officer received a list of the seamen living in the proximity of the port, and was required to muster all mariners, "fathers and masters as well as sons and servants". The officer was to choose only men skilled in sea-service paying each man prest and conduct money according to the scale laid down. The man also received a ticket bearing his description, his name and the amounts paid and also the time and date on which he had to present himself to the clerk of the cheque at Chatham. No man taken was to be unskilled at sea, weak, decrepit, maimed or unfit; the officer was to use his discretion and see that while his majesty must be well-served, trade and fishing were to be hindered as little as possible, e.g. only one or two men to be taken from a single barque. Fathers

1. S.F.(D.), Chas.I, lvi, 101. The reference to punishment for provoking another shows an interesting quality of discernment in the eye of authority.

and masters were made answerable for their sons or servants, and each man was warned that absentees would be dealt with as the law allowed. At the completion of his duty, the pressing officer made up books bearing the names and descriptions of all pressed men, with a note of the amounts paid, the date and place of the press and the date each man was required to appear at Chatham. All such books were sent either to the navy commissioners or direct to the navy treasurer's office at Deptford.¹

The imprest money seems to have varied from one to two shillings, the most common amount being 1s.6d., approximately three day's pay. The amount of conduct money varied with the distance to be travelled. Generally the cost increased, the farther along the coast the place of origin was from Chatham. Occasional anomalies appear, presumably, because a particular route might be more direct although somewhat longer in mileage. Thus from coastal towns in Kent from Faversham to Ramsgate, the conduct money allowed was 2s.4d., from Sandwich to Dover, 2s.6d., from Hythe to Rye, 2s.8d., in Sussex from Shoreham to Chichester, 2s.8d., from Arundel 3s., and from Newhaven to Brighton 3s.6d.² Those men pressed from "remote places" in the west country and the north-east coast were sometimes paid as much as 7s.7d. conduct money.

The authorities were always conscious of the potential danger the use of impressment held for trade and commerce. This is clear from the instructions already cited, and although the temptation to strip merchantmen and fishing fleets of able men must have been great, it bespeaks far-sightedness and calculated

1. S.P.(D.), Jas.I, cxl, 34. 9th Mar. 1623.
2. Loc.cit.

restraint that the lord admiral and the privy council were always prepared to grant immunity from the press under the proper circumstances, no matter how great the navy's need. In the early summer of 1625, although the sailing of the Newfoundland fishing fleet had been stayed until the navy's requirements had been met, the privy council urged the navy commissioners to act with all speed and with as little disturbance as possible to the fishermen.¹ A month later, when complaints had been received that the fleet had still not been allowed to sail, the council summoned the commissioners to certify the reason, and also to assure the council that its orders concerning the minimum hindrance to the fishermen had been carried out.² Ships bound for the Americas seem to have been completely free from impressment. On the 14th November 1625, open warrants granting immunity were issued to each of the Virgin, the Jonathan, and the William and John, bound for Virginia, and also the Gift of God bound for the islands of the Caribbean, while a month later similar protection was given to the Anne and the James also bound for Virginia.³ The council went further, even releasing a mariner who had been pressed while employed aboard a ship, the Paramour bound for Virginia in 1626. The man, John Hill, was discharged and 17 of his shipmates were granted immunity from the press.⁴

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1. Acts of the Privy Council, 1623-25, pp.500-1. 18th Mar. 1625.
 2. Ibid., 1625-26, p.13. Privy council to navy commissioners, 5th Apr. 1625. There may have been unnecessary delay in the first three weeks of March, although the fact that the vessels of the fishing fleet were distributed throughout ports along the coast from Southampton to Bristol made the organisation and execution of impressment difficult. There was certainly further delay because of the king's death on 27th March, which invalidated all warrants and patents issued in his name. It could not be expected that the commissioners would lay themselves open to action at law by proceeding in their business when they possessed no legal warrant to do so.
 3. Ibid., p.153, and p.134. 16th Dec. 1625.
 4. Ibid., 1628-29, p.91. 8th Aug.

This courtesy was not extended to English sailors serving in foreign vessels. Of these the greatest number was employed by the Dutch, and in February 1625, the privy council ordered all vice-admirals of the western coasts together with the local mayors to board all Dutch vessels and press for the king's service any Englishman found aboard. It is a sign of the council's concern for justice and the welfare of the men involved, as well as for Anglo-Dutch relations, that the order also demanded that care should be taken that neither man nor ship remained in the other's debt.¹ Similarly exemptions from the press among men remaining in England were sufficiently few that each man so exempted carried a warrant to that end. Not even members of the Watermen's Company were excluded in this period although in later years they did obtain exemption.²

The reception accorded to the press masters is demonstrated by two documents, one concerned with the preparation for Cadiz, the other with the preparation for the expedition to Rhé. In the first the navy commissioners protested to the privy council that the intended "Letters of Assistance and Instruction to prepare the country against the coming downe of the pressers" would do just that, and cause all the seamen to flee or hide. They therefore requested the staying of the letters until the press masters were on the spot.³ Two years later the approach to the problem was much more subtle. In a letter to Buckingham, the navy commissioners suggested that the merchant and Newcastle ships (presumably coming

1. Acts of the Privy Council, 1623-25, pp.486-87. 28th Feb. 1625.

2. The officers of the company did complain to the privy council about its members being pressed for land service, exemption from which was granted to them on 8th Feb. 1627. H. Humpherus, A History of the Watermen's Company, I (London, 1860), 213-9.

from the less heavily pressed north-east), should press their full complements and then join the king's ships, whose manning deficiencies they could make up. If more men were needed a sudden search could be made, but if any had to be sent a distance they must go in a king's ship, for the commonly used hoy was utterly insufficient for the service from the point of view of security.¹

As might be expected, the towns of the south coast suffered most by the demand for seamen, particularly until the latter part of 1626. This is borne out by the various muster rolls, typical of which is that of the Happy Entrance which began sea-wages 1st January 1626, and those of the Dreadnought, Rainbow, and Anne Royal, each of which began sea-wages on 19th May 1626.² The rolls were probably made when Downing mustered the four ships in the Downs in mid-March, and of the 505 men shown as pressed, 370 came from 34 towns. Only three of the towns, Hull, Newcastle, and Crookhaven (Ireland) were north of a line from Bristol to Woodbridge in Suffolk, a striking feature of the figures being that the numbers in each ship pressed from any given town exceeds ten in only five instances, and the most in one ship pressed from the same port were the 15 men from Crookhaven who were all aboard the Dreadnought. Perhaps this wide dispersal of men who might have common ties was a conscious attempt to reduce mass desertion, although there is no real evidence to support this conclusion. The distribution throughout the fleet is the more remarkable because during this period press masters were controlled by the navy commissioners and acted only on the lord admiral's warrant.

1. S.P.(D.), Chas.I, lx, 41. 17th Apr. 1627.

2. Ibid., xxii, 104-5. Dreadnought, Rainbow; xxiii, 21. Anne Royal; 44. Happy Entrance.

Men were, therefore, pressed in relatively large numbers.¹

By the following year the southern ports could no longer meet the navy's needs and the press masters' net had to be cast more widely and less discriminately. A muster roll of the Assurance dated 3rd February 1627, shows that 43 of the 232 men aboard were Scots,² while two months later men were being pressed from inland counties as remote from the sea as Bedfordshire and Warwickshire.³

Many ships returned from expeditions dangerously undermanned, but the evidence suggests that undermanning of the fleets on leaving England was not a serious problem. The whole question of the size of ships' companies had been raised by the commissioners in 1619, when, as a result of the enquiry, they decided that the numbers laid down had become inflated. Although excessive caution was blamed also, the real reason given for the large numbers of men demanded was that they allowed the captain and others a very profitable number of dead pays.⁴ In reducing the numbers, the commissioners were supported by the masters attendant, so that the reductions were not merely bureaucratic economies, imposed without regard to practical requirements. Certain captains petitioned the lord admiral to stop the cuts, which in normal circumstances would have reduced a complement of

1. It was rarely in this period that individual captains had authority to send press gangs ashore as they did later in the eighteenth century. A few cases occur in 1627 but in each instance a special warrant was issued to the captain for that specific purpose. There seems to be no suggestion that this occurred in 1626. Had this practice been used it would certainly have accounted for men from the same town appearing in threes and fours in each ship.
2. S.P.(D.), Chas.I, liii, 17.
3. Coke MSS. bundle 130. 11th Apr. 1627.
4. S.P.(D.), Jas.I, cix, 136. The commissioners set the figure as varying from 40 to 80 per ship "a charge neither denied nor defended".

200 to 120, but their arguments seem unconvincing compared with the logical case presented by the commissioners.¹ As a result, Buckingham supported the commissioners and the reduced complements were introduced immediately for all ships in the Narrow Seas and on routine duties.

Of the five ships mentioned above as being at sea in 1626, only the Rainbow, with 75 of the required 150 men was dangerously undermanned. The Happy Entrance had 215 on her muster roll with an establishment for only 200 men. However, of the 215, 45 are marked as transferred to the Garland, the effective strength of the Happy Entrance at that time being therefore only 170 men.² The Dreadnought was well supplied with men, 202 compared with her required 140-150. The Anne Royal was not so fortunate. She is shown with 196 out of a probable requirement of 250-260. The 1618 list gives her 400 men, but since she was a "prestige" ship ranked as a Royal, probably 100-140 of these were unnecessary.³ The Assurance, with 232 men in February 1627, was carrying about 20 men over her establishment. In May of the same year the navy commissioners informed the lord admiral that the fleet of ten ships about to sail to take over the blockade of the Elbe and six other men of war had among them a total of some 300 men over their combined complements.⁴

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1. S.P.(D.), Jas.i, cix, 136-33. 15th July 1619.
 2. The Happy Entrance, 582 tons (ton and tonnage) was built in 1619, consequently her complement was rated according to the new standard. The only complete list which shows (at the old rate) complements for those ships built before 1619 is that in the report of the 1618 Commission of Enquiry. Ships of 500 tons and 600 tons are shown as requiring 250 men or more.
 3. The Anne Royal was just over 100 tons larger than the Happy Entrance and carried 12 more guns, which suggests that her ship's company should have been the greater by perhaps 50 or 60 men.
 4. S.P.(D.), Chas.I, lxii, 40. 4th May 1627.

At the same time, it is also apparent that the reports of runaway seamen were exaggerated when they occurred.

Unfortunately, these are the accounts that have been cited by historians, who accepted them as reliable. For example, when seamen left Portsmouth en masse in 1626 to march to London, the officers of the Red Lion wrote to Pennington, the captain and admiral, that they numbered 400-500.¹ Two days later the same officers wrote again to Pennington, this time stating that after mustering the men present, only 119 were found to be missing.²

Despite threats, and the possession of authority to administer capital punishment, sailors who ran away, or pressed men who failed to report seem rarely to have been punished very harshly. The chief concern of the authorities, whose bark seems to have been infinitely worse than their bite, was to get the men back on board the ship, where the ringleaders may or may not have been punished, but if they were, the punishment was probably no more than the bilboes or a ducking. In 1626, a proclamation was issued forbidding on pain of death, desertion by mariners who had accepted press money,³ but there is no recorded instance of this penalty having been carried out, and yet many of the runaways were later recaptured. It is rather surprising to find that capital punishment was hedged about with legal difficulties, so that there is no suggestion of summary justice being administered by

1. S.P.(D.), Chas.I, xxx, 48. 25th June 1626.
2. Ibid., f.59. Oppenheim, op.cit., p.226, cites the former, but not the latter document. He also errs surprisingly in assuming that the 400 or more men all came from the Red Lion, whose establishment, even before 1613, was only listed as 250 men. It is doubtful that the 119 who did leave were all from the Red Lion. Clearly, Pennington was being informed as admiral, not merely as captain of a particular ship.
3. Steele, Proclamations, 1481.

even senior officers, except perhaps in the face of the enemy. The problem of the death penalty is shown in a minute prepared by Nicholas in April 1627, for the lord admiral to bring before the privy council. Certain seamen found guilty of mutiny had been committed to the Marshalsea prison, but Sir Henry Marten, the judge of the Admiralty Court, pointed out that his court could not punish them except to whip them or duck them. If the privy council wished them to be hanged as an exemplary punishment, a court of martial law would have to be established for that purpose.¹

Because men of the Cinque Ports were traditionally exempt from the press, in those towns seamen might gain sanctuary. However, this difficulty was resolved for the commissioners when Buckingham became lord warden in 1624. The jealousy and rivalry which had long existed between the offices of lord warden and lord admiral no longer had any point, which led to fewer complications in the pressing of seamen, and fewer delays over the jurisdiction over wrecks along traditionally disputed stretches of the south coast.

An interesting sidelight on pressing and its problems appears in a letter from Captain Philpot of the Globe, to Nicholas in 1626. Philpot thought that much of the trouble was caused by the press masters themselves, and that the navy was ill-served by,

1. S.F.(D.), Chas.I, lxi, 78. Martial law was one of the impositions to which specific reference was made in the Petition of Right the following year. Surprisingly, no mention was made of impressment for land or sea service, although the latter was no longer confined to seamen. This suggests perhaps that it was accepted as a necessary evil, and that historians have tended to read into accounts of impressment in the days of the early Stuarts the widespread tyranny of the eighteenth-century press-gang.

many meane ill-conditioned ffellows having obtains the Commissioners authority to press, puft up thereby with an opinion they have power to bind and loose hold it a glory to tyrranise his majesty's poor subjects every day pressinge men yet still wanting. As for myself though I found few men when I came aboarde through the like abuse yet am I now furnished with voluntaryes.¹

Doubtless Philpot was right and many did relish the considerable power a warrant to press gave them, but this is only likely to have aggravated the difficulties. It would hardly have created them. Had Philpot's argument been carried to its logical conclusion, the navy had only to make its press masters courteous and respectful towards their prey and no matter what the conditions of service the king would not have wanted for seamen. There was undoubtedly some point to Philpot's observations, but they did not provide the solution.

While the system of impressment in the early seventeenth century was not as efficient as it later became in the eighteenth century, it did provide large numbers of men. Nor was it generally so officious, Philpot notwithstanding. Certainly the press masters had not the power they later assumed, and for all the threats and proclamations, runaways were not treated as repressively as one might have expected.

As far as the officers were concerned, although the lower ranks were occasionally filled by the press there was rarely a scarcity of volunteers. All appointments were made by warrant from the lord admiral, selection being based upon recommendation. Soon after transferring his services to Buckingham in 1624 and making himself responsible for the lord admiral's correspondence, Nicholas drew all the lines for

1. S.P.(D.), Chas.I, xli, 2. 1st Dec. 1626.

promotion of subordinate officers into his own hands. Downing refers in a letter to Nicholas's "request" which was obviously that all recommendations for promotion should be made through him.¹ Other evidence makes it clear that Nicholas also could only recommend, as all such warrants received Buckingham's signature. However, Nicholas was in a position to influence the lord admiral by pressing certain promotions or appointments. The recommendations most likely to be successful came from the navy commissioners, and even they soon addressed themselves to Nicholas about such matters. Some recommendations came from individual captains or other subordinate officers, and in many of these instances Buckingham sought the commissioners' opinion of the men concerned. Nicholas's object in having the appointments pass through his hands is plain, for many of the letters state clearly that the successful candidate would show Nicholas his appreciation in a tangible form. There appears to be no suggestion that any of these presents were directed to the lord admiral, although Nicholas may have had his instructions; in any case seventeenth century standards condoned such practices provided that the present was made in gratitude for an appointment after the event and not as a bribe in order to secure it. But such niceties are beside the point, which in this case is that even if the recommendation went to Nicholas in the first instance, the lord admiral's signature was required.

The appointment of senior officers, i.e., captains and admirals was the particular responsibility of the lord admiral, and only very rarely and in special circumstances did the navy commissioners presume to advise on such matters. On at least

1. S.P.(D.), Chas.I, v, 53. Downing to Nicholas 10th Aug. 1625.

one occasion when, in the absence of the lord admiral in 1623 they were invited by Secretary Conway to nominate the admiral in a squadron, they absolutely refused to do so.¹ Lieutenants were often appointed to ships of the third rank and larger, occasionally on the recommendation of the commissioners, but often on application by the captain. Oppenheim likens the lieutenants to the modern midshipman, but in this he seems to have been misled by a phrase in the document he quotes, "to breed young gentlemen for the sea-service . . ." ² which he takes perhaps rather too literally. The lieutenants may have been young men, but they were not mere youths, for they often took command in the case of death or illness of the captain, and after the 1626 pay increase received 2s.6d. per day, which had previously been the standard captain's rate. For example, when the Spanish ambassador, the Marques de Inojosa, left England on 26th June 1624, the ship in which he sailed was commanded by Sir Richard Bingley's lieutenant.³

Again, contrary to Oppenheim's belief, there were midshipmen long before the sixteen-forties.⁴ On 1st March 1627, the navy commissioners issued a warrant to press four able mariners to serve as midshipmen in Pennington's Red Lion. They were to be paid as master's mates as they would probably be required to serve as replacement subordinate officers in other ships of the squadron.⁵

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1. S.P.(D.), Jas.I, cxlvii, 2. Navy commissioners to Sec. Conway, 17th June 1623. It should be remembered that these appointments were usually made for each voyage; there was no permanent rank of admiral or captain in the navy and the gentlemen commanders would not have considered themselves to be "in the navy" as are their modern counterparts.
 2. Op.cit., p.226, and he cites Egerton MSS. 2541, f.13.
 3. S.P.(D.), Jas.I, cxlviii, 14. Conway to Coke, 20th June 1624.
 4. Op.cit., pp.226, 314 and note.
 5. S.P.(D.), Chas.I, lvi, 3.

The captain of any naval vessel had the right to a certain number of men engaged as his retinue. They were each allowed the seaman's rate of pay, although whether the full wages went to them probably depended upon the captain. The number allowed depended upon the size of the ship's complement, the rate being two retinue for every 50 men in the ship's company. The maximum number was 22, but there were extra allowances of two for any captain who was also a knight, three if he were the admiral and one if he were the vice-admiral.¹

The captain of a ship was of course in command and was solely responsible for his vessel, but his chief concern was with fighting the ship; the navigation and technicalities of sailing were delegated to the master. Naturally a captain of many years' experience, such as Pennington, Monson or Thomas Best, i.e., the professional captains, were probably as competent as their respective ship's masters. Most captains however, were merely sea-borne soldiers with little or no interest in the ship or its crew. These were the gentlemen-captains whose indifference to the ship as an entity in itself caused so much bad feeling among the professional seamen they commanded.

The master was the chief professional sailor aboard the ship and had usually spent long years learning his trade as seaman, quartermaster, boatswain and finally master's mate. He frequently, but not necessarily consulted by the captain when major decisions had to be taken. His function was to present the captain with an efficient vehicle for fighting, and in action, to place it according to his needs. The master normally had a much closer affinity with his men than with his captain.

1. S.P.(D.), Eliz., ccxxxvii, 41. 4th Mar. 1598.

For the deployment of the crew when the ship was at action stations, the master gunner traditionally had the pick of the men. Next the sail trimmers were chosen, those at the mainmast being under the master, the foremast under the boatswain and the mizzenmast under the trumpeter. The men who would work under the master carpenter and the quartermaster were next appointed, their task being the location and stoppage of leaks. Finally the remainder of the company acted as musketeers under the lieutenant and the corporal, the latter rank being recognised for the first time in 1626.¹

In the dockyards the manning problem was much less acute, although the sudden need for artisans and labourers to repair and refit large numbers of ships for the expeditions did create difficulties. The only permanent staff in a dockyard were the officers, who acted under the lord admiral's warrant, and the shipkeepers who provided a small labour force capable of carrying out the purely routine duties.² The remainder of the dockyard workmen, both skilled and unskilled, were generally engaged on a daily basis, although for many the employment must have been regular and constant, particularly during the period 1619-23 when two ships were built each year, besides the major repairs effected upon others. With the completion of the shipbuilding programme in the autumn of 1623, the bulk of the labour force was dismissed, with the result that when the great preparations for Cadiz began in 1625, artisans of all kinds had to be pressed. Naturally this service was not shunned quite as much as sea-going, but it is not likely to have been too

1. Nathaniel Knott, *op.cit.*, ff.43-44.

2. The duties of the various dockyard officers are set out below, pp.187-97.

popular by December 1626, when the men on the books of the Chatham ordinary were protesting that they had not been paid for nearly a year.¹ At the same time, the merchant yards were relatively prosperous.² Lack of adequate funds affected the manning problem in other ways. The stock of supplies became depleted and with no means of buying more the commissioners were faced with the dilemma of either maintaining the labour force in pay and at hand even though they had no work, or else letting the men go and then having the difficulty of recruiting them again when the provisions were available.

Thus the problems of adequately manning the navy centred upon the provision of quantity at the seaman level and quality among the officers. Given both these attributes a self-perpetuating standard of efficiency would appear, for if the numbers on the lower deck were adequate for the service, good officers would find enough able men to train for positions of authority in the future. This of course was the ideal, and in practice the service fell far short of achieving it. The number of men available was unreliable, which led to the pressing of many that were unsuited to the sea; this in turn meant that the number of competent seamen worthy of promotion was fewer than it should have been. The quality of the officers had suffered a similar set-back, for most of those in authority in the sixteen-twenties had either learned their trade during the period 1604-18, and so had little notion of honest efficiency, or else they had spent so long under a corrupt and lax administration that in their later years the effort to

1. S.P.(D.), Chas.I, xlii, 137.

2. Oppenheim, p.272.

revert to the standards demanded by Hawkins, Drake and a younger, vigorous Howard were beyond them.¹ It is very difficult, if not impossible, to assess the true merits of the subordinate sea officers. Favourable comment usually occurs only in a recommendation for a higher place, and there is no way of knowing the relationship between the referee and the applicant, or the general background of the recommendation. In the case of the administrative officers, however, there is naturally more documentary evidence available. From this it seems significant of the atmosphere prevailing during the ten years of administration by Buckingham and the commissioners, that at least four of the five officers known to have been efficient, reliable and honest (by the standards of their day) began their association with the navy in 1618 or after.² It was the perseverance of such men as these under the direction of the commissioners and the lord admiral that stopped the administration becoming absolutely engulfed by the problems raised because of financial difficulties and the persistence of disease. Of these problems, that of manning was of paramount importance.

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1. Downing frequently complained of the dearth of good officers, e.g., S.P.(D.), Chas.I, x, 21-2. Downing to Nicholas, 26th Dec. 1625.
 2. Downing, Edisbury, Hollond, Nicholas and Parr. Little is known about Downing's early career; if he had been "navy bred" he probably held an inferior post before 1618. Nicholas, while not technically an officer as were the others, nevertheless fulfilled similar duties and was undoubtedly efficient. Edisbury began his career as a clerk in the treasurer's office in 1615. John Hollond entered the service as a clerk to Downing in 1624. Roger Parr, who earned the praise of Buckingham and the commissioners, as well as a bonus payment for his devotion to duty during the plagues of the sixteen-twenties, also began his career as a clerk in the navy office in 1618.

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CHAPTER VI

The Seaman's Welfare

The life of any sailor is hard by comparison with that of someone employed ashore. This statement has been true ever since man first took to the sea and is such a commonplace that despite its evident truth, the facts are so taken for granted that one tends to lose sight of just how hard and dangerous a sailor's life may be. Probably conditions were never worse than during the two hundred years from 1460 to 1660. During this period long voyages were undertaken in small and vulnerable ships with only a very basic knowledge of navigation, medicine (particularly preventive medicine), and food preservation: in short, of all the arts necessary to maintain the seaman's life and health. In addition to these drawbacks, which were serious enough on any protracted voyage no matter how favourable the weather, the seaman was at the mercy of both wind and sea, which could tear his ship apart, drowning all aboard. Perhaps least deserving of consideration in this respect are those who went on the truly long voyages of exploration with captains such as Columbus, Magellan or Vasco de Gama, for although their sufferings may at times have been acute, yet they were all volunteers who knew the risks and the privations of life at sea and accepted them, as often as not for the great rewards of wealth so often promised, but rarely obtained. Those English seamen most to be both admired and pitied are to be found among the men who manned the king's ships in the seventeenth century, before the Civil War: their rewards small, their expectations nil, their food varying often from the barely palatable to the utterly inedible; yet

with all these the dangers as great as ever.¹ It might be said that these ships did not attempt lengthy voyages, but a voyage of six months or more was not uncommon, and unless the victualling arrangements had been excellent the last six weeks of such a voyage could have been thoroughly unpleasant. Naval administration itself was still unsophisticated, especially in the mounting of such large-scale expeditions as were sent to Cadiz and the Isle of Rhé when the numbers involved made adequate victualling problematical.

It was during this period that in theory at least, several measures were introduced for the benefit of seamen. The first and most important was the Chatham Chest, established by Drake and Hawkins in 1590.² By the deduction of 6d. per month from all ranks from seaman to master, with grometts and boys contributing 4d. and 3d. per month respectively, a fund was set up to provide pensions or gratuities to help seamen who had been injured or disabled in the service of the crown, and who were less able to provide for themselves in the future.³ The administrators of the fund, termed governors of the Chest, were five in number, and included one of the principal officers, one of the masters attendant, a purser who acted as secretary-treasurer, a boatswain

1. Throughout most of Elizabeth's reign there had always been the possibility of wealth from prize-money. From 1604 until the Civil War this state of affairs existed only once, for a few months, during 1627, but by July, England's supremacy at sea had become such that no French merchant vessel would venture from its port. Gardiner, VI, 178.
2. The foundation of the Chatham Chest is valid in this context as its purpose had been as necessary under the parsimony of Elizabeth as it was in later years.
3. S.P.(D.), Chas.I, ccclii, 80. With the wage increase of 1626, all ranks contributed 6d. a month thereafter.

and a master shipwright.¹

The chest in which the funds were kept had (in the manner of the time) five different locks, each governor being responsible for one key. This simple precaution at least meant that the Chest could not be opened without the knowledge and approval of each governor. The system was by no means foolproof, but based on the assumption that five unscrupulous men were less likely to be found together than any smaller number, it did afford some slight protection to the contributors. Each branch of the service was represented so that a claimant would have some assurance of a fair hearing—this at least was the theory. It is unlikely that in constituting the governors, Hawkins and Drake were so naive as to suppose that subordinate officers would be less open to corruption than their superiors; the safeguard, such as it was, was that four of the five governors were known personally to the electors. In fact, it was not safeguard enough. Perhaps there could be none. In any case it was very early in the existence of the Chest that the ideals of its founders became sadly neglected. If the administration had been deliberately kept from the higher echelons of the king's service as a means of security, the danger from grasping senior officers had been replaced by that from only slightly less

1. There is a slight conflict in the evidence concerning the governors. The list given in the text is taken from the 1637 report S.P.(D.), Chas. I, ccclii, 80, but an undated document, thought to be of 1625, demands a return to the original ideas of Drake and Hawkins and quotes the governors as being one principal officer, a master attendant, a master shipwright and two pursers. *Ibid.*, xii, 61. The question seems to be whether the fifth place originally went to another man from the seaman's branch, *i.e.*, a boatswain, or a second purser. However, this place on the board of governors was almost certainly the one accorded the gunners, when they joined the scheme in 1619.

grasping subordinates. Twenty-five years after its inception, the funds of the Chest had become so misused that a Commission of Enquiry was issued in 1616, the subsequent report being made on 11th April 1617.¹ In all a total of £1,483 4s.3d. had been "borrowed" from the Chest while the successive governors were in office. The largest debtor was Sir Thomas Middleton, an alderman of the City who had managed to obtain £371.18s.0d ostensibly as reimbursement of monies he had paid out to seamen while paymaster for the Drake-Hawkins voyage to the West Indies in 1596. Roger Langford, the senior clerk in Hawkins's office who, between the treasurer's death in November 1595, and the appointment of Fulke Greville in 1598, had been nominated a stop-gap general paymaster of marine causes, also owed a large sum, £328.15s.6d. The clerk of the ships, Sir Peter Buck, had received £107.17s.10d. since 1604, and among several in debt for £100 was the king's master shipwright, Phineas Pett. The only classification of subordinate officer not involved was that of boatswain. Of the thirteen debts, only two were for less than £10, and one of the debts of £100 had been incurred as early as 1592.

As a result of the enquiry the debtors were ordered to make restitution to the Chest. Those who could offer security were permitted to engage to repay by fixed instalments on set dates. Those who could not find security were ordered to make total repayment within eight months. Unfortunately, no official of any consequence seems to have concerned himself with the

1. P.R.O. Adm. Lxxxii, 30.

effectiveness of these orders. When further abuses led to another Commission of Enquiry and another report in 1637, of the debts of 1617, £672.6s.0d was still outstanding. Four debts, amounting to £154.18s.0d were classed as virtually irrecoverable. Six of the debtors, including Phineas Pett and Roger Langford, had made no repayment; Sir Thomas Middleton, who had offered no security, had repaid all.¹

It is curious that there is no record of a complaint being made by the governors to the Commission of 1618 that the debts were not being repaid, particularly when this zealous commission began its work about fifteen months after the order, at the very time when it was becoming increasingly obvious to the governors that much of the money would not be recovered. A possible explanation is that several of those most in debt were still in positions of authority and it might have been thought unwise to antagonise them. Two of them were Sir Peter Buck and Phineas Pett. However, in view of the power of the commission and the presence of a new lord admiral, it would seem that the governors need have had little fear of victimisation. Another possibility is that by 1618, the effects of the enquiry of 1617 were forgotten and the storm of the previous year had begun to die away, with the result that the governors elected for 1618, were seeking their own opportunity to divert money from the fund. If such was the case, the last thing they would have wanted would have been the long, inquisitive arm of the navy commission investigating the affairs of the Chest. But the records of

1. S.P.(D.), Chas.I, ccclii, 81. 14th Apr. 1637.

the 1637 enquiry show only one debt incurred between 1617 and 1630, and that amounted to no more than £12. The likeliest explanation of the governors' acceptance of the situation in 1618 may well be that they were very jealous of their authority and were anxious not to jeopardize the independence of the Chest by risking an invitation to the navy commissioners to interfere. Certainly the mood of the commissioners, particularly Cranfield, and later Coke, suggests that any fears the governors may have had of being absorbed into the general administration of the navy were not unfounded. The air of independence in successive governors is demonstrated by the way in which their prerogative in affairs concerning the Chest was jealously guarded, even in opposition to Buckingham and the privy council.¹

The only item of note affecting the administration of the Chest in the early part of the period was the admission of gunners in 1619. This step was taken after the gunners had petitioned to join the scheme; as a result thereafter, a master gunner was also annually elected to office by his fellows.

In 1617, for the first time apparently, the governors of

1. E.g. the case of Thomas Crostat who was wounded at Rhé and petitioned the privy council for relief. On the 16th February 1628, the council ordered the governors of the Chest to pay Crostat a pension of £10 p.a., but it was not continued after the first two years on the pretence it was not specified in the order that the pension had been granted for life. Crostat then petitioned the council again and was granted an order, signed by secretaries Windebanke and Coke, and comptroller Henry Vane, that the governors were to pay the arrears and keep payments up to date, or certify why. S.P.(D.), Chas.I, cclxiv, 59. 20th Dec. 1634. Perhaps Crostat died shortly thereafter. If he did not, the governors of the Chest seem either to have defied the council entirely, or else to have been guilty of grave contempt, for a list of beneficiaries dated 14th April 1637, no Thomas Crostat appears, although a William Corstat was in receipt of a pension of £2.12s.0d p.a. Neither name is a common one and it is quite likely the same person with the name misspelled. The different christian name means little, for copying clerks, outside chancery and the exchequer seem to have had a fine disregard for such details. Ibid. ccclii, 79.

the Chest invested part of their trust in land. Whether the step was taken with the conscious knowledge that besides bringing in an annual rent of £120, the move would stop, or at least considerably decrease, the drain of capital by debts, is unknown. In any case £1,930 was actually paid to a Mr. Johnson for the land.¹

The administrative costs of buying the land were set at £6.15s.0d or a little more than $\frac{1}{2}\%$, perhaps a proper figure. However, there is a rather sinister entry showing £64.4s.0d paid to Kenrick Edisbury,² which may be a genuine reimbursement, but if that is so, the original expenditure is not shown, nor is there any apparent reason why he should legitimately (by modern standards) be receiving money from the Chest. One cannot help but feel that he was involved in the purchase of the land, which raises the administrative costs of the purchase then, to £70.19s.0d or rather more than $\frac{3}{4}\%$. The total costs of this purchase left the Chest with a cash balance of a little over £21 and debts receivable of more than £1,100. In 1618 the debts were reduced by nearly £400, so that with the rent income of £120, the governors were able to pay out £138.5s.0d in grants and running costs, and still end the year with a cash balance of more than £380.³ The following year Mansell, then treasurer of the navy, paid in

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1. S.P.(D.), Chas.I, ccclii, F.80. The land purchased consisted of a farm in fee simple at Chislett, with an annual rent of £100. There was in addition a lease valued at £20 p.a., but in 1623, subject to the tenant paying a £40 penalty, the lease was revalued at £10 p.a. The lands were held in trust for the Chest, the governors being named as feoffees.
 2. Edisbury lived in Chatham, and his will, P.C.C. 122 Lee, suggests that his estate was small. There is no suggestion that he had any financial interest at Chislett which is 35 miles away in north-eastern Kent.
 3. The payment of £138.5s.0d is to Nathaniel Tearne, clerk of the Chest, and doubtless includes some payments to deserving cases. However a certificate of payments, drawn up for the enquiry of 1637, shows that at that time at least £40 p.a. was being paid in fees to the governors. This may have been an innovation of the sixteen-thirties, but it is not very likely.

£427, but with the governors' approval also disbursed £68 of the Chest's funds, while Tearne received £125, for grants and expenses. From 1620 to 1624 the accounts are unremarkable, and by the beginning of 1625 the cash balance had increased to more than £3,000, whilst the debts receiveable remained at £709, which figure had been reached in 1621. Payments made in 1625 came to £1,824, of which £1,722 is shown as having been awarded to seamen during the years 1621-25. There are few details given to account for the other £102, but presumably it covered administrative costs. A new item of expenditure appears in this account: £5,9s.10d. in rent, presumably for a room in which the governors could meet. Finally, the account for 1629 shows that during the preceding four years of wartime, only £1,372 had been disbursed to seamen, £250 less than had been paid in benefits during four years of peace.

This niggardliness may have been because of embezzlement by the governors; certainly the temptation must have been great in view of the ease with which it could be done, and the act itself not really difficult. The Chest did have a somewhat unsavoury reputation for corruption, but the accounts show no irregularity, except in the extent of the debt owed by Crowe, and this did not account for the relatively small sum paid out. The reason could be that the Chest could not stand larger payments. In January 1626, the actual cash balance stood at £1,375, and until some time in 1629, when Russell began to repay his debt, the only amounts which can reliably be said to have been paid in to the Chest were the annual rent of £110, plus, in 1626, £9.4s.6d from the contribution from wages paid on the ordinary charge. Thus the income from 1st January 1626, to 1st June 1629, the date to which the total disbursement to

seamen is taken, amounts to £450, if the whole year's rent for 1629 is included. The governors, therefore, did not have a huge amount of money to hand. The accounts presented in 1637 are quite misleading, since Russell's debt is shown as a payment to the Chest in 1626.¹

To the extent that it demonstrates wages paid, Russell's debt has been described in the chapter on naval finance.² Once having received the assignment he repaid all but £500, with a promptness that could well have been emulated by certain governors themselves, such as Phineas Pett. Russell was pressed for the £500 in 1636, and his explanation in reply to a demand from the king was not unreasonable, nor were the moral standards involved out of place in his time. Russell said that he did not punctually pay the final instalment as he believed that it would only lie unused anyway, and his obligation would be enough to prevent any serious financial harm to the Chest. Since he had long foreborne far greater payments himself, he felt the Chest could stand this one courtesy, the safety of which was guaranteed. The £500 had now been repaid, but if his majesty thought his conduct a disservice to himself or a disadvantage to the Chest, Russell would either pay for the use of the £500, for as long as he had held it, or else he would advance a similar sum of £500 to the Chest for a similar period for any purpose the Chest might need. The question of use of the money was a valid one, but one

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1. This is in accordance with seventeenth-century practice in accounting. By the time the account was rendered, the debt had been paid; therefore it was shown as having been received in the year it was originally due. By modern standards this is the basic fault with the declared accounts of this period.
 2. See p.109 above.

cannot help wondering if Russell's offer was genuine or whether he was merely disarming the governors of the Chest in advance, for in the same letter to the king, he carefully pointed out that the debt charged on navy funds had not been covered by the lord treasurer until five years after it had been incurred, so that his majesty had enjoyed the benefit of the £2,370 for that time without paying any usage (as the audits would show). Clearly the implication seems to be that since the usage on funds assigned to the navy properly (and legally) belonged to its treasurer, if the Chest were permitted to claim usage from Russell, he would claim a far greater sum from the crown. One cannot be certain, but since there appears to have been no further comment on this aspect of the problem, it seems that Russell's point was well taken and the matter was allowed to rest.¹

If there were mitigating circumstances in the way in which Russell's debt arose, none such could be claimed in the case of Sir Sackville Crowe; and if Russell's conduct was subsequently just faintly suspect, Crowe's was utterly unscrupulous. The Chest account for 1630, shows for the years 1627-29, a total of £3,130, "received and owing from Sir Sackville Crowe". Of this sum, £3,005 was owing; the remainder, which had been paid, probably came from deductions at a payment on the ordinary charge at the dockyards. The sum was paid to Crowe's charge in 1630 (for although by that date Russell had been re-appointed, the money was in respect of wages paid during the years for which Crowe was accountable). Although the wages were paid, the Chest

1. S.P.(D.), Chas.I, cccxxvii, 53. 17th Dec. 1636.

did not receive the amounts deducted, whereupon by 1633 presumably, the governors had sued Crowe in Chancery, where the debt was acknowledged. Order was made that Crowe should pay £1,000 by the 26th March 1634, £1,000 six months later at Michaelmas, and the remainder by the 26th March 1635. When no payment had been forthcoming by the last date allowed, the governors entered another suit, and an order was made to execute a Commission of Rebellion on Crowe, to attach his person. By that time however, Crowe had been appointed ambassador to Turkey and could not be so attached without indignity to his majesty, yet there remained no other means by which the debt could be recovered. In their quandary the governors of the Chest appealed to the lords commissioners of the admiralty for assistance,¹ but they too were apparently powerless, for the debt was carried on the Chest accounts until 1644, after which there are no accounts until 1654, when it no longer appears.² There is no evidence of whether Crowe repaid the debt, or whether, after so long a period, it was written off by the governors. He died in the Fleet prison in 1683.³

Beyond a very general account of the sums disbursed there is no evidence of the extent to which the Chest actually supplied relief to petitioners. Although one may gain some idea of the numbers being paid this means very little unless one also has some knowledge of the number and physical state of the applicants refused. Records of applications have only survived in cases where the petitioner for some reason subsequently petitioned

1. S.P.(D.), Chas.I, ccci, 44. 9th Nov. 1635.

2. Oppenheim, pp.245-6.

3. G.E. Cockayne, Complete Baronetage, II (Exeter, 1902), 29.

either the lord admiral or the privy council. It is of some slight significance perhaps, that these instances chiefly occur during the period of greatest financial difficulty, i.e. in 1627 and 1628. One example from the earlier period is the petition from Widow Jordan, who sought the lord admiral's aid in obtaining assistance from the Chest. The tone of Buckingham's letter to the governors suggests real concern for the poor woman's feelings:

and I desire you to deal the more charittably with her because she hath lost her husband not long since at sea in the king's service.¹

A year later, Thomas Nelmes petitioned the lord admiral for a pension from the Chest having injured his knee during the march overland to Panama, for which service he had been pressed in 1595, and had been disabled ever since.² As a result of the lord admiral having interceded for Nelmes and others, and even directing the governors of the Chest to pay some compensation, the governors wrote in protest to Buckingham six weeks later. They began by affirming that the three men had been granted pensions according to "their hurts and quality", but that when petitioned, the lord admiral should seek a certificate from the governors testifying to the right of the petitioners to receive relief before ordering that pensions and allowances be paid. They add, perhaps a shade too piously,

Thus may your Grace be freed from incapable suitors, and the chest from unnecessary charges, which our respect to your Grace's letters may draw us in to.³

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1. B.M. Add. MSS. 37816 f.122. 18th June 1626.
 2. S.P.(D.), Chas.I, liii, 81. 11th Feb. 1627.
 3. Ibid., lviii, 70. 31st Mar. 1627. This respectful admonition has ten signatures, several of whom had presumably been governors the previous year.

On 30th May 1628, the privy council wrote to the governors concerning Francis Albert, who had lost both arms while serving in the expedition to Rhé. Albert had petitioned the privy council who had recommended that the Chest pay him £30 p.a. The governors of the Chest had awarded him only 20 marks (£13.13s.4d), which Albert considered insufficient and protested as much to the council, who also received a letter from the governors pointing out Albert's error in seeking a privy council order first. Nevertheless, the council "expected and required" the governors to allow the man £30 p.a., or show just cause.¹

It is impossible to say what happened next, whether the governors did indeed show just cause because of the state of the Chest's finances, or whether they defied the council and refused point-blank to increase Albert's award; but whatever happened, the governors maintained their position and the council retired from the contest. On the 25th November, Albert petitioned the king and was granted a pension of £30 p.a., "until he shall be otherwise provided for", an order being made to the lord treasurer to proceed accordingly.² However, there seems to be no record of Albert having received his pension from the crown. Between November 1628, and April 1637, the governors revised the award offered to Albert, for in a list of annual beneficiaries, he is shown as holding a pension of £20 p.a., the only one of that size, which is twice the next largest annual pension paid to one

1. Acts of the Privy Council, 1627-8, p.453. 30th May 1628.
2. S.P.(D.), Chas.I, cxxi, 56.

man. In all, 48 pensioners are listed receiving a total of £272.¹

In such a manner the seamen endeavoured to minister to their own needs. At best the Chatham Chest could provide only the barest essentials of relief to only a few of those who merited it. At worst it provided a source of easy money for the unscrupulous, who were too ready to betray the trust their election brought them. Few were as blatant in their abuse as was Sir Sackville Crowe, for whom there were no mitigating circumstances. Oppenheim surprisingly does not differentiate between Crowe and Russell. The former embezzled money for his own use and refused to make restitution. The latter had money wrongfully used in his name (it may indeed even have been without his knowledge), but money used at least in the king's service and for the benefit of seamen. There was no profit for Russell in the debt, which he endeavoured to repay as soon as the money had been assigned to him by the lord treasurer.

Oppenheim is also very scathing about the governors, particularly during the years 1625-28, but again he seems not to have looked beyond what was on the surface, and was readily apparent. It has been demonstrated that an analysis of the accounts shows that if the money allocated was disbursed steadily throughout the war, the annual cash balance rarely reached much above £100. This practice would have been logical and there is evidence that at least three men were granted pensions early in

1. S.P.(D.), Chas.I, ccclii, 79. The list is made up of one pension of £20, five of £10; six of £8; six of £6.13s.4d; six of £6; one of £5.4s.0d; three of £5; 13 of £4; three of £2.12s.0d and four of £2. An error was made in copying the original document, for the total shown is £182.

1627, in addition to the annual pensions to which the Chest was already committed. The question arises whether the governors could have done more, in view of the hardships even able-bodied men were facing. The answer is that probably more could have been done, but not much more. The Chest's cash balance could have been allowed to run down to perhaps an average of £20 or £25 a year. Seventy-five pounds a year may not seem much of an extension of benefits, but taking the average pension paid in 1637 as almost £5, this could have meant vital relief for another 12 men per year.¹ This, of course was what the Chest was for, but one must take into account the nature of the men responsible for the funds. It may well have been that the governors were merely displaying the rather miserly attitude which commonly besets administrators of charitable institutions. The idea of a healthy cash balance as a virtue in itself frequently dominates the organisation so that the original purpose is obscured in the overwhelming desire to be seen as a financial success. Besides it should be remembered that except for a payment of £185 by Russell in 1626 (for 1624), the last substantial sum received from the Chest's proper source, i.e., deductions from wages, had been as far back as 1623. In 1627 and 1628 the governors may well have wondered if they would ever receive another.

One of the reasons for the extreme discomfort suffered by the seamen was the difficulty of obtaining adequate clothing.

1. Albert's £20 is not included in calculating the average as it was an exceptionally high grant. Indeed as a result of the enquiry of 1637, new regulations were approved by the privy council, the first of which limited future annual pensions to no greater than £6.13s.4d. If additional benefits were necessary for any one man they had to be made separately, and be approved by the governors each year.

There are many letters in the state papers complaining about the lack of clothing during the winter months and some at least are from captains, such as Sir Henry Mervin and Sir John Pennington, who were sympathetic to the needs of their men. Ideally a seaman's suit consisted of shoes, stockings, canvas trousers and overshirt, a cotton shirt and a Monmouth or Tam o'Shanter cap.¹ Not since the middle of the sixteenth century had the state provided clothing for its seamen, who from then until 1623 bought their clothes where they could. Often the purchase was made from an official of the navy office who had bought a quantity as a speculation, but although this was not a very satisfactory arrangement it may have proved no more expensive to the seaman than had he sought clothing privately somewhere ashore.

In 1623, the commission set up for the first time a store, known much latter as the slop-chest, from which sailors might purchase clothing. For them, the advantages were twofold. First, in theory at least, there was always a place where clothing could be bought at fixed prices, second and more important, the clothing could be obtained at the beginning of a voyage, the cost being noted and deducted from the buyer's wages when he was next paid. These arrangements seem to have worked well enough at first, but with the great expense of the expeditions from 1625 onward, little money was made available to replenish the store. By the time the enquiry of December 1626 had begun, the lack of

1. It was not yet, of course considered in any sense a uniform. Among the many references to clothing in contemporary documents, shoes appear very rarely. They were doubtless most welcome when obtainable, but the seamen probably looked upon them, along with stockings, as a luxury and among the least necessary articles of apparel during such hard times.

clothing was already causing great hardship in the fleet. The special commissioners addressed themselves to the problem and made the following proposals.

The commissioners of the navy were to deal with Billingsgate merchants for clothing at fair prices, paying half on purchase and the remainder from the deductions made from the men's wages within one month of each ship being paid. The commissioners were also to draw up detailed tables of prices showing the rates at which the deductions were to be made. The cost to the seaman was to be restricted to the cost price of the item plus an increase of 18d. in the pound to cover the charges incurred in administration. An "understanding clerk" was to be nominated for the task of providing ships with the clothes, which were to be stored at Deptford until required. All charges of transportation and loss or spoilage by time, accident or shipwreck were to be borne by the king. The purser of each ship would state his requirements and receive them (on his signature) from the clerk, who would be sent the remains and a list of the men supplied when the ship returned. Provided that they were clean and in a properly saleable condition, the remains were to be returned to the merchants with the abatement of the cost price paid. On receiving the necessary information from the purser the clerk would draw up for each ship a list in alphabetical order of the men to whom clothing had been supplied. This list would then be sent to the paymaster a few days before the pay so that the correct deductions might be made. The paymaster would check the passes for each ship and pay over to the clerk all deductions made, whereupon the clerk would draw up an account, making due allowance for properly attested issues to

dead men or runaways, so that the merchants might be paid. The 18d. per £1 extra charge was to be paid to the paymaster, purser and the clerk at the rate of 6d. in the £1, whilst the clerk was to receive an ordinary wage of 1s. per day with travelling charges.¹

According to Sir Henry Mervin, with the Happy Entrance at Margate, in the following May the quality of the "provant" clothes, i.e. those supplied, was very poor although the prices were high.² He gives no details, and the only prices for this period are those in the declared accounts for 1628.³ Shirts were 3s.4d each, cotton breeches 2s.8d a pair, cotton waistcoats 3s., caps 2s., stockings 1s.4d. a pair, and canvas suits 6s.⁴ What relationship these prices had to Mervin's complaint there is no way of knowing, but perhaps the more important piece of information is supplied: the suits were of inferior quality.

A month later Sir John Wolstenholme wrote to Nicholas on

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1. S.P.(D.), Eliz. ccxxxvii, 57. 11th Jan. 1627. Although similar regulations of which there seems to be no trace must have been set down in 1623, this is not really a case of re-issuing the same set of instructions as a token gesture when nothing else could be done. The special commission of enquiry was indeed quite a separate body from the navy commission who had set up the slop-chest in 1623; not merely in name but in personnel, for only Coke had any connection at all with the commissioners of the navy and he had ceased to be a commissioner on receiving appointment as a principal secretary in 1625. If he figures in naval affairs after that date, his authority is that of his new office and his concern comes from his allegiance to Buckingham; although it would be surprising if he had not a genuine personal interest, if only because of the considerable part he had played in the restoration of the navy.
 2. Ibid., Chas.I, lxiv, 76. Mervin to the lord admiral, 27th May 1627.
 3. Pipe Office, 2266.
 4. Oppenheim, p.286, states that suits were being sold for 27s. in 1628, but he neither says what in that instance constituted a suit, nor gives any evidence for the price quoted.

the subject of shoes. The commissioners were unable to obtain any without ready cash. Wolstenholme himself could advance the money if he might be assured of re-imbusement from the sale of prize goods.¹ There is no evidence that the shoes were provided, although it seems likely that Buckingham would have given such an assurance readily enough. One might be less sanguine about the chances of an order from the privy council being fulfilled in October, however. On the recommendation of the navy commissioners, shoes and clothing were sought for 4,000 seamen already at Rhé, but such a large amount was proposed that it seems unlikely that such a great provision would have gone unremarked, especially in view of the state of most of the crews on their return.² Thus the plan probably came to nothing, a view that seems to be supported by a letter from the navy commissioners to the lord admiral, written on the 29th November. Buckingham had ordered the commissioners to treat with the tailors for the provision of clothing, but the tailors would do nothing without half the payment in advance. The commissioners requested an immediate order to the treasurer to provide half the necessary £3,000, for without such a sum, nothing could be done.³

The following year the privy council gave order that provision of 1,000 complete suits of clothing be made.⁴ This order was followed by another one month later, making the usual proviso that such clothing as was supplied would have to be paid

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1. S.P.(D.), Chas.I, lxvii, 91. 22nd June 1627.
 2. Acts of the Privy Council, 1627-28, p.74. 5th Oct. 1627.
 3. B.M. Add. MSS. 9301, f.17. £3,000 would have provided 1,500 men with a set each of: two shirts, a pair of cotton breeches, a cotton waistcoat, a cap, a pair of stockings and a canvas suit.
 4. S.P.(D.), Chas.I, cvii, 28. Council to the lord admiral, 14th June 1628. It would seem that "suits of clothing" here meant much more than the canvas trousers and jumper.

for by deductions from the men's wages.¹ The second order is made remarkable by subsequent events however, for the declared accounts show £546.3s.4d. spent on 1,000 shirts, 500 pairs of breeches, 500 waistcoats, 500 caps, 500 pairs of stockings and 500 canvas suits.² No item entered in the declared account could have been paid for other than by the treasurer out of navy funds. Moreover, he could not legally have been reimbursed for the sum out of the men's wages since he had already been discharged of that amount. It has been assumed that this clothing is part, at least, of what was ordered by the council in June and July, although there is no hint of what may have caused the departure from an established and economical practice. It could of course, be an entirely separate provision and one made even before the date of the council order.

So far the cases dealt with have all been attempts to provide clothing by what might be called the official means. Other methods existed which were perhaps proportionately more successful simply because they did not rely on the good offices of the lord treasurer. When Pennington's squadron returned in May 1627 from one of its successful sweeps for French merchantmen, among its prize goods were packs of linen. He requested that in view of the state of his men and as an encouragement for the future, they might be allowed part of the linen cargo to provide themselves with clothing. The request was immediately granted.³ The other example concerns the Rainbow in the expedition to Rhé. Earl Lindsey had provided

1. Acts of the Privy Council, 1628-29, p.33. 15th July, 1628.
 2. Declared accounts, Pipe Office 2266.
 3. S.P.(D.), Chas.I, lxii, 39. Buckingham to Pennington, 4th May 1627.

his men with wine, stockings, shoes and shirts and in a letter to the recently restored principal officers, Buckingham ordered that Lindsey was to be repaid from the seamen's wages.¹

The most important sector of the seaman's welfare was that concerned with the care of his health; and, as will be seen, not only in the sphere of surgery made necessary by battle or by accidents, but also and more vitally in the sphere of physical medicine made necessary by the conditions under which he lived.² It was perhaps a natural error for men to have supposed that the main employment of a doctor at sea would be in the treatment of broken bones and flesh wounds. As a consequence the men appointed to ships were surgeons, a name which has persisted in the ranks of naval doctors to the present day, but in fact far more seamen died from illnesses beyond the scope of the surgeon than were ever in danger of being killed or dying from wounds received in action. Yet perhaps, although the toll taken was frightful, the right decision was made after all. Given the circumstances of the day the men were better off with a surgeon than with a physician, for though the former's knowledge of his art may have been merely rudimentary, that of the latter was almost non-existent, still based as it was upon the ancient but fallacious Galenical principles.

In the ship on normal duties the gravest threat came from scurvy,³ a disease resulting from a deficiency in vitamin C which

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1. S.P.(D.), Chas.I, ci, 45.
 2. J.J. Keevil, Medicine and the Navy: 1200-1900, vol.1 (1957), gives by far the best account of the whole range of these problems and the attempts made to solve them. On the medical aspects he is probably unchallengeable, but his background material, based upon Oppenheim and Clowes, inevitably repeats their errors, particularly in connection with seamen's wages and the affairs of the Chatham Chest.
 3. Normal duties in the sense of ships carrying the normal complement of sailors.

after many unpleasant symptoms, resulted in prostration and eventual death.¹ It is something of a tragedy that the correct treatment of the disease had been repeatedly found by chance, even before the seventeenth century, only to be ignored again later, either because the connection between the cure and fresh fruits and vegetables was misunderstood or because many other factors had been present and the wrong conclusions drawn.² The truth was also frequently obscured from puzzled captains because in many cases, men saved from scurvy by fruit and vegetables died from food poisoning emanating from the same source. Seamen met other killer diseases, of course, and learned to accept their occasional appearance as one of the hazards of the life, and one certainly that did not amount to as great a threat as scurvy. In the voyages concerned with military expeditions, however, it was a very different story. Sailors attuned to the hardships of their existence learned to live with them, and generations of seamen had learned by hard experience that a certain standard of cleanliness in both ship and person was essential if disease was to be kept at bay.³ Soldiers had not had such lessons to learn, and whenever military necessity dictated that the never spacious quarters aboard ship should be crammed with landsmen for days and weeks at a time, the grim price was paid. The common result was typhus which attacked more than 3,000 Spaniards in the Armada of 1588, decimated Wimbledon's men on the return from Cadiz in

1. Oxford English Dictionary, s.v. scurvy.

2. Keevil, p.102.

3. The sailor was probably a cleaner being than most landsmen. The general standards of the time were so low that only the rural nature of the population saved it, witness the normal confinement of the plague to urban areas. The sailor had certainly learned to be more conscious of the connection between dirt and disease than the soldier.

1625 and also struck the survivors of the Rhé expedition on their return.¹

At the same time, the circumstances which led to the serious overcrowding of ships also strained the victualling arrangements to the utmost. Unprecedented quantities of supplies were demanded, with the inevitable result that the quality of the victuals, frequently dubious, dropped to a lower level than usual. Moreover this state of affairs was aggravated by the often inadequate storage of such large amounts of food, and so the great fleets were often assailed by food poisoning. The seeds of this disease, which appears to have completely mystified both physicians and laymen of the time, were almost certainly sown while the ships were in harbour, either waiting to sail or else waiting for the moment to strike the enemy. Food was prepared in the cookroom, which was traditionally situated amidships, immediately above the ballast which was usually wet and therefore, something of a guard against fire. But as well as stagnant bilge water, the ballast contained much of the deck filth, from the sweeping and washing. Further, all the cooking and eating utensils were washed in sea-water hauled from the necessarily shallow anchorage into which went all the ship's drainage and, of course any corpse that had to be disposed of. Under such circumstances, outbreaks of food poisoning were not surprising, and according to Keevil it was this disease which more than anything else was responsible for the great loss of life in the Armada, and which also reduced the English fleet to the state where it had lost so many men

1. Keevil, pp.73, 174 and 183 respectively.

that it was almost unable to put to sea.¹

Until the sixteen twenties the navy board appointed surgeons only to fleets engaged on special service, such as the expeditions to Cadiz in 1596 and Algiers in 1620. On other occasions the surgeon was aboard a ship solely at the invitation and expense of the captain or admiral in command.

For most of Elizabeth's reign, and for the whole reign of James I, a surgeon's wage was the same as that for a seaman, 10s. a month, although a surgeon suffered no deductions. In addition to this he received an imprest at the beginning of the voyage with which to stock his chest. The amount of the imprest varied with the size of the ship to which he was appointed, and had to be repaid at the end of the service. For this purpose 2d. per month was deducted from each man's pay and allotted to the surgeon.

Just as changes and improvements were being made in other directions touching the general welfare of seamen, it seems significant that innovations and improvements occurred in naval medicine and its organisation during the period in which Buckingham was lord admiral. Much can be argued about Mansell's expedition to the Mediterranean as to whether it was a fiasco at the tactical level, or merely a partial success from the standpoint of grand strategy. One thing is certain however no fleet had ever before left England better provided for medically. Each ship was allowed a surgeon, the treasurer of the fleet received an imprest of £1,400 for the relief of sick mariners, each captain had a small sum imprest to him for the

1. Keevil, pp.70-76.

relief of his ship's company, and for the first time a hospital ship was sent to accompany the expedition. The author of this last idea is unknown, although Oppenheim suggests that it was Sir Richard Hawkins,¹ and as in the case of many innovations, the first use of a hospital ship by the navy was not particularly successful. The ship concerned, the Goodwill, left England after the main fleet carrying general stores as well as the special provisions to be used for the relief of the sick. The plan was, apparently, that on her joining the fleet, the main cargo of stores was to be distributed among the vessels which by then would have space to accommodate them and the Goodwill would assume her role as a hospital ship. However, there had been sickness in the ships before Mansell left England on 12th October, and by the time he was joined by the Goodwill he had already been forced to arrange accommodation ashore for his sick men, the number of which had reached proportions beyond the extent to which the hospital ship's resources could serve. She was used briefly for that purpose, but by the end of November, she seems to have been turned into a store ship for prize goods taken.²

In view of the very unsavoury reputation Mansell received as treasurer of the navy 1603-18, as well as the apparently vicious and arrogant nature of his character in his private as well as public life,³ it is only proper to point out that he

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1. Monson, Naval Tracts, III, 107.
 2. S.P.(D.), Jas.I, cxxviii, 92. Committee of merchants to privy council, 28th Mar. 1622, for her actual use as a hospital ship; and Sackville-Knoke MSS. 6755, Mansell to Cranfield, 15th Mar. 1621, for her use to carry prize goods.
 3. J.K. Laughton, D.H.B., s.v., Mansell, Sir Robert.

seems to have been an excellent commander in this voyage. In view of his reputation, and the fact that such a short time previously the Spanish Inquisition had killed or tortured English seamen, it is not merely surprising that Mansell succeeded in housing his sick men ashore at Gibraltar and Alicante; it is surprising that he even considered the possibility. Men were left, suitably provided for, at Gibraltar on the 2nd November 1621, and at Alicante just over two weeks later, which group included 37 of his own crew from the flagship the Red Lion. Oppenheim does Mansell less than justice when he says of the Goodwill, that "she was afterwards 'commanded for other purposes' and the invalids thrust ashore on the cold charity to be found in a Spanish port".¹ The inference to be drawn from this is contradicted by the success of Mansell's arrangements before the Goodwill's arrival, and the preparations for the care of sick mariners, which according to Keevil were to be found in all major Spanish ports.² If further evidence is needed, it may be supplied by an eye-witness, who wrote (of Alicante),

during the time of our staying here we refreshed our sicke men ashoare, having convenient houses provided for them in the fields[and] gardens, with carefull people to attend them, providing them such necessaries as they should need.³

Mansell, it will be remembered, had an imprest particularly for this kind of situation, and the excess charges were paid later when bills were presented through Spanish merchants in London.⁴

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1. Op.cit., p.188.
 2. Op.cit., I, 157. Of all the religious houses which established such provision, Keevil names the Orden de San Juan de Dios as most outstanding.
 3. S.P.(D.), Jas.I, cxxii, 106. S. Purchas, Purchas His Pilgrimes, VI (Glasgow, 1905), 139. The writer is somewhat ambiguous for the reference could conceivably be to Malaga; however the exact location in Spain is immaterial to the point being made.
 4. Rawlinson MSS. A455, ff.128-9. Navy commissioners to Buckingham 29th July 1622.

As there was no reason for the fleet to be without fresh victuals on this voyage it seems unlikely that the disease was connected with food poisoning. The risk of food poisoning had also been reduced by the decision to move the cookrooms from amidships and place them in the forecastle. The idea was not new for it has been advanced by Sir William Wynter in 1578, when he was surveyor.¹ However, the new administration was the first to realise the several advantages of such a change, and immediately on assuming effective control of the navy late in 1618 it was ordered that the cookrooms must be in the forecastle of all new ships built, and that the existing ships should be converted to the new style as they came in for repair.

Keevil suggests that in the Algiers fleet, once again the infection was typhus, and indeed there had been a fatal disease present in some ships when the expedition sailed. As usual the number of men who died or needed treatment because of sickness and infection greatly exceeded that of men requiring treatment for wounds or injuries, and as usual the surgeons were faced with cases whose treatment demanded skills which they had received neither the professional training nor the legal right to practise. As did all professional companies, the College of Physicians jealously guarded the privileges of its members, in this instance the sole right to administer drugs and physic. This had been the situation since the decision had been made to send surgeons rather than physicians to sea, although more than one conscientious

1. H.M.C. Hatfield House MSS. ii, 222. Wynter's sole concern was with the dangers to the structure of the vessel. This too was an important point in 1618, but the health factor was also stressed at that time, not so much in the report as in the proposals for the change and the controversy they aroused.

surgeon had, in the absence of a physician, held it his duty to treat such illness as best he could. Fortunately for the sailor whose life depended upon such legal niceties, whatever the College of Physicians might feel, the practical aspects of the situation were soon to be drastically changed.

The second sign of reform in the organisation of naval medicine occurred in 1626, when for the first time, provision was made for at least one surgeon aboard any or every one of the ships in the king's service, as long as the Company of Barber-Surgeons could supply enough trained men. At the same time a considerable increase in pay raised them, in that important respect at least, to officer status. In a ship of the 1st rank, a surgeon was to receive 36s. per month and in all others, i.e. down to the 6th rank, which included small pinnaces with crews of 30-40 men, 30s. per month; while in ships of the first three ranks, i.e. down to ships with crews of more than 150 men, he was to have the assistance of a surgeon's mate at 20s. per month.¹ This unprecedented increase of pay and prestige demonstrates the appreciation of Buckingham and the navy commissioners of the value of a competent surgeon, and also shows that they were endeavouring to attract men of the right quality. Nor did the inducements stop there. In response to a petition to the council of war,² requesting that in the absence of physicians or apothecaries in any ship the surgeon might have an extra allowance to provide the necessary physic, the privy council later ordered that the scale would be as follows:

1. S.P.(D.), Chas.I, xxxv, 53.
2. Ibid., xxxii, 109. July 1626.

<u>Ships</u>	<u>Free Grant</u>	<u>Imprest towards</u>	<u>Total</u>
	<u>for Physic</u>	<u>Chest</u>	
	£	£ s d	£ s d
1st, 2nd rank and great merchantmen)	10	7 10 0	17 10 0
3rd rank	7	5 0 0	12 0 0
4th rank and ordinary merchantmen)	5	3 10 0	8 10 0
5th rank	3	3 0 0	6 0 0
6th rank and colliers	3	2 10 0	5 10 0

The council also specifically ordered that Russell, who was to receive such necessary sums forthwith from the lord treasurer, was to pay the money for drugs and instruments to the Company of Barber-Surgeons who would see the money properly used and the supplies, when ready, delivered to Tower Wharf under lock and key.¹ One further item arose out of this promotion of sea-surgeons to respectability. The Company of Barber-Surgeons ordered one of its members, John Woodall, to see that the medical provisions were properly chosen and packed, as he had performed the same service for the East India Company since 1612. By this means Woodall began a close association with naval medicine, which lasted until his death in 1643. His influence was to be found everywhere, not least because of his books on the problems of practising medicine at sea, which set the standard for naval surgeons long after their author's death.²

The order of the council must indeed have been executed promptly, for within a month chests had either been received by surgeons or else Woodall was so far advanced in the business that

1. Acts of the Privy Council, June-Dec. 1626, p.70. Keevil, p.176.
2. See the bibliography below, printed sources, s.v., Woodall J.

the contents of the chests had become known to them, for they presented a petition to the lord admiral complaining that those responsible for equipping the chests were doing so solely according to the needs of their own practice and to the detriment of others.¹ Keevil asserts that the charge was made because in fact, Woodall had no first-hand experience of medicine at sea, and further that Woodall was completely vindicated by Buckingham's lack of response to the petition.² There is little doubt that despite his apparent lack of practical experience, Woodall knew his business. On the other hand, there may well have been some justification for the petitioners' complaint. In the matter of physic at least, there are bound to have been differences of opinion between medical men about the treatment of any given disease, the more so when all concerned were amateurs, so to speak, and untrained in that particular branch of medicine. In any case, two facts can be established in connection with the charge. First, the system ordered was not changed, as subsequent estimates testify, and second, there was a very good reason why the money should not have been paid directly to the surgeons in order that each might furnish his own chest, as requested by the petitioners: far too many surgeons had the reputation of being drunkards so that there was a grave risk that the grant and imprest money might find its way into the taverns, while the chests remained empty.³

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1. S.P.(D.), Chas.I, xxxiii, 81. It may be that the petitioners were complaining merely on the strength of Woodall's views expressed in his first work The Surgeon's Mate (first printed in 1655 but widely circulated in manuscript form soon after it was written in 1617), but this seems unlikely.
 2. Op.cit., p.177.
 3. E.g., S.P.(D.), Chas.I, cviii, 18. Coke to Buckingham, 25th June 1627, and ibid., cclxxix, 106, ff.16-17, Nathaniel Knott, Advice of a Seaman, MS. published in 1634.

The new regard for medicine in the navy of Buckingham and the commissioners, however, was not confined to the benefit of the sea-going men. During the first year of the new regime, a surgeon in ordinary was appointed to the dockyard at Chatham for the care of men who might be injured whilst working there. For this he received £13.13s.4d., but no diet allowance, plus 2d. per month from the wages of each man entered on the ordinary.¹ Probably the first surgeon at Chatham was a man named Lyneard; certainly he seems to be the first of whom there exists any record. Perhaps because in such a post a man is bound to have long spells with little or nothing to do, or perhaps because it was his nature, Lyneard seems to have been a drunkard. Worse, he was contentious and unruly, and with it all a poor surgeon. So at least runs the letter from the navy commissioners to the lord admiral on the 8th December 1619, for Burrell had requested the dismissal of both Lyneard and one of the porters, a man named Walters. The commissioners state that both men commonly spent most of their duty hours in the nearby alehouse. On one occasion Lyneard was called to the master of the labourers, who had broken his leg, but the injury was treated so poorly that the man's family and friends called in a local surgeon, a Mr. Woodhale, to see him. As a result, Woodhale was much abused and physically assaulted by the affronted Lyneard.²

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1. Declared accounts, Pipe Office, 2257. Somewhat surprisingly, Keevil, p.205, states that the appointment was first made in December 1625.
 2. Rawlinson MSS. A.455, ff.114-5. Since this letter from the commissioners sings Burrell's praises highly it would be interesting to know the signatories. Unfortunately this document is a copy made later in the seventeenth century (probably for Samuel Pepys) and they are not given. It is not beyond the bounds of possibility that Woodhale is none other than John Woodall himself, but perhaps this would be too great a coincidence.

Presumably Buckingham assented and the offender was dismissed, for the 1619 declared account names John Pawson as the dockyard surgeon at the end of the year. Apart from the annual accounts there seems to be no mention of Pawson for the next six years. He was undoubtedly kept busy for the Chatham dockyard took in much of the repair work while the yards at Deptford and Woolwich concentrated on the building programme.

The increased activity in the Chatham yard in making ready the Cadiz fleet in 1625 and then repairing the ships on their return led to recommendations that Pawson should be joined by a second surgeon, one John Norton.¹ He was evidently appointed, but he cannot have enjoyed the post for longer than six months, for on the 3rd July the next year, Downing again wrote to Nicholas, this time requesting the lord admiral's secretary to procure speedily the appointment of Richard Wye to replace Norton, lately deceased. This letter also contains the first evidence of dissatisfaction with Pawson, who is described as "aged and of poor experience".² The last document connected with the surgeon in ordinary at Chatham with which we are concerned is yet another letter from Downing to Nicholas, this time in May 1627.³ Again Pawson was criticised, this time as being "ambitious and dangerously ignorant". On the other hand the new surgeon

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1. S.P.(D.), Chas.I, xii, 50. Petition from the masters attendant and other officers at Chatham to the navy commissioners, 23rd Dec. 1625; *ibid.*, 51. Capt. Joshua Downing, assistant commissioner in charge of the dockyard at Chatham to Nicholas, 23rd Dec. 1625.
 2. *Ibid.*, xxxi, 11. Also enclosed is a petition from the officers in ordinary similar to the previous one. In 1625, during which year four men were killed in dockyard accidents, Downing had also been injured. The declared account merely states, somewhat cryptically, that he was "hurt by shott aboard the George drummer" but whatever the accident, he was absent from duty for five weeks. Perhaps during that time he had too close an association with Pawson's professional ability.
 3. *Ibid.*, lxiv, 6.

Richard Wye was termed "conscientious". Apparently Pawson, by means of judicious loans had been attempting to secure for himself all the payments made from the Chatham Chest for their services.¹ It may be that Pawson considered Wye rather as an assistant than as a surgeon in his own right, but whatever the reasons for Pawson's behaviour, Downing's request to Nicholas was clear. If either Pawson or Wye approached the duke on the matter, would Nicholas endeavour to persuade him to issue a warrant stating that all fees paid by the Chatham Chest were to be divided equally between them.

The decision to send an expedition to Cadiz created acute problems for the Company of Barber-Surgeons from the point of view of finding enough skilled men. The company seems to have been reluctant to press men, but faced with such a great demand, for the army also required surgeons, there was no choice but to use compulsion. It seems to have reached extreme lengths with the attempt to press William Goodridge, then 60 years old and an alderman of Salisbury. Goodridge's age, infirmity from gout and relative lack of skill in surgery was attested by the mayor and the local justices, how successfully with regard to avoiding the service is not known.² Keevil draws attention to a decision made shortly after the fleet left Cadiz, when, with large numbers of men incapacitated by a disease unnamed by contemporaries (except as "the sickness") but which he identified as probably typhus, the council of war discussed the possibility of sending the sick home to England while the remainder searched for the

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1. If the patients concerned were contributors to the Chest, this would seem to be a legitimate expense in times when wages were paid irregularly, but there is no such item entered in any of the Chatham Chest accounts available.
 2. S.P.(D.), Chas.I, vi, 18. Mayor to privy council, 4th Sept. 1625.

expected Spanish treasure fleet. It was decided that the sole responsibility for deciding whether a man was fit for duty or not must rest with the executive officer of the ship, i.e. the captain, a principle that was maintained for two hundred years and which exists, in a very emasculated form even today.¹ One of the more remarkable things about the voyage was the fact that when a return of the sick was called for from the king's ships, while most of them had from 25%-33% of their complement disabled by sickness, the Constant Reformation under Raleigh Gilbert declared a completely healthy crew up to full strength.² The returns from two other ships are not recorded, but in view of Glanville's note of the surprise caused by Gilbert's report, it seems unlikely that the Dreadnought and the Anne Royal were any more free from disease than the rest of the fleet.³ Keevil is inclined to give Gilbert all the credit for the state of his crew, and he is probably right in that the captain ensured that all the men in his ship kept both her and themselves in a proper state.⁴ Nevertheless, good fortune must surely have played a part, for there was a distinct limit on the standard of hygiene that could be achieved aboard a small ship carrying 250 men and an unknown number of soldiers.

The state of both ships and men on their return to Plymouth was desperate and the ability to cope with it was quite beyond the resources available or the ideas of the time. Keevil quotes the great contrast with which Philip had organised the reception of the remnants of the armada which straggled back to Spain.

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1. Op.cit., pp.165-6.
 2. John Glanville, The Voyage to Cadiz in 1625, ed. A.B. Grosart, Camden Soc. Publications (1883), p.90.
 3. One month later the Anne Royal's sick numbered more than 130. Ibid., p.116.
 4. Op.cit., pp.164, 167.

Unfortunately the English tradition was something quite different, and the lack of preparation for such a situation was not peculiar to Caroline England. When the "victorious" crews returned to port after meeting the Spaniards in 1588, they were in much the same condition as their descendants in 1625, and their reception was very similar. Lord Admiral Howard wrote to Burghley that men were dying in the streets of Margate, that there were so few places to provide the men with their needs and in any case there was no money to buy them; at Plymouth, the situation was the same. Officers did the best they could for their men, but that was often very little and there was no attempt to organise relief from London.¹ Thirty-seven years later the authorities in London did make some attempt to provide aid, but on a scale hopelessly inadequate to meet the situation. In October Sir John Coke wrote to the mayor of Plymouth to the effect that seamen should be discharged with a travelling imprest, and all charges on Plymouth for sick mariners would be re-imbursed by the commissioners for the navy.² The pragmatic Coke can have had no idea of the state of the fleet and the enormous task he had thrust upon the town of Plymouth. The local authorities did as much as they could in providing houses, firing and clothes, but their slender resources were soon swallowed up while still more ships and men in an equally pitiful condition appeared.³ When the true situation was realised clothing was sent to the port, but by the time it reached Plymouth, the last vestiges of organisation appear to have collapsed. There were no officers to receive it

1. S.P. Armada, ii, 96-7, 10th Aug. 1588.

2. S.P.(D.), Chas.I, dxxii, 15.

3. Ibid., xi, 44. Mayor of Plymouth to privy council, 9th Dec. 1625.

and ensure the proper distribution, with the result that it is unlikely that it was used to the best advantage.

It was natural that the consensus of contemporary opinions should place the blame on the victuals provided. Much of the food was not up to the standard required, particularly that which originated from Plymouth, where Sir James Bagg achieved some notoriety for the victuals provided under his name. Yet some discerning critics such as Nathaniel Butler, also clearly associated the disease with the overcrowded conditions in the ships,¹ while Sir John Coke, in a letter to Buckingham concerning the preparations for the expedition wrote,

It was not intended that vinegar [used to clean and disinfect] should be spent before the landmen can aboarde and when the number might cause infection in the ships.²

From the standpoint of naval medicine there is little to be said of the chief operation for 1626, Lord Willoughby's abortive attempt to reach La Rochelle. However, one incident in that year is worthy of note perhaps, if only to support the contention that the hearts of seventeenth-century administrators were not so flinty as has often been suggested. While Captain Pennington's squadron was preparing for service he received a letter from the navy commissioners concerning the surgeon of the Isaac of Ipswich. Apparently the man, Peter Holloway, was the only son and source of support of his widowed mother, who had petitioned them (and presumably the lord admiral) for his discharge. Accordingly Pennington was requested to discharge

1. Boteler's Dialogues, ed. W.G. Perrin (N.R.S. LNV, 1929), p.61.
2. S.P.(D.), Chas.I, v, 77. 25th Aug. 1625.

him and press another in his place.¹ Unfortunately for the picture of kindly authority, the commissioners' decision is not quite so altruistic as it at first appears, for on their own admission Holloway had "long been sicke and unfit for his duties". But far from diminishing the evidence of the sympathetic attitude of navy officials, it is only their realistic approach which makes the story believable at all. The service would have become farcical if a mother had only to make such pleas to obtain her son's release. It may perhaps be surprising that Holloway was recommended for discharge, sick or not, in view of the great shortage of surgeons during the period. He was probably fortunate that the petition had not been made at the time of one of the great expeditions, for then it would probably have been impossible for Pennington to find a replacement, even by use of the press.

From the point of view of medical stores, the expedition which sailed for the island of Rhé on the 27th June 1627, appears to have been well enough supplied. This at least is the inference to be drawn from the declared account for that year, which gives the total cost of "phisicall drugges and medicaments" as £299.5s.0d.² The Company of Barber-Surgeons had found difficulty in supplying enough skilled men for the service and it is not known how many of the 84 ships which composed the fleet were without a surgeon. There seems little doubt though, that

1. B.M. Add. MSS. 9301, f.7. 7th Mar. 1626. Keevil seems to have confused the dates, for he places this incident before the Cadiz expedition, and indeed suggests that the Isaac was one of the ships loaned to the king of France in 1625. The date on the document is clearly 7th March 1625, but this is of course Old Style. The Isaac was not one of the vessels delivered to the French, see S.P.(D.), Jas.I, clxxxv, 56 and ibid., Chas.I, ii, 37.

2. Pipe Office, 2265.

the surgeons who were sent were properly supplied, for £299 would have produced an average rate per ship of more than £3.10s., which was about 15% more than the allowance of physical drugs for a collier or ship of the sixth rank.

The preparations for dealing with the sick when the expedition returned were once more inadequate, although they were a considerable improvement upon those for the Cadiz expedition. The master of the Barber-Surgeons' company was ordered to provide five or six surgeons to attend Portsmouth and Plymouth to care for returning men.¹ Unfortunately by some misunderstanding, the four who were appointed all went to Portsmouth leaving Plymouth without any such assistance.² At Portsmouth funds were made available locally, and one of the first acts of the team of surgeons was to arrange for the transportation of 120 sick and wounded soldiers to the royal hospitals in London, a relief denied to the authorities at Plymouth because of the great distance involved.

It was ironic that Plymouth, which had borne the brunt of so much similar misfortune only two years earlier, should have been put at such a disability by the mischance. As soon as it was known what had occurred the College of Physicians was approached and six physicians were sent to Plymouth at once.³ The biographer of Edward Nicholas states that Buckingham landed at Plymouth with more than a thousand sick men, on the evening of 12th November 1627, and that before leaving for London he deposited £3,500 with Sir James Bagg.⁴ Unfortunately he gives

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1. S.P.(D.), Jas.I, ccxiv (Conway's Letter Book), p.291. 20th Nov. 1627.
 2. Keevil, pp.181-2, recounts the details of the arrangement and the possible reasons for the error.
 3. Annals of the Royal College of Physicians, III (1608-47) f.77a, quoted by Keevil, p.182.
 4. D. Nicholas, Mr. Secretary Nicholas, 1593-1669 (1955), p.60.

no source for this information, which must necessarily, therefore, be treated with some suspicion. Buckingham kept in touch with the situation,¹ and had such a sum of money indeed disappeared into the Bagg he would have asked some very awkward questions.

The crews of those ships which managed to reach Chatham were more fortunate, for on receipt of a certificate of their needs, sent by Downing, the navy commissioners ordered that they were to be housed ashore and provided with the necessaries for their recovery, for which they were to receive wages and victualling money until they were well again or until their discharge.² Oppenheim suggests that the men in the River were treated thus because of their proximity to London and the possibility of protest marches, but perhaps he is being less than fair to the administration.³ The men in Chatham were undoubtedly treated better than those at Plymouth, but this was largely because although both towns, being seaports, were genuinely sympathetic to the plight of seamen, for Chatham the demands had previously been less heavy than for Plymouth, as indeed was the case also in 1627. Plymouth suffered as much from the accident of geography as from anything else, in that it was the first major port for ships struggling up the Channel from the westward; Chatham was anything from two to six days farther on.

The real reason for the difference in the treatment accorded to the men at Plymouth lay in the magnitude of the problem, for the arrangements in both places were basically the

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1. E.g., S.P.(D.), Chas.I, lxxxv, 23. Conway to Buckingham, 22nd Nov. 1627; ibid., 22. Bagg to Buckingham, 22nd Nov. 1627.
 2. B.M. Add. MSS. 9301, f.18. Navy commissioners to Buckingham, 7th Dec. 1627; Acts of the Privy Council, 1627-28, pp.295, 301-2. 16th Feb. 1627.
 3. Cp.cit., p.232.

same, but the disintegration of any organisation is commonly related to the size of the problem with which it is trying to cope. It may be that there was in fact better organisation in Chatham, but this is merely symptomatic of an immature administration grappling with new problems. It is almost inevitable that under such circumstances the efficiency will be greater close to the centre of authority, and it is worthy of note that while an enquiry concerning Chatham could be made and the answer received during the same morning, for a similar request to Plymouth, the answer might not be available until three days or so later.

As has already been shown, it is believed that once more, the killer disease was typhus, in which case apart from insisting upon some standard of cleanliness and fresh air there was little that could be done in the seventeenth century, except to ease the suffering of those infected, whilst the disease ran its course.

In the spring of 1628 a fleet under the command of the Earl of Denbigh was sent to La Rochelle. Politically it had little significance, for it withdrew after only a week having attempted nothing. As far as the medical preparations were concerned it is of interest, however, as they seem to indicate that lessons recently learned were being put to practical use. The estimate prepared by the navy commissioners includes in the sum to be paid to the victualler, £9,800 (one month's allowance at 8d. per day), which was to be carried with the fleet in cash, to be used for the relief of the sick; and in the assignment to the navy treasurer was included £10,500 (one month's pay per man at the "medium" of 20s.), to be used for buying clothes, and, should there be a surplus, for relief of the sick. In the case of the £10,500, however, deductions

from pay were to be made for any clothes or money received by seamen.¹

The last expedition of the sixteen twenties was yet another attempt on La Rochelle in September of the same year, this time under the Earl of Lindsey.² It seems reasonable to assume that since the large sums carried with Denbigh's fleet were not used, they were applied for the same purpose to Lindsey's expedition. Again the medical arrangements were improved, for an experienced surgeon, Peter Thorney, who had accompanied Woodall to Portsmouth to tend the men returning from Rhé, was appointed surgeon-general of both the land and sea forces. The Company of Barber-Surgeons was required to nominate 16 of its members to accompany him.³ For their supplies, the privy council had already ordered £500 to be provided for furnishing their chests and also to provide conduct money for the surgeons' travelling charges.⁴ This sum almost certainly includes the amount entered on the declared account for "physic and medicaments", £285.10s. which suggests something like £16.15s. to provide drugs for each of the 17 surgeons.⁵ At the top rate of £7.10s. per chest, the cost of furnishing supplies peculiar to the surgeons' own craft amounted to £167.10s. leaving £46.15s. which would more than cover the prest and conduct money of the 17 men. Thus the allowance for drugs for each surgeon was far

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1. S.P.(D.), Chas.I, dxxxviii, 7. 14th Jan. 1628.
 2. Robert Bertie, who as Lord Willoughby d'Eresby had commanded the abortive expedition against Spanish shipping in October 1626.
 3. Acts of the Privy Council, 1628-29, p.45. 22nd July 1628.
 4. Ibid., p.5. 2nd July 1628.
 5. Pipe Office, 2266. If one supposes that the £500 does not include this £285.10s. for medicines, on the grounds that some of the drugs had been supplied to Denbigh's fleet then the grant to Lindsey's fleet for medical services is even more generous than it seems.

in excess of the previous amount of £10, which in any case had applied only to those on vessels of the first or second rank. The total allowance to each surgeon for all his medical supplies was greater than the £20 requested by the company before the Rhé expedition in 1627, and which was apparently at that time refused.¹ However, as in the case of Denbigh's fleet, the new arrangements for care of the sick were not put to the test, for the return of Lindsey's fleet after two months occasioned little comment, presumably because widespread disease was for once absent. The authorities at Plymouth were taking no chances however, and requested that the fleet should not return there.² Their wishes were respected, and on 12th November, Sir Guilford Slingsby reported that all the fleet had arrived at Portsmouth with the exception of two vessels. None had gone to Plymouth.³

One more item concerned with naval medicine in 1628 is worthy of note. During a discussion of the problem at a meeting of the council of war in March, someone remembered the Chatham Chest and hazarded a guess that there should be a cash balance of £5,000 or £6,000 in which case it was suggested that the lord admiral should be moved to order the governors to be examined by commissioners, such funds as they had being applied towards the erection of a hospital.⁴ It is perhaps

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1. S.P.(D.), Chas.I, dxxvi, 94. The masters and wardens of the Company of Barber-Surgeons to privy council, July 1627. Keevil, p.178, denies that there was any change in the allowance in either 1627 or 1628, in support of which he quotes an estimate made in January 1628. He does not mention the order to provide £500 for the surgeons for the expedition later in the year.
 2. Ibid., cxviii, 78. Mayor of Plymouth to privy council, 16th Oct. 1628.
 3. Ibid., cxx, 45. Slingsby to the lords commissioners of the admiralty.
 4. Ibid., xcv, 41. Minutes, 6th Mar. 1628.

significant that Buckingham was not present, nor was anyone with any knowledge of the administration of the navy. Had there been, it is unlikely that so utterly unrealistic a motion would have been allowed to stand, for it has been shown that the balance at that time was probably not more than £100 and was certainly not to be measured in thousands. The proposal, of course, came to nothing and the absence of any reference to a commission of 1628 in the report of 1637, suggests that the lord admiral rejected the idea as impossible without any formal reference to the governors.¹

Thus the period 1618-28 saw considerable changes and much improvement in the organisation of naval medicine. Most important was the acceptance of the principle that the provision of surgeons to treat any members of the ship's company was the responsibility of the administration, acting for the crown who through the navy treasurer paid first for the surgeon's attendance, and then later also provided the physical drugs. The immediate attention the new administration gave to the establishment of the surgeon in ordinary, and the removal of cookrooms to a more healthy location on the forecastle were merely forerunners to the improvements made in medical services as the needs became apparent. The officers of the administration were neither more foolish, nor more callous, nor more corrupt than those of any other day. The changes made with each successive expedition were logical but, most important of all, limited by the resources available. It is an accepted fact that money was difficult to provide, but it is equally true, if

1. In fact there was no authority that legally could have disposed of the Chest's money without the concurrence of the governors, and there is sufficient evidence of their independence to suggest that an agreement would not have been forthcoming.

less evident, that the supply of competent surgeons and physicians was also very limited. The administration was also hampered by the very real differences between the College of Physicians and the Company of Barber-Surgeons, both of which should have supplied practitioners for the fleet if the seamen's health was to be safeguarded properly within the provisions of their respective charters. The act of the privy council in cutting across this privilege and placing the responsibility for both forms of medical treatment squarely on the shoulders of the surgeons, was for the seventeenth century both imaginative and enterprising. And although the stroke was made by the privy council, it would not, and probably could not, in practice have been executed without strong representation from the lord admiral concerning the needs of the seamen involved.

If it was inevitable that the lord admiral's first duty towards the men under him should have been to look to their material comforts as far as circumstances permitted, it is also true that he was interested in their spiritual welfare. It is rather surprising that although the navy had been in being for nearly a hundred years (i.e. as a separate entity from the merchant marine), chaplains were not officially recognised as necessary adjuncts to the fleet until 1626. Surprising, because at that time religion was much more an integral part of the daily life of the ordinary man than it is today, or perhaps than it has been since the seventeenth century. Further, this was especially true for the seaman, exposed as he was to the elements and the ever present proximity of death, even without the extra hazard of disease. This almost certainly accounts for the custom of saying prayers at each

change of the watch, and it is significant that in any list of instructions given to admirals and captains, the first always adjured them to see that the ritual was performed and "God . . . served daily". The breaking of this custom, on the rare occasions that it happened, caused much misgiving among the crew. Similarly, the duke's order that the whole fleet would take communion together on Sunday 31st August, before setting sail for La Rochelle in 1628, should not be dismissed as a mere formality.¹

As in the case of the surgeons, during the period before the navy reforms were begun, any chaplain that was present aboard one of the king's ships was there at the invitation and expense of the captain, who may or may not have assented to his ministering to all and sundry. The transition of the chaplain's office from being a private engagement to one of general service with official recognition seems to have taken place in the middle sixteen-twenties. The movement towards a change is first apparent in the Cadiz expedition of 1625. The lord admiral required ten chaplains from Oxford University to go with the fleet, one in each of the king's ships. They were to have diet, and an imprest of £10 on their embarkation at Plymouth. Buckingham also made two promises of great importance to the prospective chaplains which must have played a significant part in obtaining the necessary volunteers: on their return, the chaplains should have preferment according to their merits, and service in the expedition would not prejudice anyone holding a fellowship at a university.²

1. S.P.(D.), Chas I, cxiii, 49. Buckingham to Pennington, 22nd Aug. 1628.
2. B.M. Add. MSS. 37816, f.44. 28th Aug. 1625.

Official recognition, in part at least, was granted the following year with the general revision of the wage rates. The qualification must be made for it might be said that they were not properly recognised unless the navy paid their stipend, which was not the case. Official recognition was limited to permission to preach aboard the ship, an allowance of 4d. per month deducted from the wages of each man aboard,¹ and a victualling allowance. The chaplain, unlike the surgeon after 1626, was in no way accorded the status of an officer; he lived on the lower deck with the seamen.²

An account, apparently drawn up in 1627 shows the amounts paid to chaplains in 1626.³ It lists 12 preachers associated with 24 vessels, including those in ordinary. The twelve had been paid a total of £287.6s.5d, but the document implies that a further £358.4s.9d had been deducted from the wages of men aboard the other 50 vessels listed, none of which apparently had a chaplain. There is nothing to suggest that the chaplains received any of this money, and it is most unlikely that it was repaid to the seamen. Recruitment of chaplains for the expedition to Rhé in 1627 was evidently difficult, for only two of the king's ships seem to have had a preacher aboard, Daniel Ambrose in the Red Lion and John Simson in the Triumph.⁴

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1. Presumably the deductions were made from the wages of all ranks from the master down, as in the case of the Chatham Chest. It is possible however that the captain and lieutenant (when carried) also contributed.
 2. An unknown chaplain complained in 1629 that chaplains should receive at least a seaman's wage since they shared all his hardships. Deductions were made from all men, but few ships had a chaplain, and although he did not receive their groats (*i.e.* fourpences) one such had to attend the men not provided for. To make matters worse, the practice had grown of deducting 2s. in the £1 from his wages, for the trouble to the clerks in making the deductions from the crews' pay.
 3. B.M. Add. 9294, f.204.
 4. S.P.(D.), Chas.I, xcviij, 105-6. Simson to Mr. King, 24th Mar. 1628.

It was natural that following such recognition for chaplains on ships at sea, they should also be approved to minister to the men on the ordinary charge. Moreover it is significant of the importance of their faith to the seamen and artisans of the time that the appointment of the first chaplain to a dockyard, that at Chatham, was made as a result of a petition from the officers of ships in the ordinary charge there on behalf of the men. As a result of the petition, Buckingham sought the opinion of the commissioners as to the fitness of Griffin Spencer, the man suggested as chaplain. The navy commissioners were able to recommend him as having good testimonials, and suggested that the duke should recognise the appointment by issuing a warrant for it.¹ The recommendation was approved, for two months later the commissioners notified Peter Buck, the clerk of the cheque at Chatham, that Spencer was to be entered as minister in ordinary there.²

Unfortunately, Spencer was looked upon as an intruder by the local clergy. In describing the situation, Joshua Downing's phraseology would more aptly be suited to a problem of service administration (which perhaps to him it was), rather than to affairs of the church; but he expressed the difficulty quite succinctly to Nicholas,

he [Spencer] hath bene much hindered for want of a certain church or convenient place for the discharge of his duty. The most convenient place is the church where God is usually worshipped and called upon.

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1. S.P.(D.), Chas.I, xxxc, 77. Navy commissioners to Buckingham, 12th Sept. 1626. The mention of the warrant is important, for it was the issuing of such a warrant entitling a man to so much pay from the navy treasurer, that signified the official recognition to which reference is made above. In the case of the chaplain to the ordinary, the warrant evidently did not authorise payment; nevertheless its issue undoubtedly conferred full recognition of his position.
 2. Ibid., xxxix, 33. 6th Nov. 1626.

Since the Rev. John Piham, the curate of Chatham, had refused Spencer permission to use the parish church close by the dockyard, Downing wrote to Nicholas soliciting a letter from the lord admiral to the bishop of Rochester, that Piham should be commanded to allow Spencer to preach in the church on Wednesdays, both morning and afternoon.¹ There seems to be no record of such a letter from Buckingham, but the fact that Spencer did use the church later suggests that the letter was not merely forthcoming, but was indeed successful.

The expeditions of the sixteen-twenties led to an increased use of Portsmouth as a base, and from this the need arose for a chaplain in ordinary there. Once again the initiative seems to have been taken in the first instance by the men themselves, and their need for a chaplain was met by a local man. Having "attended and instructed" the men of the St. George and the Garland since their arrival, it seems that he applied to Mathew Brooke, the clerk of the cheque, to see what payment could be arranged. As a result the commissioners of the navy wrote to Nicholas on the 18th November 1627, recommending that the lord admiral authorise some sort of appointment for Robert Prickett during such times as there were ships in the harbour there.²

The last piece of evidence of note concerning chaplains in the period provides ample testimony to the full recognition accorded them, despite their somewhat anomalous position regarding pay. It seems that Francis Webb, chaplain of the Mary Rose had been arrested in Rochester for debt at the suit of one William

1. S.P.(D.), Chas.I, lxiv, 6. 21st May 1627.
2. B.M. Add. MSS. 9301, f.17.

Gatliffe. An order from the privy council directed to the mayor of Rochester on the 22nd July 1628, ordered that if Webb were not returned to his ship immediately, Gatliffe was to be charged to appear before the council to answer for his contempt.¹

Despite the picture of unrelieved gloom that every historian in the past has painted when dealing with the welfare of the men in Buckingham's navy, a careful analysis of the evidence available presents a very different view. Certainly the seamen suffered dreadful hardships, which no attempt has been made to minimise here. However, the previous accounts seem to have erred by concentrating solely on the debit side, without considering the great steps forward that were taken under Buckingham's administration in three of the four fields of welfare.

In the provision of clothing, the slop-chest was originated to provide a source of replacement without involving the seamen in finding ready cash. In medicine, the whole notion of medical care was placed on a firm basis with improvements being introduced as each lesson was learned. In religion an obvious need was provided for by the recognition accorded to chaplains. With regard to the Chatham Chest there was no sweeping reform or innovation despite the record of ill-found debts, if not actual embezzlement during the previous twenty-five years. What is noticeable however, if the accounts available are properly studied, is that from 1618 to 1628, the funds of the Chest were better administered, with less corruption, than at any time in its previous history or, with the possible exception of a short period under the Commonwealth, for a very long time afterwards. One amount of £12 in 1620 was the sole debt allowed from 1618 to 1626. The money owed by Russell was not

1. Acts of the Privy Council, 1628-29, p.47.

a debt in the sense that the others had been, and in any case the money was owed by the navy on behalf of the exchequer, not by Russell himself. There was no evidence of corruption, and repayment was made the moment the lord treasurer made funds available. With regard to Sackville Crowe's embezzlement it should be remarked that it occurred in connection with Weston's payment in 1629, six months after Buckingham had been murdered. The thought is perhaps worth some speculation as to whether Crowe would have been allowed to be so successful had the lord admiral still been in command.

It is very easy to scoff at the attempts made to assist the common seaman. The Chatham Chest was inadequate for its self-imposed task; of course it was, but the concept of the scheme was unheard of elsewhere. Certainly the army had no similar plan, nor did have for many years. The army made no provision of clothes, even on repayment, and this must have been one of the vital factors in the incidence of typhus when soldiers were crowded on the lower decks of a ship. None of the plans to look after the welfare of seamen worked perfectly. Sometimes they didn't work at all, and often when they did work it was but very imperfectly. But someone had the imagination to try them; and sometimes they did work. That is the important fact, for it enabled these very imperfect schemes to be improved upon later. It is impossible to say whose brain was responsible, but it is a remarkable coincidence that each of these ideas was either introduced or reached a previously unattained standard during the brief ten-year period when Buckingham was lord admiral. Historians have said many hard things about the duke, but few would deny that he was a man of imagination.

CHAPTER VII

Shipbuilding and the Administration of the Dockyards

During the first part of James's reign, when the navy was allowed to run down, the dockyards, with their great quantity of stores, were the centres of embezzlement, misappropriation of funds and every conceivable form of abuse of the king's service. It was natural therefore, that the attention of the 1618 Commission of Enquiry should have been concentrated on them to re-institute administration by responsible officers as well as regulations designed to minimise the opportunities for peculation in the future.¹ The commission then, recognised the officers performing the duties shown below.

As the king's master shipwright, William Burrell, the commissioner, was responsible for the dockyards, but it was apparent that without assistance adequate supervision would be impossible.² Most of his time would have to be spent at Deptford, where the shipbuilding programme was being carried out, but these duties would permit him to supervise the other yards only through the senior officials, the clerks of the cheque. This arrangement presented no problem at Woolwich or Portsmouth where the yards were quiet, but at Chatham, which had developed as the navy's main base, the general supervision of the yard was far too much for the clerk of the cheque in addition to his normal duties. The problem was solved by giving Chatham into the hands of Thomas Norreys, the commissioner responsible for the annual surveys of ships.³

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1. The term minimise is used advisedly; it is doubtful that the realists on the commission would have claimed to be able to eliminate corruption entirely.
 2. Burrell also maintained his private shipyard at Ratcliffe.
 3. The arrangement worked well, for besides relieving Burrell of the immediate responsibility for Chatham, it also avoided the embarrassment of the continual presence of a fellow shipwright, equal in rank as a commissioner, but who was without responsibility in the design and building of ships yet who doubtless held strong views on the art.
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Norreys seems to have been successful, although perhaps he should be held responsible for the deplorable standards Downing found later among the shipkeepers there. In other respects he must have been competent, for the early years of the commission were particularly notable for the zealous checking in all departments of administration by Cranfield and Coke, but the quality of the shipkeepers would not have been disclosed by such checks. Norreys died on 20th December 1624, and was replaced by Captain Joshua Downing.

Downing was not appointed to the commission, but was given the title of assistant commissioner. Like his predecessor, he performed the duties of the surveyor of the navy as well as supervising the dockyards, for which he was paid £200 p.a.,¹ his position perhaps being most nearly comparable with that of the dockyard commissioners of the Commonwealth.

The chief accountable subordinate officer was the clerk of the cheque, and in normal times he was the representative of the principal officers (or the commissioners) in the dockyard. Although the clerks at Woolwich, Deptford and Portsmouth had no immediate superior always at their elbow, they are of less importance in studying dockyard administration than their colleague at Chatham, for despite the presence of the assistant commissioner, it was the clerk who kept the books.

The clerk of the cheque had to account in wages, victualling and sometimes lodging allowance for all the men, both ordinary and extraordinary, serving the navy there.² He was considered the

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1. With Burrell ultimately responsible for all building and repairs, Downing could hardly have been named as the surveyor. Even Norreys, a commissioner, had only been designated as one "with special responsibility for survey of his majesty's ships and stores.
 2. The accounts of the duties of dockyard officials are to be found in Adm. Lib. MSS. 12, ff.3-21; Coke MSS. bundle 129.

master of all companies in harbour and of any ships setting forth to sea as long as they were victualled by petty warrant. All men on the extraordinary charge had to be mustered (usually by a bell) twice daily in winter and three times daily in summer when the working day began at 5 a.m. Those of the ordinary, i.e., "permanent" employees, were mustered monthly or weekly as necessary, occasionally by night, with stoppage of pay and victuals for absence without leave from the principal officers (commissioners) or the lord admiral.¹ In the absence of the master attendant the clerk also had to set the watch, and see that the gate was locked. He was responsible for receiving, rating and discharging men, but only by warrant from the officers except in certain cases in the ordinary where the rate remained constant. When a man was discharged, the clerk issued him a ticket for his wages due, the ticket being signed by one of the officers. The clerk at Deptford was also responsible for all men in ordinary on ships serving the king between London and Blackwall. These men were mustered twice weekly.

When stores were received the clerk kept a counterbook with the storekeeper, filing all lading bills that the storekeeper might be charged with them. If the stores delivered came from the contractor he had to record the quantity and quality, time and date received, and prepare bills of payment for them and for their carriage. He kept detailed records of all ironwork made by the smith at Chatham and used in his majesty's work, and likewise of all the masts issued from the mast dock. He made warrant to Sir Allen Apsley, the surveyor of victuals, for all

1. The mustering by night was chiefly designed to ensure the proper attendance of the shipkeepers.

extraordinary and ordinary victuals delivered, keeping a book for all the board wages allowed to carpenters in ordinary, and a similar book, submitted quarterly to the treasurer for their lodging money. He kept a record of the arrival of each man pressed to serve in the king's ships, giving copies to the purser of the ship when it left Chatham. He also gave warrant for the day to day victualling of pressed men while the ship was in harbour, mustering such men as often as he thought necessary. All his account books had to be submitted to the officers quarterly.

The clerk of the cheque at Chatham was Peter Buck,¹ who had been there at least twenty four years in 1618.² As in the case of most of the subordinate officers the attempt to ascertain the amount of salary paid suffers from conflicting evidence. Sir William Monson gives the clerk's fee as £33.6s.8d, which with 3s.4d a day diet and £8 for boat hire, finally totals £102.3s.4d.³ Peter Buck himself gave his fee as £40 in 1618. He made no mention of diet or boat hire, but admitted receiving "by ancient custom" the wages and victuals of two shipkeepers on the ordinary and one carpenter on the extraordinary for a total of £98.10s.4d.⁴ Buck plaintively added that all this was only expected, not received; he had received only one pay in his time as clerk. The declared accounts for 1619-23 show the clerk being paid a fee of £50 p.a. although in 1620, for that year only, he was granted a further £23.6s.8d for the diligent performance of many extraordinary duties.⁵ The duties of the clerks at Deptford and

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1. Sir Peter Buck's eldest son was named Peter, P.C.C. Wills, 63 Clarke, but there is no evidence to show that he was the clerk at Chatham.
 2. Declared accounts, Pipe Office 2231.
 3. Naval Tracts III, 391.
 4. Adm. Lib. MSS. 12, f.13. The normal practice was to employ servants (boys) at a much lower rate than that being received.
 5. Declared accounts, Pipe Office 2258.

Woolwich were the same in principle but necessarily less onerous, since the number of men and the value of material concentrated at either yard at any given time was much smaller. The clerks there received £30 and £20 respectively.¹ At Portsmouth, the clerk remained for a few more years a mere caretaker, except when special circumstances caused vessels to be held there. His fee, for several years the only item in the declared accounts showing the existence of any naval establishment at Portsmouth, was £20.²

The clerk at Chatham employed two clerks, Nathaniel Tearne and Henry Norris at 8d. each per day. At Deptford the staff was a little larger, Peter Wraye, clerk, at a shilling per day, and three others at 8d. each per day.³

The clerk of the survey had formerly held wide powers over the control of stores,⁴ but because of the abuse of the office, he was now employed on more general duties. He was now responsible to all the officers rather than just the surveyor; he was to see that all stores issued were properly and economically employed; and he was to do nothing "in their elements" without the approval of the masters attendant and the master shipwrights.⁵

The remaining subordinate officers have been divided into two groups: the storekeepers, and those who utilized the stores. Each group is dealt with in an order of descending importance, although any such attempt to show precedence can at best be only approximate.

Probably the most important of the first group was the

1. Declared accounts, Pipe Office 2258.
2. Ibid..
3. Ibid., 2257.
4. Adm. Lib. MSS. 12, f.20, a deposition by J. Wrythesley, a clerk in 1618 giving the instructions issued by Lord Admiral Nottingham in 1613.
5. Ibid., f.10a.

keeper of the stores at Chatham.¹ He kept accounts in all kinds of stores such as tar, oil, pitch, small masts and deals, including also any stores landed from ships having no use for them in harbour. Stores from contractors might be received only on warrant from two officers, unless the value was less than 40 shillings, in which case the signature of one officer was sufficient when joined with that of the clerk of the cheque. Stores from other storehouses might be accepted only if they were accompanied by a ticket from the sender. The clerk of the cheque had to be notified immediately and the hoyman (wherryman) given a certificate for such as had been received. The keeper might issue no stores without a warrant except in cases of emergency, when they had to be signed for by one of the masters attendant, a master shipwright or an assistant to either. A record was kept of all stores issued, when, and to whom. The Chatham storekeeper's fee was a shilling per day. He too was occasionally granted an additional sum at the end of the year, as in 1619 and 1620 when, for night and other special attendance he received a further £26.14s. and £31.14s.6d.² Naturally, the duties of the storekeeper at Deptford were very similar, but two provisions appear in the list of his duties which are not found in those for Chatham. It is unlikely that these applied only to Deptford, however. First, the keeper was instructed to call the master shipwright, boatswain of the yard or anyone else necessary to view stores being delivered, such stores to be refused if considered unserviceable. Second, all cordage received was to be viewed and examined by certain "approvers" who were to certify their judgment,³ the implication being that the proper appraisal of cordage was so

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1. Described also as the long storehouse and the great store. Adm. Lib. MSS. 12, ff.10a, 15.
 2. Declared accounts, Pipe Office, 2257-58.
 3. Adm. Lib. MSS. 12, f.9.

specialised that inspection by experts was obligatory. The Deptford storekeeper's fee was one shilling per day.¹

The keeper of the sailhouse and nailhouse, was responsible for the receipt and issue of all sail canvas and flags, all of which were to be "deposited in the East side of the repository". All such items received from ships had to be inspected in the presence of the clerk of the cheque, masters attendant or other deputed officers, the condition to be graded as new, quarter-worn, half-worn, three-quarter worn or decayed. None might be issued without signature from an officer (i.e. principal officer or commissioner), the knowledge of the clerk of the cheque and the presence of the officers' clerk. In addition, the storekeeper held all ironwork not bespoke from the smith, such as bolts, shackles, hooks and locks, including such items returned from sea stores by the ship's carpenter. Ironwork might be issued to master or assistant shipwrights, the pumpmaker and topmaker as required, under signature. Accounts had to be kept of all stores, sail, flag and ironwork.² The keeper's fee was one shilling per day, but from 1st July 1619 the commission abolished this office and committed all such stores to the care of William Lawrence, keeper of the great storehouse.³

The mast-keeper might not accept any goods delivered without warrant from the officers and the knowledge of the clerk of the cheque. He was to keep a record of the size and condition of all masts, and he might only issue at the direction of a master shipwright or his assistant. The date and reason for issue had to be recorded, both by the keeper and the clerk of the cheque to

1. Declared accounts, Pipe Office, 2257.
2. Adm. Lib. MSS. 12, ff. 6, 10a.
3. Declared accounts, Pipe Office, 2257.

whom notice of all issues had to be given. The mast-keeper had also to inspect his dock gates regularly, for the state of the caulking and the gates' proper working, as well as his wharfs. In the case of any defect appearing he had to report it to the officers so that timely repairs might be made.¹

The plank-keeper took charge of all timber and plank. Material might only be received in the presence of the clerk of the cheque or his deputy, who had to certify to the quantity and quality delivered. Record had also to be kept of receipts from other stores or yards, and a book kept of all issues which might be made only to a master shipwright or his assistant.²

The clerk of the rope yard, paid £36.10s. p.a., received all the materials for making new cordage, which materials he delivered to the master workman. The clerk was also responsible for the men's punctuality.³ The master workman of the ropemakers, who was immediately responsible for production, received £50 p.a.⁴

The porters opened and closed the gates each morning and evening, attending during the day to prevent workmen absenting themselves without leave, and also to prevent the illegal removal of any of the king's provisions. One of the porters was on duty each morning from the time the watch dispersed until the arrival of the workmen.⁵ Each porter received one shilling per day.⁶ In addition to the porters, various watchmen were employed to patrol the dockyards and prevent pilfering. They were paid at the rate of 6d. per night and 8d. per day.⁷

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1. Adm. Lib. MSS. 12, ff. 6-7.
 2. Ibid., f.6.
 3. Declared accounts, Pipe Office, 2261.
 4. Ibid.
 5. Monson, Naval Tracts III, 413.
 6. Declared accounts, Pipe Office, 2257.
 7. Ibid.

The messenger of the navy had to attend upon the officers at their meetings and arrange victuals and horses when they had to travel on the king's business. He was also despatched to summon any delinquent, and was responsible for his custody until the order was given for his release.¹ His wage was one shilling per day.²

The most important of the subordinate executive officers in the dockyards were the four masters attendant, each of whom in turn spent three months of the year at Chatham. During his tour of duty the resident master was responsible for seeing that the boatswains carried out their duties and also for the setting and the vigilance of the nightly watches. He was also responsible for the secure and sufficient mooring of the ships; each week he or one of his fellows had to see that the meat delivered to the companies was fresh and adequate, and once a month visit the storehouse to inspect the butter, cheese and fish. The principal masters³ had to "carry" i.e., pilot and command, the ships up or down the river as required. A particular responsibility of the masters attendant was to see, when occasion demanded, that ships were "grounded" properly without risk of damage. They were also ultimately responsible for the correct rigging and furnishing of all ships setting forth to sea.⁴ They had also to attend all general surveys of hulls and keep a record of the findings; their opinion had to be sought before any use was made of anchors, cables or sails; and once a month one of them had to inspect the cordage made at Woolwich to ensure the standard of quality.⁵ The

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1. Monson, Naval Tracts III, 413.
 2. Declared accounts, Pipe Office, 2257.
 3. Both titles are common in the early Stuart period. Later the term masters attendant was used almost exclusively.
 4. Monson, Naval Tracts III, 412.
 5. Adm. Lib. MSS. 12, ff.4, 10.

commission had maintained the fee at £50 p.a., asserting that the appointment was valuable for its prestige rather than its monetary worth.¹

Of the two master shipwrights,² one had always to be attendant at Chatham while the other was at Deptford supervising any building or repairs being carried out there. One of the master shipwright's duties was the direction of his assistants and other artificers and journeymen to their appointed tasks. He was to be present at any graving, to make good any apparent faults and to ensure the standard of work by the caulkers and carpenters. When stores were delivered he inspected those that were pertinent to his trade so that the storekeeper might reject them if they were insufficient or of poor quality. Naturally he also had power to demand stores and materials necessary to him for the king's service, but he might not remove them without the storekeeper's knowledge. He also had to record the receipt and weight of any ironwork delivered to him by the smith, and sign each page of the smith's delivery book either daily or weekly. The master shipwrights were present at all the general surveys of hulls, certifying their opinions in the survey book. When any ship came into dry dock a master shipwright was responsible for estimating materials necessary for repair. He also advised the clerk of the survey and the masters attendant on the proportion of carpenter's stores to be allotted to any ship making ready for sea-service. Finally, his opinion might be sought by the officers in regard to the rating of the various dockyard artificers.³ A master

1. S.P.(D.), Jas.I, ci, f.23.

2. By 1623 they had been increased to four, including Burrell.
B.M. Add. MSS. 9294, f.143.

3. Adm. Lib. MSS. 12, ff. 5, 10, 12.

shipwright received 2s. per day, plus 5d. per week lodging allowance.¹

There were two assistant master shipwrights, usually shipwrights of some experience who were able to deputise for the master shipwrights at all times. They also attended Chatham unless directed to Woolwich or Deptford on building or repairs. It was often one of these who became responsible for the surveying, moulding, felling and provision of timber.² Their fee was an additional 1d. per day above the ordinary shipwrights pay of 1s.6d. per day.³

The topmaker and pumpmaker stored beech and ash timber for capstan bars, tholes etc., and also leather for the pumps. He might receive stores only in the presence of the clerk of the cheque and issue them on order made by a master shipwright or his assistant for such as his trade required. He also kept ships' tops, pulleys and blocks issuing these only on a ticket from the clerk of the survey.⁴ A topmaker and pumpmaker was paid 1s.2d. per day.⁵

The master caulker was responsible for the quality of the work from his caulkers, and had the power to command pitch, tar, resin, oil, brimstone and okum from the stores as his majesty's service required.⁶ In 1622 his wage was 2s. per day.⁷

The keeper of the plug was responsible for the gates of the dry dock and had to attend them at each tide to see that no damage was caused. Presumably, if the dock was not in use he had to open the sluice on each occasion. His fee was £5.4s. p.a.⁸ As a result

1. B.M. Add. MSS. 9294, f.143. He also received an annual fee of £66.18s.4d. from the exchequer.

2. Adm. Lib. MSS. 12, ff. 5, 16.

3. Declared accounts, Pipe Office, 2261.

4. Adm. Lib. MSS. 12, f.6.

5. B.M. Add. MSS. 9294, f.143.

6. Adm. Lib. MSS. 12, f.6.

7. S.P.(D.), Jas.I, cxxxvi (quarter book, Chatham ordinary).

8. Declared accounts, Pipe Office, 2258.

of the 1613 enquiry, the post was abolished as a separate office and the duty passed to the boatswain of the yard. However, since the plug keeper at Woolwich was at that time not a separate post, but one held by Hugh Lydiard, clerk of the cheque, he was allowed to keep it.¹

The dockyard smith might make ironwork only at the direction of a master shipwright or his assistant, and none was to be issued until the clerk of the cheque, or his clerk had recorded its weight. The smith had also to keep a copy book of all the deliveries, which was presented to the officers with his bills, that they might be compared.² The smith has been included here because of the essential nature of his work; the glazier occupied a similar status, but neither of them was an employee of the navy in the sense that the others were. His position was really that of a civilian contractor supplying special goods for the king's service.

The boatswain of the yard attended daily to supervise the loading and unloading of vessels carrying provisions, and in the absence of a master attendant he set the shipkeepers to work. He was responsible for the store of blocks, tackles, handspikes, screws and all the movable equipment used for launching or docking ships built or repaired.³ His annual wage was £25.⁴

The terms of employment in the dockyards were generally by the day although a few men were paid "by great" i.e., by contract. These latter were usually performing a particular task that could be isolated from the work of others; indeed the term used was "taskwork". Thus the smith was often paid "by great" as were the skilled painters employed in gilding and decorating the ships.

1. Declared accounts, Pipe Office 2261.
2. Adm. Lib. MSS. 12, f.7.
3. Ibid.
4. Declared accounts, Pipe Office 2261.

Day wages varied according to the experience and status of the workman. Journeymen shipwrights began at 1s.2d., caulkers 7d., bricklayers 10d., sailmakers 1s.8d., carpenters 1s.3d., joiners 1s.4d., sawyers 1s.2d., and labourers 8d.¹ With the exception of the last named, all the workmen were paid a lodging allowance on a pro-rata basis ranging from 5s. for the master shipwrights to 2d. per week for caulkers.

When his vessel was in harbour the ship's boatswain remained with her, "to lie aboard nightly" with the ordinary company. Each morning when summoned by the yard flag, he attended the dock with his men to carry out such duties as the master attendant or yard boatswain might require. He was responsible for the keeping of proper watches on his ship; when caulkers or carpenters were at work on her he was to be in constant attendance to ensure that no fire was caused, and he was in fact responsible for the safety of the ship and the care of any furnishings remaining on board until he was relieved by the master,² on the ship's being prepared for sea. At that time the boatswain's particular care was the vast amount of sea stores, sails, cordage, anchors and cables, everything that might be used in the working of the ship for the next (usually) six months.³ All these had to be checked on receipt and signed for so that he could account for the stores expended and the remains at the end of the service. In 1618, the boatswain's monthly wage was between 13s.4d. and 16s.8d., depending upon the rank of his ship. By 1626 he earned between £1.3s.4d. and £2.5s.⁴

The purser was responsible for the victualling of the ships

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1. S.P.(D.), Jas.I, cxxxvi (quarter book, Chatham ordinary).
 2. On the four Royal ships the master always remained on board in harbour. B.M. Add. MSS. 9294, f.158.
 3. Adm. Lib. MSS. 12, f.17.
 4. See above pp.24-6 and appendix I.

company. In harbour if his ship were not one of the four "first rank" he was reduced to the status of cook, although his duties remained the same. It was his duty to see that the proper amounts of victuals were ordered, and, when received, tallied with the order, while any unfit victuals delivered had to be reported to the master attendant. He was responsible for the proper storage and care for the provisions as also their correct preparation as food. He had to keep books of all enrolling and discharging, and present his books to the officers before payments were made. The penalty for false entries was the loss of his place as purser as well as having to make sufficient satisfaction to the king.¹ In harbour when classed as a cook, the purser's wages ranged from £1.3s.4d. per month to £1.5s. At sea they ranged from the same minimum rate to £2.²

As far as the dockyards themselves were concerned, the commission made great changes, which eventually resulted in a re-deployment of the peacetime navy upon which the developments of the next three hundred years were to be based. The most important step was the expansion of Chatham as a naval base. Until 1618 Chatham was used merely as a safe mooring, but the commissioners disapproved of the time and money wasted by the continual passage to and fro from Chatham to Deptford and Woolwich of ships needing repair.³ These charges could not be eliminated at once, but the commissioners moved in the right direction; the yard at Woolwich was virtually closed down, shipbuilding was

1. Adm. Lib. MSS. 12, f.7.

2. See appendix I.

3. The average cost of transporting each of the new built ships from Deptford to Chatham seems to have been between £75 and £100. It is difficult to know exactly as the entries in the declared accounts invariably cover both vessels each year. In some years the figure shown obviously includes launching costs.

concentrated on Deptford, and the Chatham yard was extended and improved to be able to handle all the repair work. There is no way of knowing whether the lord admiral (for such changes could not have been contemplated except on his approval, if not his instigation) and the commissioners looked ahead far enough to consider the advantages of having all major shipbuilding carried out at Chatham as well. Perhaps they did, for the logic of such an extension to their plans is unlikely to have escaped them. For the moment however, they had plenty to occupy them in fulfilling their promise,¹ and in the short run, Deptford had so many advantages that not to use the yard there to its fullest capacity would have been far more wasteful than the cost of transporting ships.

The Deptford dock was the only one capable of holding two ships at the same time, and the established nature of the industry there guaranteed a supply of skilled labour close by. In addition the yard contained the major part of the naval stores held and it alone of the king's dockyards had any pretensions to security. Unfortunately these were slight, depending upon the watchmen and a paling fence, although in 1619 the commissioners did at least replace the fence with a brick wall. Apart from sums for the upkeep of walls and fences, little more was spent on the Deptford yard. The bulk of the expenditure was concentrated on the expansion of the facilities at Chatham.

In 1619, a hundred-year lease on about 75 acres of land was bought from Sir Robert Jackson for £200, while lands adjoining the

1. It should be remembered that with the exception of Norreys, Burrell and Coke, none of the commissioners were paid for their work at the navy office.

existing yard were already rented at an annual cost of nearly £5.¹ The new lease was described as comprising "54 acres upland, the remainder marsh, for the new dockyard, ropeway, brick and lime kilns and ways to both dock and kilns" for an annual rent of £14, in addition to which 24s. p.a. had to be paid in tithes to the Rev. John Piham of the parish church.² Once the land had been secured, the expansion was begun.³

In 1619 and 1620 new wharves 200 ft. long were constructed, as well as two mast docks each 120 ft. long, 60 ft. wide and 30 ft. deep. Little work on the improvements is shown as having been completed in 1621, although several minor additions were certainly made. By the end of 1622, a new dockyard gate, and a 244 ft. length of fence had been erected and there was also a covered shelter where sawyers could work in the field adjoining the yard. A new lodging house 91 ft. long and 20 ft. wide was built, as well as a house for one of the senior officials. This house, with a cellar and a storey and a half, had ten gables on the front and measured 20 ft. by 16 ft. As was common, the back door led directly into the yard.⁴ A new forge and pulley house measured

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1. There seems to have been an impediment in the actual occupation of the land, known as Lordship fields or Lords land, which is shown as 80 acres in 1619 and "71 acres per estimate" in 1622, declared accounts Pipe Office 2257 and 2260. The purchase of the lease is shown in 1619, but the first rent was not paid until the half-year beginning 1st July 1622.
 2. The name is worth mentioning because it was he who refused to co-operate with the chaplain-in-ordinary in 1627, while in the declared account (2265) for that year, a John Piham is shown employed in making cordage at the Chatham ropeworks at a wage of 24s. p.a.
 3. The evidence of all the improvements listed is to be found in the declared account for the appropriate year.
 4. There are no maps of Chatham dockyard for this period. However, since it was east of the river some of the otherwise unintelligible description makes sense. Thus, the house with its "ten gables on the field side" and "door to the Northward", probably faced south in the southern wall of the yard.

125½ ft. by 25½ ft., between the ropewhouse and the river, a new building 9 ft. wide and 160 ft. long was erected and the foundations laid for a row of storehouses 268 ft. long. Three new wharves were made and a 122 ft. long row of dwelling and lodging houses 25 ft. deep complete with turret and belfry. In the ropeworks the spinning shop was extended and more storehouses built.

The following year a wall 14 ft. 9 ins. high closed the 97 ft. gap between the western end of the new store houses on the northern side of the yard and the river, while on the opposite side a 221 ft. wall was built 11 ft. high enclosing the yards of the dwelling houses. Storehouses 201 ft. by 22 ft., and work shops 330 ft. by 21 ft. were erected and also a shelter 113 ft. long and 52 ft. wide where the mastmakers could work under cover. There was also nearly a quarter of an acre in pavement around the new buildings. In 1624, more land was obtained for drying and repairing sails, a sawhouse measuring 56 ft. by 26 ft. was built as well as a new tarring house and two sailhouses. Little was done in 1625, but the following year saw the erection of three new wharves, one 300 ft. long, and the completion of a new ropewhouse 600 ft. long and 20 ft. wide contracted for in 1625, while the growing ropeyard had a 500 ft. wall built on its street frontage to protect the stores. There was no further development of Chatham dockyard within the period with which we are concerned, probably because of the increasing financial difficulties.

It is an illuminating comment on the times that the navy paid compensation to people whose property and amenities had been damaged by the great works in hand at Chatham. In 1620, Robert Peryn was allowed £4 for spoilage of his land while the new dock was being built nearby, and in 1626, £24 compensation was paid to

William Poynter for loss and damage incurred by the digging of six acres of marshland to stop St. Mary's creek.

The only appreciable sums spent on the Woolwich yard were for the extension of the ropeworks there. In 1621, £227 was spent on a new storehouse, in addition a new stoving house 54 ft. long, 21 ft. wide and 10 ft. high was also built.¹ The following year a Dutchman, Harman Barnes, was brought from Amsterdam to build a new stove there. In 1623 more than £500 was spent on the storehouse at Portsmouth and on the repair and preservation of the dry dock, long since disused, but which was recognised as an asset that might be invaluable in the future.

A great deal has been said about the abuses committed by the dockyard employees before 1618, but the totally inadequate security arrangements undoubtedly caused great losses by simple theft. Much of this, at least, was reduced by the new regime, which caused all storage areas, and eventually the whole dockyard to be surrounded by high walls. It is most unlikely that embezzlement was eliminated during Buckingham's ten years as lord admiral, but there is very little evidence of abuse even approaching the scale reached during Mansell's term as treasurer, or the period of some 35 years following Buckingham's murder. Even Oppenheim, who draws attention to corruption whenever it could be found, quotes no evidence for it between 1613 and 1626, most of his reference to abuse in Charles's reign being to the state of affairs in the sixteen-thirties.

The faults demonstrated by the commission and the lessons it had learned were soon forgotten when the power in the administration was once more concentrated in the hands of the

1. A process in the manufacture of cordage, in which the rope was heated.

principal officers under an apparently benevolent board of lords commissioners of the admiralty. Sir Guilford Slingsby's overbearing manner was once more in evidence, even towards his colleagues, and he lost no time in making over more property to his own use, even though it meant evicting the tenant.¹ On his death in 1632, Slingsby was succeeded as surveyor by Sir Henry Palmer; unfortunately if Palmer was less unpleasant he was just as unscrupulous in defrauding the king.² Oppenheim presents a clear enough picture of the corruption once more rife. One example is typical: the complaint by Pett of new houses being built in the Woolwich yard as soon as the decision had been made to build the Sovereign of the Seas, to the charge of which he was certain the houses would be added.³ He was no doubt correct in his supposition although the protest comes somewhat strangely from one with his penchant for enriching himself at the expense of others. Pett had been appointed a principal officer in January 1631, and was also nominated by the king as being responsible for the construction of the Sovereign.⁴ After Burrell's death in 1630, Pett was undoubtedly the foremost shipwright of the day, and his advancement to office placed him in a position of advantage similar to that which Burrell had enjoyed. It seems probable therefore, that he was responsible for repudiating the decision to concentrate the shipbuilding on Deptford. Of the six ships built 1632-34, three were from the Woolwich yard and three from Deptford, notwithstanding that the sizes were comparable with the ten built

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1. S.P.(D.), Chas.I, clii, 51. 27th Nov. 1629 and Ibid., cxxxv, 37. 12th Feb. 1629.
 2. B.M. Add. MSS. 9301, ff. 121, 132v-133. Questioned unofficially Palmer defended his embezzlement because his "predecessors had done the like". Officially his reasons were less incriminating.
 3. S.P.(D.), Chas.I, ccxvii, 20. 19th Sept. 1635.
 4. Ibid., cclxiv, 67a. 7th Jan 1634. 87a. 7th Mar. 1634.

by Burrell, no two being so large that they could not be accommodated in the Deptford yard simultaneously.¹ Further, Pett's use of Woolwich was a retrograde step since not until 1646 did the building programme become so large that it could not be met by the full use of Deptford.²

Burrell's direction of the yards seems to have been efficient and honest despite Coke's repeated accusations of jobbery. From 1619 to 1623 the efficiency of the yards, particularly Deptford which was under Burrell's immediate supervision, seems beyond reasonable doubt. When Downing was appointed to Chatham, at the same time or soon after, a master shipwright was appointed responsible for the work done in each of the docks there. Burrell's instructions to Edward Boate at the old dock, and Henry Goddard at the new dock were probably a reiteration of rules that in theory had long been in force.³

The orders to Downing however, clearly contained new items although the routine checks prescribed may well have been those practised by Thomas Norreys.⁴ These latter included the order that the keys to the yard gates should remain in Downing's possession so

1. Oppenheim, pp.254-5. There seems to be a contradiction in this work, for on p.296, the author states that Woolwich was almost discarded in the early thirties, yet the lists on pp.254-5, based on state papers and declared accounts show that between 1632 and 1647, nine ships were built at Woolwich and seven at Deptford.
2. It is possible that the 300-ton pinnaces Expedition and Providence were built at Deptford in 1637, while the Sovereign was being finished at Woolwich. It is clear however, that since the latter was begun first, the use of Woolwich was deliberate and not enforced by circumstances. There seems little doubt that the decision was made to accommodate Phineas Pett, who had always worked there; administrative or financial benefits to the navy appear not to have been considered.
3. Coke MSS. bundles 62 and 131.
4. Ibid., bundle 130.

that he might be sure that the gates would remain closed except at meal times and the beginning and end of the day; between 8 p.m. and 4 a.m. they were to be opened on his order only, which might be given on very exceptional occasions. The standing orders concerning the checking at the receipt and delivery of all stores were repeated, with particular emphasis, it seems, on a check of the ironwork executed by the smith. Of the new orders, two seem significant. First, Downing was ordered to have stopped up any doors which had been put into the houses and led directly into the dockyard; and second, an instruction which must have caused some dismay among the workmen: every two days, the work of each man was to be compared with that of the others, as a check upon his diligence.

Much has been written about the relative abilities at sea of English, Dutch and Flemish ships, the general consensus of opinion suggesting that this, in rising order of merit reflects the speed and manoeuvrability of warships from those three nations respectively. This was nicely illustrated in 1623, when Captain Best, in the Garland accompanied by the Bonaventure was sent to convoy back to Ostend a Dunkirker blockaded at Leith by Dutch men-of-war. On the way however, the Dunkirker captain could not resist the temptation to show his superiority in seamanship. Suddenly crowding on all sail he left both English and Dutch standing and did not shorten sail again until they were nearly two miles behind. Unfortunately for him, the Dutch ships also outsailed the exasperated Best and his squadron, and proceeded to take full advantage of the time gained by pouring a broadside into the Dunkirker killing the captain and five others in the process. The Dutch withdrew as the English ships arrived, leaving the chastened Dunkirker to her escort. However, the

four Dutch ships continued in company, amusing themselves and infuriating the impotent Captain Best by sailing round the English ships in wide circles.¹

The disparity existed for two main reasons. The English ships, whether large or small, were built far more solidly than those of the Dutch or the Flemish. They were heavier and as a consequence more rigid, especially in comparison with the Dunkirkers. This did have the advantage of giving them a longer life (provided they had been properly constructed) and the ability to withstand the pounding of a winter sea, while in a fight their sturdier build enabled them to absorb greater punishment.² The second reason was that other maritime nations, particularly the Dutch, not only cleaned their hulls below the waterline every two months, but also treated them with tallow to inhibit the growth of marine life.³ English ships, on the other hand appear to have been careened at three-month intervals—hardly less than every two months, at all events—and this often without the benefit of tallow. The difference in care and maintenance would certainly have accounted for the relative sailing ability of Best's ships and the Dutch. As for the Dunkirker, such ships were built less rigidly than either Dutch or English; they had a shorter life of course, but this mattered little to a pirate whose business it was to capture other ships. When a prize taken seemed likely to prove

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1. S.P.(D.), Jas.I, cxlvii - clii passim. For Best's report of incidents mentioned in the text, ibid., cl, 18 and 83. Best to Conway 4th and 11th Aug. 1623. The whole affair and particularly the diplomatic background is excellently described by Gardiner, V, 79-88.
 2. This latter quality may well have been a reason for the reputation English seamen enjoyed among Dutch and Spaniards alike of never giving up in a fight. Real bravery undoubtedly played its part, but it is much easier to be brave when one knows that one's ship is less likely to be battered to pieces than her adversary.
 3. S.P.(D.), Chas.I, cclxxvii, 43. Pennington to the lords commissioners of the admiralty.

a good sailer it was a not infrequent practice for the pirate to remove certain knees and other supporting timbers which would the ship more flexible and so faster. When it became too weak for safety, there were always other prizes to be had.

Oppenheim makes the point that Turkish pirates used ships with a lateen-rig and that the Dunkirkers may have used it too in a modified form, which would have accentuated the difference between their light vessels and the lumbering third and fourth rates set against them.¹ It also stresses the fact that Giffard's plan was the right one and could have succeeded had it been carried out properly.² Disregarding the question of the most effective size of ships for each service, it is easy to criticise the manner of building when one has the benefit of three centuries of hindsight and shipbuilding experience at hand. It seems to us that the faults were obvious enough, but the question cannot have been seen so simply in Buckingham's day. Burrell was competent enough to have satisfied the East India Company, and his ten warships proved themselves. Phineas Pett may have been a rogue, but he was no fool; at the same time the Venetians sought the hire of English ships in preference to others and one would have thought that Venice had little to learn in the conduct of maritime affairs. In a letter to the Doge and the Senate, Contarini actually stresses the preference for English ships for their strength and the quality of both guns and crews, despite the offer of Flemish vessels at a cheaper rate.³ This suggests that between English and foreign vessels of a size the key factor in speed was the difference in the careening, and it goes far towards

1. *Op.cit.*, p.252.

2. See below, pp. 261-2.

3. C.S.P.(Ven.), XV, 1617-19, no.254. Pietro Contarini (Venetian ambassador extraordinary) to Doge and Senate, 2nd Mar. 1616.

explaining why Best's vessels had been outsailed by the Dutch despite their being two of the ten new ships built by Burrell. An age of less than three years and even competent workmanship meant little if they had bottoms fouled by three months marine growth. The Venetians presumably intended to take advantage of sturdy construction while increasing performance by frequent cleaning and the use of tallow. Thus the work of English shipbuilders was perhaps not to be so readily despised if Venice employed their ships by choice, and this when they obviously knew all about lateen-rigged Turkish pirates in the Mediterranean.

In accordance with the accepted recommendations of the 1613 commission, Burrell was to have built six ships of 650 tons burthen (second rank), three ships of 450 tons and one of 350 tons (all third rank); i.e. two ships per year for five years at a rate of £8 per ton for the larger, and £7.10s. per ton for the smaller, although the contracts were drawn up each year.¹ In the event, most of the ships completed approximated only very roughly to the sizes ordered. The largest discrepancy occurred in the first year when the Constant Reformation proved to be 86 tons (burthen) smaller than originally ordered.² This is a considerable fraction of the whole and seems to lend weight to Captain George Weymouth's assertion made nearly twenty years earlier, that with English shipbuilders at least, the proportions were determined as the ship grew, instead of being planned in advance.³ Whatever the reason, the result seems to have been satisfactory enough, for

1. E.g., for the Constant Reformation (2nd), and the Happy Entrance (3rd), S.P.(D.), Jas.I, The other eight ships were the Victory (2nd), Garland (3rd), Swiftsure (2nd), Bonaventure (3rd), St. George (2nd), St. Andrew (2nd), Triumph (2nd), and the Mary Rose (3rd).
2. S.P.(D.), Jas.I, clvii, 54.
3. B.M. Add. MSS. 19889, ff.135-6, "The Jewell of Artes."

the Constant Reformation, mounting 42 guns of the same type and weight as her sisters in the second rank, was still giving good service in 1647.¹ Thus, if Burrell's ships differed somewhat from those planned they at least seem to have been adequate.² The accusation of waste could not be made since the total burthen supplied was only slightly greater than that proposed: 5,647 tons as against 5,600 tons. For once the main difference lay on the credit side, for Burrell's ten ships cost only £48,101, which included £776 for the transport of eight of the vessels to Chatham.³ The estimated cost of £56,200 certainly did not include any transport charges and (by the 1618 estimate) the saving amounted to the cost of two ships of 450 tons burthen.⁴

Oppenheim makes clear the cut-throat nature of seventeenth-century shipbuilding.⁵ The former chief shipwright Phineas Pett was already complaining in 1618 about the elevation of Burrell and Norreys, "my greatest enemies",⁶ so that after his success, Burrell's position vis-à-vis his professional colleagues may well be imagined. The more so since in 1618, the shipwrights testifying before the Commission of Enquiry had set £46,125 as the lowest possible estimate for the ten ships (masts and bulls only); Burrell, as one of the commissioners, asserted that they could be had for £2,800 less.⁷ The commission's plans were then based on this figure, which undoubtedly led to Burrell's special responsibility within the later commission. Few officials in

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1. C.D. Penn, The Navy Under the Early Stuarts (London, 1920), p.291, n.
 2. The commission had the new ships surveyed by members deputed by the Wardens of the Company of Shipwrights. E.g., B.M. Add. MSS. 9301, f.2.
 3. Declared accounts, Pipe Office, 2257-61.
 4. S.P.(D.), Jas.I, ci.37.
 5. Op.cit., pp.203-5, 209.
 6. Autobiography of Phineas Pett, ed. W.G. Perrin (N.R.S. LI, 1913), p.
 7. S.P.(D.), Jas.I, ci.37.

early Stuart times were able to justify themselves so completely.

The most serious criticism of Burrell's ships occurred as a result of the survey made for the Commission of Enquiry appointed in 1626, but it should be remembered that Coke was doing his best to discredit Burrell at that time, and that the survey was carried out by his competitors under the leadership of Phineas Pett. The Victory, Garland, Swiftsure, Bonaventure and Mary Rose, were described as "tender-sided" and "weakly built"; the St. George, St. Andrew and the Triumph were rather grudgingly accounted adequate; the Constant Reformation was also described as "a good ship" except that her gun ports could not be opened in a reasonable gale; the Happy Entrance was at sea at the time of the survey.¹ Against this criticism must be placed the record of these ships, five of which were still afloat in the navy of the Restoration.² In addition there is the fact that all these vessels had been inspected twice by the same men previously, without any serious fault having been reported. First, when the ships had been completed and before they were accepted by the lord admiral, the commissioners requested that the master and wardens of the Company of Shipwrights should appoint suitable shipwrights to survey them and report regarding particularly their proportion, burthen, strength and sufficiency of building.³ Again at the end of the commissioners' first five years, all ten ships were surveyed by a team of eight of the leading shipwrights, the foremost

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1. S.P.(D.), Chas.I, lii, 52. January 1627.
 2. The dates on which these ships finally went out of service are shown in appendix
 3. E.g., Bodleian Rawlinson MSS. A.455, ff.110-1, the Happy Entrance and the Constant Reformation in 1619 by Pett, et al; B.M. Add. MSS. 9301, f.2, the Swiftsure and the Bonaventure, 5th Sept. 1621.

of whom was Phineas Pett. All were pronounced satisfactory, the only comment being that the lower edge of the gun ports in the Constant Reformation, Happy Entrance and Mary Rose, were rather less than the four and a half feet from the water-line, the distance obtaining in all the others.¹ The navy commissioners claimed that their ships could carry out their guns in all fighting weathers, and indeed that they were the first vessels able to do so, with the exception of the old Bonaventure.²

Since Pett became famous as shipbuilder to Charles I, while Burrell remained unknown, and even during his service had to bear constant sniping from Coke, it is pertinent to make some comparison. Pett's fame rests particularly on the Sovereign of the Seas, although in fact she was so top heavy that she was almost unmanageable and useless at sea until she was cut down in 1652. His other great ship, the Prince Royal, built in 1610 at a cost of £20,000, was at sea only once in her first eleven years. At the end of that period it required an estimated £6,000 "to perfect her" for any service, because she had been built of timber that was either green or decayed.³ It is with this that the estimate of repairs to Burrell's ships must be compared: £3,088 for nine ships ranging from three to seven years old and all of which had seen constant service from the date of their launching.⁴

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1. S.P.(D.), Jas.I, clviii, 54. 27th Jan. 1624.
 2. It is impossible to know of course, whether the "reasonable gale" as imagined by the surveyors in 1627, was in fact fighting weather.
 3. Coke MSS. bundle 21. Navy commissioners to Buckingham, 1621. Pett's son, Peter, was one of the shipwrights who made the estimate.
 4. From the time of their building until the 1626 Enquiry, Burrell's ships averaged almost 6 months sea-time per year. The greatest average was that of the Happy Entrance (almost 8 months) the least that of the Victory (3 months). In 16 years the Prince Royal's sea-time totalled barely a year, an average of 23 days per year. She was in fact at sea on only three occasions before 1626.

Shortly after the completion of the shipbuilding programme and the renewal of the commission's patent, Burrell put forward a well thought out plan to maintain the navy at full strength over the next eleven years.¹ The scheme was as well designed as the commissioners' original proposal, which suggests that he had a considerable voice in drawing up that also. There is no record of the proposals having been seriously considered, but even had they been, the events of the next few years must have led to the abandonment of so ambitious a scheme. Three pinnaces were built in 1626, the Henrietta and the Maria of 68 tons each, and the Spy of 20 tons, but there was no attempt to build warships of any size; the only major shipbuilding project during the commissioners' second five years in office was the provision of the ten Whelms in 1627. In view of the subsequent comments on their construction, it is perhaps significant that Burrell took no part in either designing or building them, presumably because Coke's campaign against him was at its height.

With the pirate menace becoming greater as every month passed, the lord admiral sought the opinions of certain members of the new commission of enquiry early in 1627. As a result, Sir Richard Giffard proposed a scheme by which the navy should build a large fleet of small fast ships with sailing qualities comparable with those of the Dunkirkers themselves.² To this novel plan there was considerable opposition from Sir Sackville Trevor and Lord Hervey, whom Buckingham had also consulted.³

As a consequence of this feeling against Giffard's scheme,

1. S.P.(D.), Chas.I, clxi, 63. Mar. 1624.

2. Ibid., liv, 9. 15th Feb. 1627.

3. These proposals are dealt with in some detail below, p.263.

and the lack of funds to implement the plan fully, Buckingham compromised with a pilot scheme to build ten such ships to be called the ten Whelops.¹ These were completed and first used in 1628, with considerable success, according to Sir John Hippisley, the lieutenant of Dover Castle.² Four days earlier Captain William Jewell had written to Nicholas with great enthusiasm for the Whelops. Four of them had chased five sail of Dunkirkers, two of which were taken and a third foundered. He wrote, "tomorrow we will be at sea again for there is very good sport", an attitude not seen in English seamen for the previous thirty years.³ That Giffard had been right was again proved at the same time by the pinnace Spy which, returning alone after an eight-day cruise off Cherbourg met with seven Dunkirkers, and "sailed them out of sight in three hours".⁴ After Buckingham's death the plan was discarded, for according to Oppenheim, only two ships of less than 200 tons were built during the lifetime of Charles I: the Roebuck (90 tons) and the Greyhound (126 tons) both built in 1636.⁵ The reason for the change of plan almost certainly lies in the death of Buckingham, followed by that of Giffard within a few weeks. Without the lord admiral's support, Giffard's ideas would probably have been ignored anyway, but his own death virtually ensured the end of the only plan that might have succeeded against the Dunkirkers.

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1. Doubtless named after the long-serving pinnace Lion's Whelp which was removed from service in 1625, and given to Buckingham for use in an expedition to search for a north-west passage.
 2. S.P.(D.), Chas.I, cxii, 66. Hippisley to Buckingham, 12th Aug. 1628.
 3. Ibid., f.55. This may well have been the action reported by Hippisley, but Jewell's reaction alone is worthy of note.
 4. Ibid., cvii, 21. Captain John Mason to Buckingham, 13th June 1628.
 5. Op.cit., pp.254-55.

The later authorities seem not to have understood the proper purpose of the Whelps, for Oppenheim states that they were used a good deal for winter service, although the very qualities which made them a match for the pirates in speed, plainly militated against their being able to withstand the constant battering of winter gales. Oppenheim himself seems to have missed the point, for he says somewhat disparagingly that "only one of them lived into the days of the Commonwealth".¹ But that meant an age of at least 25 years, although the Dunkirkers only planned to use their vessels "for a season or two". It is possible that a report that they had been built too quickly, "of mean sappy timber" shows why four of the Whelps had been lost to use by 1631.² Indeed, the probability that the allegation was true increases when it is realised that they were built by Pett, Graves, Dearsly and Marsh. However, it is unlikely that poor construction was the sole reason for the short life of the Whelps, which may be attributed largely to misuse. Unfortunately the apparent weakness of these vessels seemed only to confirm the doubts already held about the value of vessels below 350 tons. The principal officers and the admiralty commissioners of the thirties had no faith in small ships, largely because they did not understand their purpose.

As with everything which warranted expenditure of funds, repairs to ships were classed as either ordinary or extraordinary. The former category included all the attention that the passage of time demanded, such as graving, caulking and the replacement of

1. Op.cit., p.256.

2. S.P.(D.), Chas.I, ccclxv, 17. Principal officers to the lords commissioners, 3rd Aug. 1637. The letter enclosed a report from the shipwrights who had last repaired the 5th Whelp.

sails and rigging.¹ Extraordinary repairs were those made necessary by damage at sea, whether from enemy action, the weather, or accident.

The ordinary reparations, as they were termed, were regulated by the commissioners, who kept records of the service of each ship. Vessels were recalled according to a timetable and replacements sent out if necessary. The dockyards involved, but of course chiefly Chatham, also were aware of the schedule, as Downing's correspondence frequently makes clear.

Extraordinary repairs were arranged according to the requirements of the service and the available facilities in dockyard space, stores, labour and money. Ships were always recalled to Chatham or the Thames whenever possible. If a vessel lay in a distant harbour, too seriously damaged to make the journey, a master shipwright was despatched by the commissioners to make an inspection and order the immediate execution of repairs sufficient to allow her to be removed to one of the major naval dockyards. Minor repairs were occasionally carried out at Bristol, particularly for the guard of the coast of Ireland. During the war, many ships underwent minor repairs at Portsmouth because of the pressure on the main yards. Plymouth seems to have been used but little, except on the occasion of fitting out Pennington's squadron in 1626.

The normal procedure for extraordinary repairs was for the

1. Graving, *i.e.*, the removal, by burning and scraping, of the accretions on the ship's bottom, after which it was tarred, did not necessarily require a dry dock. It was frequently done at successive periods of low water after the vessel had been grounded on a suitable spot. Grounding the ship was a skilled operation normally only entrusted to the masters attendant or the most experienced boatswains.

captain to inform the commissioners of the state of his ship. After having ascertained the availability of the necessary facilities, especially if a dry dock was required, they informed the lord admiral and obtained his warrant. Only then did they issue the captain with his orders, at the same time informing the dockyard authority what was to be done. Occasionally the captain also informed the lord admiral, who seems often to have checked with the commissioners concerning their actions. Sometimes the report was made first, or even only, to Buckingham, whose reaction seems to afford concrete evidence of his awareness of the need for a proper administrative machine. For example in 1625, the Garland (Sir Richard Bingley) was damaged in collision with two merchantmen during a gale. On receiving Bingley's report, Buckingham issued detailed orders to the navy commissioners concerning her repair.¹ The significant point is that the orders were given to the commissioners and not directly to the dockyard. That the lord admiral was aware of the need to use the proper channels of communication is made clear by a similar instance in 1627. In this case the Red Lion needed attention and, again through the commissioners, Buckingham ordered that she should be brought to the dry dock at Woolwich. The commissioners informed him however, that the Swiftsure was at that time at Woolwich and suggested that the Red Lion be sent to Deptford.²

There are many examples of the detailed reports sent to the lord admiral, typical of which in its coverage of a wide range of naval business is that of Sir John Coke in 1625.³ It is plain

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1. S.P.(D.), Jas.I, clxxiv, 4. Bingley to Buckingham, 10th Feb. 1625, and ibid., f.17, Buckingham to the navy commissioners, 21st Feb. 1625.
 2. B.M. Add. MSS. 9301, f.17. Navy commissioners to Buckingham, 7th Dec. 1627.
 3. S.P.(D.), Chas.I, v, 77. 25th Aug. 1625.

moreover, that this kind of reference to Buckingham was not confined to Coke, an administrator of considerable ability and integrity in his own right who acted as a self-appointed watchdog for the lord admiral. From him, detailed accounts to Buckingham would be expected, but the practice seems to have been standard. In January 1624, twelve ships being prepared against the possibility of war with Spain,¹ were the subject of a letter from the commissioners to the lord admiral. The six points made illustrate the detail with which they commonly referred matters to him. First, the Prince Royal was to be launched on 27th January. Was she also to be graved before leaving the dock? Second, were the nine ships at Chatham to be graved in turn? Third, should the Bonaventure, Convertine and Mary Rose at Portsmouth also be graved? Fourth, there was but limited time for the appointment of masters and mates who had to receive the victuals aboard and oversee the rigging which had yet to be done. Fifth, the ordinary "presters" would not suffice for this purpose and they must be given additional aid. Sixth, and last—on a different subject—the Antelope had been launched and rigged from Deptford, but her victuals would expire in eight days. Orders were therefore required for her victualling and employment. This letter is the more significant because it is signed by six of the most senior and active commissioners. It certainly could not be said to be from timorous and inexperienced officials seeking confirmation of their decisions.²

As with other aspects of the navy during the ten years under

1. This gives some indication of Buckingham's activities behind the scenes, in the field of diplomacy as well as naval administration. The actual warrant for the preparation of a fleet was not ordered by the king until 18th April. Gardiner, V, 223; S.P.(D.), Jas.I, clxiii, 4.
2. Ibid., clxxxii, 14. 19th Jan. 1624.

discussion, the administration of the dockyards seems to have proceeded smoothly and efficiently enough until the great pressures caused by the demands of wartime and the shortage of money. Even then it was financial difficulty and the consequent shortage of provisions that led to the despatch of ill-equipped vessels rather than a break-down of the administration. The chief complaints before 1625 seem to revolve around technicalities of the regulations rather than the practical results. Indeed, the one may well have affected the other, but in the observations made by Peter Buck, clerk of the cheque at Chatham, there seems to be more concern for his own dignity than for administrative efficiency. He asks whether the masters attendant and master shipwrights should be free of his cheque when they have been absent, and whether cheques he has imposed upon them should be remitted; if so by what warrant? He also asks who should have the trust of choosing the shipkeepers, who should have the deciding voice in accepting or rejecting stores of doubtful quality and if old or "unable" shipkeepers and labourers were taken into work whether it should not be within the power of the clerk of the cheque to discharge them.¹ There is point to some of his questions: those querying the age at which boys, grometts and men should be so rated, and whether some experience at sea should not increase the rates of pay for young men and lengthen the permitted service of the old. None makes any suggestion of serious maladministration.

Another paper, written four months later, does suggest over-administration however, when he complains of a recent order

1. Coke MSS. bundle 130.

requiring each type of payment to be separated each quarter in the accounting. If, for example, the repairs to a ship extended from one quarter into another, as often happened, he would first have to list all the types of workman separately, make up the prick books and from those the several quarter-books each with two additional copies for the commissioners and the treasurer. The whole problem was complicated by the discharge of men before or after the end of the quarter, and he had also to make out separate bills for all provisions, watercarriage, musters etc., for each quarter. In all, he complained, the new order had multiplied his work some five or six times.¹ It is difficult to judge how great was the additional work and to what extent it might in fact be considered a result of over-administration. It does seem however, that Buck was complaining about having to do the job properly, perhaps for the first time in his experience of the post, for since the very basis of all accounting lay in the quarter-books, if any real check were to be kept on expenditure, they had to be accurate.

Later in the same year Coke complained to the lord admiral during the preparations for the Cadiz expedition, but his complaint was less of the administration than of the procedure, or lack of it, observed by captains needing supplies:

It is not surprising that in so great an undertaking, things go wrong, but if the wants are small, the clamour made is prejudicial to the service; if they are great the officers should state their requirements and sign them so that remedy may be had. Verbal complaints are common, but few inform us what or how to reform.²

1. Coke MSS. bundle 58, 31st Mar. 1625.
 2. S.P.(D.), Chas.I, v,77. 25th Aug. 1625.

There is, in fact, remarkably little evidence of poor administration in the dockyards during the war years. That it existed in part at least, can hardly be doubted in view of the immense amount of work undertaken, but like much else in the period it seems to have been considerably exaggerated by historians. Oppenheim frequently implies that the administration had totally broken down but nowhere quotes a specific instance.

In March 1627, Coke wrote a letter of introduction to Sir Sackville Crowe for Sven Andersen, a Dane whom the king of Denmark had requested might be shown the methods used in English dockyards.¹ Oppenheim writes, "Andersen could hardly have been very favourably impressed by all he saw and heard. The dockyard service was as much disorganised as the rest of the administration";² but he gives no evidence of administrative decline, and merely cites some examples of the way in which the shortage of money affected the yards; that men had not been paid, and that ordnance had been sold to pay for recent repairs on the Assurance. The lack of funds was the evil which pervaded all branches of the king's service at this time, and any evidence that may be found to suggest inadequate preparation of ships in the yards, stems directly from it. Many historians quote the document which asserts that in the expedition to Cadiz the St. George was fitted with sails used by the Triumph in 1588, while her shrouds had come from the old Garland. No doubt the sails and shrouds with which she had been rigged had been used before; doubtless too they were old, and the writer felt that there were grounds for complaint; but one only needs to dwell on the allegation

1. B.M. Add. MSS. 9297, f.61. 15th Mar. 1627.
2. Op.cit., p.297.

for a moment to realise that it was surely hyperbolical. It would be remarkable that any discarded cordage could with certainty be said to have come from a particular ship even a year or so after being removed, particularly when so much old cordage was either used in caulking or else sold. The Garland had been disposed of five or six years previously and it is hardly conceivable that the Triumph's sails could have been identified after 36 years.¹

Apart from the difficulty of obtaining stores, the king's financial difficulties increased problems in the dockyards through the employees, for like the seamen they suffered from irregular payment of wages. For example, the men at Chatham petitioned Buckingham in 1627 for their pay, alleging (probably in truth) that they had not received any wages for fifteen months,² and it seems quite possible that they did not receive any substantial amount until mid-1628.³ Scandalous as this may have been, it appears to have affected work in the dockyards far less than might be imagined, for the declared accounts for 1625-27 show that work was completed to the value of £60,000, £50,000 and £30,000, respectively during those three years.⁴

The king's dockyards alone would have been unable to provide the shipping necessary for the expeditions,⁵ and it was to encourage the private building of ships large enough to serve

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1. It is surprising that both Oppenheim p.220, and Gardiner VI, 21, accept this questionable assertion without reservation.
 2. S.P.(D.), Chas.I, lx, 22. 12th Apr. 1627.
 3. Acts of the Privy Council, 1623-29, p.7. 2nd July 1628.
 4. Declared accounts, Pipe Office 2263-5. These figures are necessarily approximations, but each is a conservative estimate based on the appropriate account.
 5. But, of course, by the early seventeenth-century conception of naval action on a large scale, no-one considered that they should.

the king that a former subsidy for this purpose was re-introduced. By the proclamation of April 1626, the king offered to pay 5s. per ton for all ships suitably built of 200 tons (ton and tonnage) or more,¹ and as a result there was a brief boom in private shipbuilding. It did not last long, however, and the rate of building subsided to moderate levels, probably, as Oppenheim says, not merely because of the reaction that was bound to follow, but also because the merchants found that the king expected to make the subsidy payments far in arrears.²

The hiring of merchant ships raised once again a problem which had long vexed all those involved in the building, selling or leasing of merchant ships: the method of calculating tonnage. As far as the crown was concerned the method to be used was settled by an order issued on 26th May 1628,³ after protracted discussions which had lasted nearly two years.⁴ The one sure conclusion that may be drawn from the welter of material is that statements of tonnage are of little value in comparing seventeenth-century vessels with those of the present day; provided the method used was the same in each case however, tonnage figures can prove a useful guide in determining the relative size of ships of the period.

Two classes of naval stores, cordage and timber, were sufficiently important that they should perhaps be specifically mentioned. The oldest cordage works of any size in England had long been at Bridport in Dorset, where they specialised in the manufacture of cables, but with the expansion of shipbuilding

1. Acts of the Privy Council, 1625-26, p.411. 5th Apr. 1626.

2. Op.cit., p.269.

3. S.P.(D.), Chas.I, cv,16.

4. The whole question is quite clearly dealt with by Oppenheim, pp.266-69.

of all kinds in the sixteenth century the demand for cordage soon outstripped the supply available from home sources, and English ships became dependent on the Baltic countries for such stores. There was an attempt to found a ropeworks at Woolwich in 1573,¹ which seems to have come to nothing, but when the experiment was tried again in 1610, it proved more successful. The extensions carried out between 1613 and 1623, have already been mentioned, but domestic production was never able to meet the demand, particularly after 1625. The quality of the cordage seems to have been variable, for although there are certificates attesting to the grade produced in March and October 1621,² in June of the following year, at a meeting of the navy commissioners, Coke and Russell complained of the amount of poor cordage and rotten hemp at Woolwich.³

The scale of operations at Woolwich may be judged from the following figures showing the men employed in 1623. During April and May there were only two spinners, one at 1s.4d. per day (presumably the master) and his son at 1s. per day. These two kept 13-21 labourers busy, whose pay varied from 1s. to 1s.2d. per day. From July to September however, 27-28 spinners were employed, with the same 13-21 labourers. Costs were rising steadily; throughout Buckingham's period as lord admiral, cordage was valued at 30s. per cwt. In 1614, it had been 28s. and in 1633 it was 35s.⁴ One document suggests perhaps that liaison between the ropeyards and the administration was not what

1. Oppenheim, p.150.

2. S.P.(D.), Jas.I, cxx, 1, and cxxiii, 14. There are six signatures on each certificate, among them those of at least two masters attendant. The certificate for 1st March has the comment "as good as any that came from Poland".

3. Bodleian Rawlinson MSS. A 455, f.133. 6th June 1622.

4. Declared accounts, Pipe Office 2250, 2272.

it might have been, for despite the claims of great shortage in stores of all kinds during 1627, a survey of cordage at Deptford in that year shows a total of 473 cables weighing 334 tons (value at 30s. per cwt, £10,020), which looks suspiciously like an unnecessary store of rope of a size rarely used being built up at the expense of other sizes more commonly and urgently needed.

As far as timber is concerned in this period there is not a great deal to be said. The Baltic trade provided much of the less vital spruce and fir planking (Norway deals are a common item in the accounts), but the important hardwood timber was still found in England.

Unless it came from crown woodlands, the timber was purchased through purveyors such as Christian Coale of Sussex, William Golston or Thomas Bostock. Unfortunately the most valuable and vital timbers in a ship were the most difficult to produce. For example the hardwood knees which supported the crossmembers to take the deck, were formed from the forks of large oak-tree branches. Their supply was affected not only by the slow rate of growth of the oak, but also by the fact that trees had to be surveyed and selected at the appropriate time, and the branches bound in order to produce the right shape.¹

There was some controversy concerning the best time to cut timber: those who argued that timber felled in winter was less liable to decay competed with those who advocated cutting in the spring, when the newly rising sap permitted the easy removal of the bark, a valuable material used in the tanning of leather.²

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1. This was frequently one of the duties of the assistant master shipwright.
 2. R.G. Albion, Forests and Sea Power (Cambridge, Mass. 1926), p.101.

The costs of transportation were high, frequently amounting to as much or more than the value of the timber, but this uneconomic practice had to be accepted if the particular timber involved was vital. Where possible timber was moved by water, although land-carriage for at least part of the distance was usually unavoidable. A wet summer could raise many problems for the purveyors when woodland tracks and frequently the roads themselves became all but impassable. It was this sort of circumstance that led the navy commissioners to appeal to Cranfield for assistance in 1622. In order to preserve roads, a proclamation of 6th August had forbidden the use of four-wheeled waggons, carts carrying more than a one-ton load or carts requiring the use of more than four horses. The commissioners protested that they had 2,000 loads of timber to be moved and since much of it could not be reduced in size without danger to the service, they sought a special dispensation from the privy council.¹

Both James I and his son used woodland lots as assets that could conveniently be turned into hard cash in times when money was short. Albion suggests that a timber problem existed for the navy long before the accession of Charles I,² an assertion denied by Hammersley.³ It certainly seems that as long as shipbuilding continued at the modest rate achieved in the time of James I and even the reign of Charles I, the shortage of timber for naval purposes was unlikely to have become acute. It was the unprecedented scale of ship construction during the eleven years of the Commonwealth that really brought the problem to the fore.⁴

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1. Bodleian Rawlinson MSS. A 455, f.132. 17th Sept. 1622.
 2. Op.cit., pp.121-30.
 3. G. Hammersley, "Crown Woods and their Exploitation in the Sixteenth and Seventeenth Centuries", Bulletin of I.H.R., xxx (1957), p.153 and n.3.
 4. Oppenheim, pp.330-37 lists 98 vessels of all kinds built 1649-59.

During the administration of Buckingham and the commissioners, as in the preceding years, there was a great deal of waste caused by indiscriminate felling, as a result of which good timber was allowed to rot on the ground for want of being taken up and worked at the sawmill. There was some attempt to control cutting, and indeed the possible consequences were even related as a danger to the navy,¹ but clearly there was no overall plan for growth and use of timber for maritime purposes, and it is no smear upon the character of the administration of the day to say that they obviously saw no need of such a plan.

In common with the other branches of the service then, during the administration by the Duke of Buckingham and the navy commissioners the navy's dockyards were expanded and improved. In this expansion perhaps the greatest step was in the extended use of Chatham, since it did much to free the navy from the narrow confines of the Thames at Deptford and Woolwich. The evidence suggests that the lord admiral may even have planned the move further, for although his original conception of the navy's base did not seriously include Portsmouth, once it had proved its value during 1625-26, as a fleet rendezvous, he altered his opinion. In 1627, he had estimates prepared for the construction of a double dock there, but as with other imaginative plans the idea was shelved following his death in 1628.² The improvements included not merely the physical additions made, but also the more economical use of the available facilities. The administration

1. Acts of the Privy Council, 1621-23, p.22. Privy council to Sheriff of Southamptonshire (Hampshire), 20th July 1621. However, this seems to be a case of concern over easily accessible timber (in Havant thicket) rather than timber generally.
2. B.M. Add. MSS. 9297, f.75. Giffard had been appointed principal assistant surveyor and director for making the new dock. Ibid., 37817, f.91. 17th May 1627.

was reasonably efficient, and corruption, if not eliminated was kept severely in check. The influence of the administration of 1618-28 in the dockyards was clearly shown by Edisbury in 1629, less than a year after the loss of both the lord admiral and the commissioner. Referring to dockyard employees, he wrote:

every one almost being director of his own work for want of some able understanding man to regulate the inferiors as it was while the Commissioners had the government.¹

Similarly Monson believed that the change from commissioners to principal officers had resulted in a lowering of standards.

Referring, in the early thirties to the practice of one of the three officers residing at Chatham by turns quarterly (filling the position formerly occupied by Downing as assistant commissioner), he wrote, "the neglecting whereof doth breed his majesty no small dammage".²

In shipbuilding there were no technical advances which actually took shape between 1618 and 1628. However, in 1625, a panel of shipwrights produced a certificate showing the ideal proportions for a man-of-war for use in the Narrow Seas. The most important detail listed is that the length of the keel should be three and a quarter times the breadth,³ compared with the traditional proportion of two and a half times. This statement is most significant in view of the proportions of the ships launched during the later part of the civil war and which became the pattern for later development.⁴ If Burrell's ships did not have the advantage of this improvement they were however, built to a

1. S.P.(D.), Chas.I, cxliii, 37. Edisbury to lords commissioners of the admiralty, 30th May 1629.
2. Naval Tracts, III, 402.
3. S.P.(D.), Chas.I, xi, 62-3. 13th Dec. 1625.
4. Oppenheim, p.257.

price and approximately according to the schedule laid down; it is sufficient testimonial to his ability that five of them were still afloat forty years later.¹

1. For the dates of the final disposal of Burrell's ships see appendix III.

CHAPTER VIII

Victualling and Ordnance

For the whole period under discussion, the responsibility for the navy's victualling arrangements lay in the hands of Sir Allen Apsley, who became joint surveyor-general of marine victuals with Sir Marmaduke Darell, on the death of Sir Thomas Bludder in 1612.¹ Thereafter, until his death in 1630, Apsley was the victualler for all practical purposes. Darell had already retired from playing an active part before Bludder's death. After his own death in 1622 he was succeeded by his son Sir Sampson Darell, but the bulk of the work was still undertaken by Apsley, although the younger Darell's name appears occasionally in the victualling arrangements. The new victuallers seem to have been well-connected at court for the patent issued in 1612 had a significant difference from that previously held by Darell and Bludder. Whereas in the past the various storehouses and buildings connected with victualling the navy had remained in possession of the crown and only lent at pleasure, henceforth they were to be attached to the office. Their extent was considerable and the perquisites arising out of them no doubt totalled rather more per year than the surveyor's annual fee of £50. At Tower Hill there were storehouses, bakehouses, granaries, cooperhouses, slaughterhouses and cutting houses, as well as chambers for the lodging of the officers and their deputies, complete with yards and gardens.² In East Smithfield there was a meadow, known as Well Close, which was used for grazing and settling the oxen before they were slaughtered, and

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1. Patent roll, P.R.O. C/66/1906. 31st Jan. 1612; S.P.(D.), Eliz., cccxxvii, 42 (copy).
 2. It should be remembered that Apsley already had a house within the walls of the Tower itself by virtue of his office of lieutenant.

at Rochester there was the long storehouse. At Dover there was a storehouse called Masondieu,¹ with bakehouse, mills, granary and other land also in Kent, while at Portsmouth there were similar buildings and facilities as well as a brewhouse. The most remarkable feature of the patent was that all of these properties were placed in the hands of Darell and Apsley "for their natural life or the life of the longest liver of them, without rent or account or anything yielded or done save the execution of the office of surveyor-general of marine victuals", although the annual value in rent of the land and premises had not be ascertained. The victualler was also allowed a clerk at 8d. per day. This patent was renewed in its entirety when Sir Sampson Darell succeeded his father in 1622.²

The title surveyor-general of marine victuals is rather misleading, implying as it does a sort of civil servant responsible for organisation; in fact the term chief contractor more aptly describes the post held by Apsley. The surveyor-general held a monopoly of all victualling arrangements for the king's service; as such he was no civil servant, merely a merchant with a valuable contract. The role of the surveyor-general approached the modern idea of such a post only when the victualling requirements outstripped his ability to cope directly with them himself and he was forced to deal with

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1. The religious foundation of Maison Dieu at Dover was closed as a hospital in 1544 and converted to a victualling yard.
 2. Copies are to be found at the front of all victualling declared accounts, e.g., Audit Office, 1798/370 (1627). For the victualling accounts the paper copies in the audit office have been used because they have survived in better condition than the original parchment accounts of the Pipe Office.

sub-contractors.¹

A proposal from the Commission of Enquiry in 1616, to reduce the daily victualling rate from 7½d. to 6½d. in harbour and 8d. to 7d. at sea because of good harvests and the current merchant rates, seems not to have been carried out,² for the harbour rate remained at 7½d. during 1619,³ and the sea rate stood at 8d. in 1621.⁴ There are various examples of the ration allowance for the seaman of this period, but they differ only in detail. In 1625, lists show that he was entitled to 1 lb. biscuit and a gallon of beer per day; 2 lbs. beef and 1 lb. pork, each twice weekly as well as a pint of pease twice weekly. For 2½ days a week he was allowed ⅓ of a cod, ⅓ ling and one Newfoundland fish (colloquially termed "poor Johns"), as well as ⅓ lb. butter and ¼ lb. of cheese.⁵ Nathaniel Butler expressed a contemporary view of the seamen's diet, believing that English seamen suffered so much fever because of eating salt beef and pork. Seamen of other nations were not so afflicted and it seemed significant to him that the Spanish and Italian sailors diet was based on rice, oatmeal, figs and olives; the French and the Dutch similarly ate less

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1. Oppenheim's views on this point tend to be conflicting. Although he refers to Sir Allen Apsley as "the chief victualling contractor" (p.223), he seems to be unaware of the surveyor-general's relationship as a merchant vis-à-vis the crown in this office. He says, "As the fee still remained at its original £50 a year, the profit came out of the provisions and was unwillingly provided by the men." (p.189).
 2. S.P.(D.), Jas.I, ci, 23.
 3. B.M. Add. MSS. 15750, f.13.
 4. S.P.(D.), Jas.I, cxxii, 39. Navy commissioners' estimate, 24th July 1621.
 5. Ibid., Chas.I, ii, 5. 1st June 1625. Michael Lewis, The Navy of Britain (London, 1948), p.356, suggests that this was the allowance established by Col. Pride in 1650, which formed the basis of victualling policy for the succeeding 150 years. In fact this scale was already firmly established by 1625.

fish and flesh, and more beans, peas, flour, butter and cheese. He was convinced however, that the English seaman would not change his habits and that any attempt to do so would cause as many runaways as anything else. Indeed his "Admiral" says,

Our common seamen are so besotted in their beef and pork that they had rather adventure on all the calentures (fevers) and scurvies in the world than to be weaned from their customary diet.¹

Unfortunately for the seaman, there were far too many hands between this not unreasonable allotment and himself, and by the time it reached him it had often been drastically pared to provide profit for others, chief among whom was usually the purser, who not infrequently connived with the captain in order to benefit himself at the expense of the seamen. Buckingham's administration seems to have checked this particular abuse, at least until the years of the large-scale expeditions, and even then the pursers were not always successful in their dealings.

This was probably the greatest abuse in victualling under Apsley until the Enquiry of 1618. As the accounts show, costs were high, partly because of the number of dead pays the navy carried, but also because extra victuals were often demanded and received, before they were due, without any real check or enquiry into the circumstances. There is no way of gauging the quality of Apsley's victuals, except that there seem to have been no complaints of the standard of victualling except when the amounts required forced him to let out contracts to others; even during the war years when complaints abounded, few seem traceable to Apsley's provisions. By far the greatest number refer to victuals originating at Plymouth, where Sir James Bagg had too large a hand,

1. Boteler's Dialogues, p.65.

for the nation's good, in all matters concerning the expenditure of the crown's money. Although negative in nature, there is further evidence of Apsley's integrity in that the report of the Commission of Enquiry in 1618 makes no reference to poor victualling standards. It is true that they need not have made any enquiry into victualling arrangements, but since the commissioners were very conscious of the report of the 1608 Enquiry, made by Sir Robert Cotton and others, which had charged Apsley's predecessors with fraudulent dealing to the extent of £4,000 in four years, it is unlikely that Apsley and Darell escaped without at least a cursory investigation.

The victualler's accounts differ from those of the navy treasurer in that no distinction was made between ordinary and extraordinary services. He normally received a fixed sum from the exchequer each month, which was in fact the ordinary assignment and which had been estimated at the beginning of the year. For extraordinary services he received money from the tellers of exchequer as it became available; in the accounts, payment made by the victualler for both types of service are included under a single quarterly heading. As with most declared accounts they were supposed to be rendered annually within six months of the end of the year accountable. They were also to be signed by four of the navy commissioners.

For the six years from 1613 to 1618, the average annual expenditure was approximately £14,100, the only extensive extraordinary charge during this period occurring in 1613, when Princess Elizabeth and the Elector Palatine were escorted to Flushing. In absolute terms, this average increased during Buckingham's six peacetime years with the navy, for from 1619 to

1624, the annual expenditure was £15,200. Relatively however, those years saw a considerable economy. Victualling costs were necessarily tied to the manning of ships, and were therefore most affected by the amount of sea-service demanded. Chiefly because of the expedition to Algiers and the despatch of a large fleet to bring the Prince of Wales and the duke home from Spain in 1623, the sea-service for 1619-24 increased by 47% over the previous six years from £44,768 to £66,016.¹ The victualling expenditure however, increased by less than 8%, i.e. from £84,854 to £91,421.² About four-fifths of this economy had been achieved by the commissioners' elimination of dead pays,³ but the remainder seems to have resulted from a much closer supervision of pursers and others who handled the provisions.

The great increase of sea-service during the war rendered close supervision of cooks and pursers impracticable if not impossible. Inevitably the abuses recurred and for this reason, on the expedition to Rhé, John Wriothsesley, a former clerk to the commissioners, was appointed muster-master to keep a careful check on all manning lists. Certainly the lord admiral's reactions to reports of suspected embezzlement were not less than they should have been. In a letter dated 23rd March 1626, Sir Henry Palmer, admiral of the Narrow Seas, reported that his squadron was seriously short of victuals. Buckingham sent for Apsley, who assured him that with the exception of three ships, Palmer's squadron had been victualled until 24th May. On 26th March, the lord admiral ordered Palmer to make strict enquiries, serving with exemplary punishment anyone found guilty of embezzlement, for

1. Declared accounts, Pipe Office 2250-62.
 2. Ibid., Audit Office 1795/354-1797/365.
 3. See above p. 53.

the provisions had been signed for according to the dates given by Apsley. Consequently either the report of fresh needs was counterfeit, or else stores had been illegally sold for private gain.¹ The real problem, however, lay in controlling the quality of the victuals.

The greatest proportion of the victualling was still carried out from London, but in each successive year large quantities of provisions had to be supplied from Portsmouth and, to an even greater extent, from Plymouth. For these supplies, particularly those from the latter port, Apsley had to rely entirely on the honesty of his agents and the local officials. At Plymouth the agent was William Buxton and the leading local official Sir James Bagg.² Even before the fleet sailed from Plymouth for Cadiz in 1625, victuals were found to be rotten and Apsley had to beg a further £3,000 to replace them. The privy council ordered that the payment should be made, demanding also that the navy commissioners enquire into the reason for the decayed victuals and punish those at fault.³ There is no evidence of the commissioners' investigation although there is no reason to suppose that the privy council's order would have been ignored. If, as is probable, the unserviceable victuals were supplied from Plymouth, in Bagg they were confronted with a past master of the art of dissembling, and one against whom it would have doubtless been difficult, if not impossible, to find proof. In days when land travel was slow and tedious, and sea

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1. S.P.(D.), Chas.I, xxiii, 67.
 2. Bagg did not become vice-admiral of Devon until Sir John Eliot's dismissal in October 1626. Although Bagg held the post jointly with Sir John Drake, there seems little doubt that he was the dominant figure.
 3. S.P.(D.), Chas.I, xxxvii, 13. Warrant 30th Aug. 1625; and ibid., v, 33. 26th Aug. 1625.

passages were entirely dependent upon favourable winds, Bagg had a decided advantage in operating so far from the seat of authority.

Purveyors in London found it less easy to supply faulty provisions successfully. In June of the same year a certificate of inspection of beef provided at Clerkenwell and Tower Hill described it as poor and lean "which being butt one or two months in salt ther wilbe little or no substance left in itt".¹ The purveyor, one Palmer, was to be called before the commissioners to explain the abuse.

In 1628, victuals from Plymouth were again unsatisfactory, and Coke, writing to Buckingham from Portsmouth on 11th June, referred to great complaints made against them, even those supposed to be fresh.² Of the 17 ships at Portsmouth, 15 had to be supplied anew with beer, and ten with beef, while at least half the fleet had to be re-supplied with pork, fish, butter and cheese.³

Contractors guilty of supplying faulty provisions had to replace them at their own expense, failure to do so causing them to answer for their sins in Star Chamber. But preparing provisions took time, and even if the faulty victuals were replaced immediately the order was received, the delay might well have jeopardised the success of the expedition, whether it was a major military affair or a naval sweep to encounter reported pirates. Probably the greatest disadvantage in the system was the multiplicity of contractors, about whom unfortunately, there

1. Coke MSS. bundle 138.
2. S.P.(D.), Chas.I, cvii, 3.
3. Coke MSS. bundle 130. Certificate signed by Henry Holt, deputy victualler at Portsmouth, 9th Aug. 1628.

is scant information. Only a little more is known about the brewers, the one list among Sir John Coke's papers showing no fewer than fourteen.¹ Of these four were reprov'd for providing worthless beer in 1626, and they were ordered to supply in its stead an equivalent value in wine (there being no time to brew beer), plus an allowance for the damage to the casks.² In this instance as in others there is the threat of arraignment in Star Chamber, but this did not solve the problem. The fact is that the navy was entirely dependent on the brewers and purveyors.

Not all the complaints about the victualling were genuine. On 25th June 1627, Coke wrote to Buckingham that the beer sent to the Garland had been refused as stinking, but on examination it had been found to be good and wholesome, much better than that often on the table of the lord admiral himself.³ Presumably the only sure way to test beer was by tasting it. If however, men presumed to judge the beer's quality by its appearance the comments of Nathaniel Knott seem pertinent.⁴ Apparently some brewers had developed the art of sophisticating beer with broom instead of hops, ashes instead of malt, and sea water, which "makes it seem praiseworthy when fresh, but become worse than stinking water within a month". No names are mentioned, but Knott asserts that some places were better known for this practice than others.⁵

A major problem in keeping beer drinkable was the provision of sufficient casks that were either new or clean, and which were

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1. Coke MSS. bundle 130.
 2. Ibid., bundle 138, 18th Aug. 1626.
 3. S.P.(D.), Chas.I, cviii, 18. The rather fulsome comment about the lord admiral's table seems to taint an otherwise credible, if indignant, defence of the victualler.
 4. Ibid., cclxxix, 106, ff.12v-13. "Advice of a Seaman", written in 1634, but obviously dealing with the wartime period.
 5. No reference is made to the taste of this concoction when fresh, although it appears unlikely that the taste of ashes could have been disguised; the implication seems to be that some beer was indeed accepted on appearance only.

suitably made to withstand the battering they were likely to receive. New casks were preferred of course, but those used before could be satisfactory, provided they were still strong, tight, and had been carefully cleaned. Most valuable were the casks that were bound with iron, for they would remain tight longest. In theory they should have been filled with the best victuals for they would be the last to be broached. Thus in 1625, Sir Francis Steward of the Lion referred to them in a letter to the privy council, "I being then come from our Iron bound Casks, the last refuge in a long voiage".¹ Nathaniel Knott recommended that at least the lower two tiers of casks should be "iron hooped" as the wooden hoops rotted and soon gave way under the strains imposed by constant movement of the deck beneath them.²

There rarely seemed to be a sufficient supply of casks even in peacetime, as the documents show. For example, in 1619, a proclamation was issued prohibiting innkeepers, cooks, chandlers, victuallers and others from drawing off their beer into casks without special licence, for fear that there might be a shortage when the navy required them.³ During the preparation for the journey to bring home Charles and Buckingham in 1623, Cranfield urged on the navy commissioners the need for care to provide good casks in time, for if they relied upon the victualler at short notice they would receive only those that were old and unwholesome.⁴ He must also have impressed the privy council, for a month later an order was sent to the master, wardens, and assistants of the

1. S.P.(D.), Chas.I, v, 49. 16th Aug. 1625.

2. Op.cit., f.18.

3. S.P.(D.), Jas.I, cxxi, 67. 9th Dec. 1619. One reason why such people might be tempted to use them for decanting beer, particularly if it was for sale, was that the beer was made more lively in the process.

4. Sackville-Knole MSS. 780. 23rd Jan. 1623.

Company of Vintners and Coopers to provide 1,000 tons of good cask (used no more than once) at fair prices. No vintner might conceal his casks or sell to any other until the king's service had been furnished, on pain of punishment.¹ By November 1625, the shortage had become so acute that an order was made prohibiting the export of pipestaves and other timber used in making casks.²

The question of a "fair price" was always raised when provisions were being bought for the king's service, and there was usually a need for it to be so specified in the order, for no sooner was it known that tenders were for supplies for the crown than the price increased enormously. When William Buxton, one of Apsley's agents, went to buy cider in the Vale of Evesham he met profiteering of the most blatant kind. He had already purchased a quantity, and in arranging to buy more displayed his commission, as he was bound to do. When they realised that their customer was the crown, the vendors immediately raised the price of the purchase being negotiated, and because the term cider was not specifically used in the commission, Buxton was prevented from removing the purchases already made. Having been notified of this, the privy council ordered the deputy lieutenants of Gloucestershire and Worcestershire to give all necessary aid to Buxton in carrying away the provisions already bought and in purchasing any further requirements necessary at proper prices. In addition they were to examine and punish those parties responsible for impeding his majesty's service.³

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1. Acts of the Privy Council, 1621-23, p.429. 28th Feb. 1623.
 2. Ibid., 1625-26, pp.234-5. Privy council to the lord deputy and council of Ireland, 14th Nov. 1625.
 3. Ibid., pp.25-6. 31st Mar. 1625.

From 1619 to 1624, the average annual expenditure on victualling amounted to £15,237, but during the war years 1625-28 this annual average rocketed to £104,820.¹ As might be expected, the most expensive year was 1627, £151,091 because of the Rhé expedition.² The next most costly year was 1625, £126,290 in the year of the débâcle at Cadiz. The years 1626 and 1628 brought only moderate expense by comparison, £69,436 and £72,465 respectively, largely because the expeditions in those years proved abortive. Despite the navy's having the smallest expenditure in wartime for victualling that year (or perhaps because no more money was available--the real reason is not clear), 1626 saw the greatest number of complaints concerning the paucity of victuals.³ This is supported by the fact that discontent reached such levels in the last months of the year that riots and strikes frequently occurred.⁴ Perhaps no report presents a clearer picture of the straits to which some ships were reduced than that of Richard Skipwith of the Esperance, presumably made to Nicholas. Adverse winds kept the ship in Plymouth, she was leaking, and had no bread, butter, cheese or beef; and with no money, there was no relief forthcoming at that port. It is ironic that the captain of a ship with such a name should be in despair to the extent that he could see no alternative, if assistance was not soon forthcoming, but to "discharge oure men and run oure ship ashore".⁵

Apsley was continually pressing the privy council, the

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1. Declared accounts, Audit Office 1797/365-1798/374.
 2. The amounts shown in the declared accounts for the war years include huge sums for victualling soldiers. These are so often inextricably bound with navy victualling that no attempt has been made to calculate the cost of the latter separately.
 3. They seem even more numerous than in 1625, when most of the complaints were directed at the quality of the victuals.
 4. See above, pp. 104-5.
 5. S.F.(D.), Chas.I, x, 39. 27th Nov. 1626.

lord treasurer and Buckingham to provide him with the funds necessary to provide all that was demanded of him. Their respective reactions invite comparison. The lord admiral for example, is seen to help where and when he can—sometimes with the cargo of proceeds of a prize vessel at his disposal, once with a contribution of £30,000.¹ On 28th March 1628, the privy council ordered Sir John Hippisley to release and make available for the victualler any provisions in the prize ships held at Dover, that would be suitable for victualling his majesty's ships.² Later in the same year in response to a certificate from Apsley showing the needs for the proposed expedition to La Rochelle, on 10th July the privy council ordered that Apsley should be paid £6,000 immediately and the remaining £12,288 should be assigned to him from the first subsidy.³ A month later the promised money had still not been paid by Weston.⁴ The first part of the £6,000 ordered "immediately" was not paid for a further two weeks, and then it was no more than £1,200, with promises of the remainder.⁵

Of the three sources of aid to Apsley, Buckingham may be seen as eager to help, although he certainly had an advantage in that he had sources of income unavailable to Weston or the privy council. The council too seems to have been anxious to help when it could. It may be argued that the council had merely to demand money, not to find it; but since Weston was a member, and the

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1. Declared accounts, Audit Office 1797/365. The victualling account for 1625 shows that the king's free gift to Buckingham, £30,000 in January of that year, was paid via the navy treasurer to Sir Allen Apsley on 7th March 1625. Apsley was then preparing for the Cadiz expedition.
 2. Acts of the Privy Council, 1627, pp.172-3. Hippisley was the lieutenant of Dover Castle.
 3. Ibid., 1628-29, p.23.
 4. S.P.(D.), Chas.I, cxii, 45. Apsley to Nicholas, 7th Aug. 1628.
 5. Coke MSS. bundle 130. A memorandum concerning the report from Apsley's agent at Portsmouth, John Alcock. 20th Aug. 1627.

privy council had already lived with this shortage of money for three years, it is unlikely that an order for payment would have been given if the lord treasurer had not signified his ability to meet it. As for Weston, one cannot help but wonder if he was dragging his feet over expenditure on a policy which he had reluctantly accepted, but to which he was known to have originally objected.¹

Two orders shed light on the attitudes adopted by the privy council. The first demonstrates its attention to detail. Having received an estimate from Apsley of £12,615.10s., for victualling 4,500 seamen for 70 days, the lord admiral suggested that he should receive £6,000, plus provisions from Plymouth. The council however, insisted that the £6,000 must be on account, i.e. related in particular to the estimate so that the service would stand in credit with Apsley if the provisions at Plymouth proved to be worth more than £6,615.10s.² The second order in June 1628, shows the council's endeavours to have been just, for it instructs the principal officers (restored four months previously) to allow the accounts of pursers whose victuals had expired before the due date because of prisoners and refugees aboard the ships returned from Rhé in November 1627.³

In 1618, the commissioners had recommended a reduction in the victualling rate. It was never introduced, but the commissioners might have been excused if the prospect of mounting great expeditions under the existing financial handicap had led them to consider the possibility once again. In fact there seems

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1. This possibility would need an enormous amount of research in exchequer records before it could be proved.
 2. Acts of the Privy Council, 1627, p.413. 11th July 1627.
 3. Ibid., 1627-28, p.495. 16th June 1628.

to be no evidence that any economy was sought by this means.¹ Circumstances forced Wimbledon to reduce the rate on the Cadiz expedition by ordering that five men should share the victuals for four, when only a day out from England.² The change made the rate approximately 6 2/5d. per day for each man, but although this was 1½d. a day less than the standard rate, it was certainly no worse than that of 5½d. per day per man, under which Effingham's fleet sailed to meet the Armada, even allowing for the rise in prices during the intervening years.

Far from officially reducing the victualling rate however, the tendency seems to have been towards an increase. In 1626, an estimate to revictual the Red Lion for five months allows £1,250 for 250 men, a daily rate of 8½d. per man.³ Eight months later, at a meeting of the privy council, Buckingham referred to an estimate for 4,500 seamen for 70 days amounting to £12,615, slightly more than 9½d. per day.⁴ However, since both these instances occur in estimates, while the declared accounts show the victualling rate as 7½d. in harbour and 8d. at sea, presumably no change was in fact made.

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1. There are documents which deal with estimates made on the basis of 6d. and 7d. a man per day, e.g. S.P.(D.), Chas.I, v, 120; ibid., lxi, 15, but these are almost certainly concerned with the army, whose daily victualling rate was indeed lower than that of the navy.
 2. His reason is not clear. It may have been an appreciation of the poor quality of the victuals, although this is rather doubtful. It may even have been that he was merely being over-cautious and felt that if a reduction had to be made, the men would be in a better physical state to meet it at the beginning of the expedition than later; it might perhaps be asking too much to expect that Wimbledon would appreciate the psychological danger of so early a reduction. Probably the reason was the most simple one; that the fleet was under-victualled because it had taken so long to assemble and sail that sea-victuals had been in use long before the departure.
 3. B.M. Add. MSS. 9301, f.14. Navy commissioners to Buckingham, 17th Nov. 1626.
 4. Acts of the Privy Council, 1627, p.413. 7th Nov. 1627.

Of the large number of men in the history of the navy who have made fortunes from victualling, it seems that Apsley was not among them, for when he died in 1630, the crown was several thousand pounds in his debt. It is impossible to judge whether he profited during the chaotic years 1612-13, but the probability is that he took advantage of the lack of administration as did most others. His accounts for 1612-15 were declared in 1618, but like Mansell the navy treasurer, for the years 1616 onward he could only offer certified abstracts to the lord treasurer, and even these were not presented (for 1616-20) until 4th October 1621.¹ By the following year Cranfield was obviously becoming impatient and withheld the final payment on a victualling estimate. Apsley explained the cause of the delay to Buckingham, who requested that the outstanding £4,902 be paid forthwith.² Three months later yet another demand for Apsley's accounts, this time to the auditors of the prest, elicited a reply from Francis Gofton. The accounts were five years in arrears because of petitions that had not yet been given a ruling. The navy commissioners had demanded in vain that the accounts should be produced to 31st December 1621, the end of the previous year, at which date Apsley had been in debt to the crown for £3,567. Gofton ended by pointing out that it had been certified to the king's remembrancer for prayers to go forth against Apsley, which was the extent to which the auditors could proceed.³

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1. Sackville-Knole MSS. 6738. Sir Marmaduke Darell was co-equal with Apsley as surveyor-general of marine victuals, but Apsley submitted the accounts; the Darells played so small a part during Apsley's tenure of office that they may be ignored.
 2. *Ibid.*, 182. Buckingham to Cranfield, 2nd June 1622.
 3. *Ibid.*, 774. 13th Sept. 1622.

The accounts in question were finally declared on 18th December 1624, and those for the years 1621-24 were declared in 1627. From 1625 until his death in 1630 however, Apsley's personal finances became almost inextricably involved with the victualling accounts, forced as he often was to advance large sums of his own money in order to meet the growing demands of the king's service. By the end of 1627, the crown owed Apsley £41,276, in part payment of which he petitioned for, and was granted, land to the value of £20,000 at 23 years purchase, the same terms that had been granted to the City.¹ The fleets prepared during 1628, however, once more increased the debt to Apsley, and a certificate dated 16th October 1628, showed him in credit with the crown to the sum of £38,935.²

Although the lord admiral's influence may be discerned in the improvements of several other aspects of naval administration and the life of the seamen, there is unfortunately little to show that he made any real effort to improve the standard of victualling. He received reports on the state of the preparations, and he frequently endeavoured to speed them. Similarly on more than one occasion he advanced money of his own in order that victuals might be supplied, but there is nothing to suggest that he concerned himself with the quality of the provisions. They were not, of course, directly his responsibility, but that would hardly have precluded him from taking an interest, since it affected the navy so greatly. There is no evidence that he was indifferent to

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1. Acts of the Privy Council, 1627-28, p.267. 6th Feb. 1628; ibid., 1628-29, p.15. 7th July 1628. The grantee was allowed land to the annual rental value of the gross sum granted, divided by the number of years purchase. Thus Apsley was entitled to choose land with an annual value of £714.5s.8¹/₂d.
 2. S.P.(D.), Chas.I, Lxxx, 63.

the seamen's plight; such an explanation is perhaps just too facile. It may be that he decided that under the circumstances, Apsley was doing as well as he could. The lack of money was no fault of the surveyor, and in any case the lord admiral did all he could in that respect; but as has been said, the navy was largely in the hands of the brewers and purveyors. Buckingham, whose astuteness has never been seriously questioned, may well have realised the position; further, he may have appreciated the fact that apart from the dubious encouragement to honesty that prompt settlement of bills provided, there was no solution.¹ Indeed, Pepys, for all his expertise in administration, could produce no permanent solution sixty years later, and victualling remained the bane of naval administration until well into the nineteenth century.²

The relationship between the ordnance office and the navy was rather more difficult than that between the navy and the victualler. Although, in effect, the ordnance office acted as a contractor to the navy, supplying guns and all ordnance stores, it was an entirely separate department of the king's service. As a consequence there seems always to be present, in any negotiation or transaction between the two, an air of suspicion of each other's motives and a jealous guarding of prerogative. Part of the problem occurred because although the ordnance remained the responsibility of the ordnance office, it was so vital to the interest of the navy that the administration was bound to be concerned about

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1. I.e., according to seventeenth-century thought and practice.
 2. There were many attempts to solve the victualling problem but any success before the nineteenth century was short-lived. During the Commonwealth period Pride and Alderne introduced apparently successful reforms, but their system too was eventually beaten by the task of preserving victuals and controlling fraudulent contractors.

its supply and replacement. The situation was further complicated by the fact that the gunners responsible for the ordnance stores were appointed and paid by the navy. The possibility of friction was not lessened by the great power of the lord admiral, whoever held that office, but it was most unfortunate that by the time the enquiry into the office of ordnance was held, officials who had proved the most efficient team for such investigations were already known as the navy commissioners.¹ However, despite some signs of departmental suspicion the system worked well enough.

The organisation of the ordnance office was not unlike that of the navy; it had a master, a lieutenant, and a surveyor, supported, of course, by various administrative clerks and subordinate officers.²

Of the 52 officers of ordnance, 13 received fees from the exchequer and 23 were paid by the ordnance office, while eleven were fortunate enough to receive fees or wages from both. One office with no naval parallel was that of the master gunner of England. For the whole of the period under discussion it was held by John Reynolds, who received £36.10s. p.a. from the exchequer, £70 p.a. from the ordnance office and an allowance of £14 p.a. travelling charges. In addition he also held the post

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1. Although the members of the board of enquiry into the administration of the ordnance office were named as the navy commissioners, their appointment and their current function seems to have been coincidental. It may well be that the situation was eased when Sir William Heydon was appointed a navy commissioner in 1625.
 2. During the period under discussion, the master was Lord Carew, created Earl of Totnes after the coronation of Charles I in 1625; the lieutenant was Sir Richard Morrison, succeeded by Sir William Heydon 1624-27 who was succeeded by his brother Sir John. Sir William Harrington was also a lieutenant of ordnance 1624-26; the surveyor was Richard Kay; on his death in 1624 he was succeeded by Sir Alexander Brett.

of master gunner of the flagship, the Prince Royal.¹ The master gunner of England helped in the proving and certifying of ordnance, the inspection of stores and the establishment laid down for each ship. He was also chiefly responsible for testing the adequacy of men who applied for posts as gunners.

The master gunner of each ship supplied the commissioners with his requirements to make up the establishment set for his particular size of vessel, and the commissioners certified these to the lord admiral who signed the necessary request to the master of ordnance. There is no document which sets out the procedure, but the comparative rarity of letters from the commissioners to the office of ordnance and the large number of requests to Carew signed by Buckingham, would suggest that this was the recognised form.² The apparent demand that requests should be signed by the lord admiral rather than the commissioners, illustrates the relationship between the two departments.³ Frequently the master gunner also sent a copy of his demand direct to the ordnance office. As in the case of other accountable subordinate officers, he signed for all the stores as he received them, and on the ship's return he had to account for those expended and certify the remains.

The navy's chief weapons at this time were the culverins and demi-culverins which formed the main batteries of all the ships larger than the pinnaces. Larger guns, canon-periers and

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1. Since the Prince Royal only went to sea for ceremonial occasions, which Reynolds would wish to attend, the post was almost certainly served for him by a deputy.
 2. There are many examples of this in B.M. Add. MSS. 37816.
 3. In a letter to Conway dated 20th Mar. 1625, Coke, complained that Carew refused to prepare the ordnance and carriages requested until he had a warrant signed by Buckingham and others, presumably members of the privy council. S.P.(D.), Jas.I, clxxxv, 82.

demi-cannon, were carried in the ships of the first and second rank, but with the exception of the Loyal ships they never amounted to more than one-sixth of the main armament.¹ All the ordnance on board English ships had barrel lengths of between 8 ft. and 8 ft. 6 ins., which gave the culverin a maximum "random" range of about 2,000 yards and a "point-blank" range of about 300 yards;² the culverin threw a shot of about 13 lbs, the demi-culverin a 9 lb. shot. Sakers or minions, and falcons using shot of 5 lbs., 4 lbs. and 2 lbs. respectively were also carried in proportion; in addition smaller fowlers were often carried.³ These, loaded with small shot, were used against boarders. Demi-cannon, perhaps even culverins and larger, usually had a crew of five men. The smaller guns frequently had two men each or perhaps five men serving two guns.⁴

The best ordnance was made of bronze although at the time such guns were described as brass.⁵ Their quality lay in the strength of the metal, which allowed guns of a similar calibre to be made much smaller in bronze than would have been the case with cast iron; a consideration of some importance in view of the confined space available for handling the guns and the effect of the additional weight of metal on the trim of the ship. In vessels that were "crank", or hard to sail, the ordnance she was expected to carry often proved so much of a disability that

1. A table showing the armament of certain ships is to be found in appendix
2. The "random" range was the farthest possible carry with the gun at maximum elevation; "point-blank" was the distance at which the shot began to fall appreciably.
3. B.M. Add. MSS. 9294, f.270.
4. S.P.(D.), Chas.I, cclxxix, 27.
5. The best account of the evolution of the shipboard gun is that by Lewis, The Navy of Britain, pp.414-35.

guns were unshipped and stowed among the gravel ballast.¹ This did at least transfer the extra weight to below the centre of gravity, but since a culverin weighed about 4,000 lbs. and a demi-culverin nearly 3,000 lbs.,² the threat of internal damage in a heavy storm was considerable if there were any danger of the ballast shifting. There seems to be no evidence that any of Burrell's ships were such poor sea-boats that these precautions had to be taken.

English gunfounders may have been extra cautious in the margin of safety provided, for Oppenheim asserts that when English made ordnance was sold abroad, it was frequently rebored to accept larger shot.³ The demand for English guns was great enough that repeated warnings had to be made concerning the penalties incurred by anyone transporting ordnance abroad in defiance of the proclamation forbidding it. All ordnance had to be proved in Ratcliff Fields, and each piece had to bear the founder's name, or two letters of it, as well as the weight of the gun and the year of its manufacture and proof.⁴ In addition every year each founder had to certify to the master of the ordnance how many pieces of each size he had made that year, and to whom they had been sold. The only market allowed for such wares was at East Smithfield, near the Tower, and Tower Wharf was the only place at which ordnance might be either shipped or landed. A bond of £1,000 was required from the founders as a security against illegal exportation, but despite all these

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1. S.P.(D.), Jas.I, cix, 139. 15th July 1619. The Dreadnought had for seven years carried four of its heaviest guns in this manner.
 2. The weights are approximate; no two guns of like size were the same weight.
 3. Op.cit., p.268. The source is not quoted.
 4. S.P.(D.), Eliz., cccxxvii, 119.

precautions, ordnance still went abroad.¹ Not all the clandestine exporters went undetected. For example on 13th May 1625, Coke and Apsley were ordered by the privy council to interrogate a merchant, Martin Bowen, who had been committed to the Tower on suspicion that he was planning to transport ordnance and shot to Dunkirk.²

The naval authorities were fully aware of the need to produce light, but stronger pieces, and in 1625, the commissioners named John Browne as the only man fit to enquire into the abuses of making iron ordnance. Browne, it was said, could make iron ordnance lighter and stronger than most of his competitors could make in brass.³ His ability was demonstrated later in the year and he was awarded £200 for casting lighter guns which had been tested by double proof.

The commission of enquiry into the navy, begun in December 1626, reported other faults to Totnes the master of ordnance. Captains and gunners asserted that canon-periers, port pieces and fowlers were inclined to jump from their cases and "offend the gunner . . . through the vent in the worn chambers"⁴ Since drakes were handier to use from a bulkhead or halfdeck it was suggested that they might be substituted, in brass if possible, for the offending guns.

1. The demand for English ordnance remained high until the sixteen thirties. By 1634, John Browne, the king's gunfounder and the man best known, as well as the most skilled, in his craft at the time, wrote that the Swedes were then selling ordnance to Holland at half the price of a few years previously, £14 - £15 per ton instead of £35 per ton.
2. Acts of the Privy Council, 1625-26, p.60. 18th May 1625. Bowen was later freed.
3. S.P.(D.), Chas.I, xxv, 79. Navy commissioners to privy council, 28th Apr. 1626. Browne, of Cranbrook in Kent, was one of a family which was famous as gunfounders through several generations in the sixteenth and seventeenth centuries.
4. Ibid., Eliz. cccxxvii, 35.

During the sixteen-twenties the ordnance office was plagued with trouble in the provision of powder. Evelyn was the chief contractor, and caused some consternation when, with several months provision of powder unpaid for by the king, he exercised the right given to him in his contract¹ and sold the current month's supply elsewhere. An enquiry was made into the whole affair by the navy commissioners, with particular regard to certain allegations made by a Mr. Sadler, a former contractor. Evelyn emerged with some credit,² and one result was that the lord admiral then required the commissioners to enquire more closely into Sadler's affairs.³ Rather more serious were the difficulties caused by the large number of saltpetremen who contracted to supply Evelyn; some refused to sell unless the price was raised, others broke their covenant by selling elsewhere. These problems belonged to the ordnance office rather than the navy, however. As usual, where profit might be had at the king's expense, the navy had its own forms of abuse to deal with. The gunner of the Antelope was accused in 1624, of selling one and a half barrels of powder,⁴ and he was not alone in using this means to dispose of his stores. But speculation of this kind seems to have been kept to a minimum under Buckingham and the commissioners.

A far greater amount of powder was wasted on unnecessary saluting, a state of affairs typified in a letter of complaint from Sir William Heydon, as lieutenant of ordnance, to Nicholas.⁵ The gunner of the pinnace Maria had requested more powder and shot,

1. Sackville-Knole MSS. 8376.

2. Ibid., 8395. Navy commissioners to Middlesex, 9th May 1622.

3. Ibid., 19. Buckingham to Middlesex, 22nd Sept. 1622.

4. Coke MSS, bundle 130.

5. S.P.(D.), Chas.I, liii, 40. 6th Feb. 1627.

although his account showed that he had been issued with sufficient for 50 rounds. This had been expended between October and January, although the normal allowance for an admiral (i.e. flagship) among "king's ships that return good remains", was only 40 rounds. The account showed that most had been expended in saluting ketches and oyster boats, and Heydon warned that this was only one example of many.¹ He went on to assert that the navy, who paid and placed gunners, had to be responsible for correcting the abuse, for it was beyond the reach of the ordnance office.

The administration seems to have had much less success in its attempts to eliminate this particular form of waste. Regulations were re-issued which required that the captain should keep an inventory of the stores, with the purser; that no gun might be fired without his permission or the purser recording the reason and occasion; that on returning to port, the captain should check the stores and seal the remains; and that no gunner might be paid until his ordnance remains had been checked and cleared by the ordnance office.² But there seems to have been little positive result. The staying of the gunner's wages might have acted as a deterrent, but for the fact that during the time when it would appear that these excesses were at their worst (in the period under discussion) the gunners were not being paid anyway. Had a payment been made, at which erring gunners were confronted by the hard facts of large deductions, the situation might well have been controlled quickly. As it was, with no payments, no example could be made, and the excesses continued.

1. Oppenheim, pp.213, 290, gives other examples.
2. S.P.(D.), Eliz. cccxxvii, 112.

Unfortunately there appears to be no record of deductions for this offence on the occasion of Lord Treasurer Weston's large scale payment made in January and February 1629.

CHAPTER IX

The Commission's Decline

Although the commission's ten-year period in office divides naturally into two equal periods by virtue of its first patent being for a specific five-year term, it would be wrong to suggest that the commissioners' effectiveness was waning before the summer of 1626. By that time the commission's performance had become suspect under the pressure which required wartime activity to be conducted under conditions of economy that had only with difficulty been established in peacetime. However, before dealing with the events which led to the termination of the commission, it is worthwhile considering the changes made in its composition.

A new patent was issued on the accession of Charles I,¹ omitting the names of Cranfield,² Fortescue,³ Pitt,⁴ and Norreys.⁵ They were replaced by Sir William Russell, the treasurer, Sir Robert Iye,⁶ Denis Fleming,⁷ and Sir Allan Apsley. A second patent was issued two months later,⁸ including Sir William Heydon, lieutenant of ordnance, and adding his name to those four senior commissioners at least one of whom had to sign a document to give it force.⁹ The average numbers of signatures on the commissioners' letters and instructions for the second five year period dropped to four and they show a striking difference from the first term. Whereas the busiest commissioners of the first five years were all

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1. C/82/1989/14. Privy seal dated 7th Apr. 1625.
 2. As the Earl of Middlesex, Cranfield was impeached and disgraced in 1624.
 3. There are seven letters of 1625 bearing his signature.
 4. There is only one letter of 1625 bearing his signature.
 5. Norreys died in December 1624.
 6. An auditor of the prest.
 7. Fleming had been appointed clerk of the acts on the death of Sir Peter Buck in 1625.
 8. C/82/1991/167. Privy seal dated 4th June 1625.
 9. The others were Weston, Smythe, Coke and Wolstenholme. Smythe died later in the year.

men with no financial interest in the navy,¹ those who seem to have been most active during the second five years were Wolstenholme, Burrell, Fleming, Apsley and Russell. Of these only Wolstenholme could be described as being independent of the navy; the fortunes of the others were inextricably bound to it. Probably the greatest single blow to the commission was the death of Sir William Heydon, who was drowned during the landing on Rhé. The number of letters which bear his signature² suggest that he was active as a commissioner, and a paper containing eleven questions the resolving of which would provide rules for "the halings dowme, bevellings and moulding of all the timbers" suggests that he was far more competent on the technical side of shipbuilding than most of his colleagues.

By the summer of 1626, the evidence shows that the lord admiral had frequent occasion to comment adversely on the commissioners' ability to get things done. On 17th August, they were rebuked for promoting a man who had been found guilty of misdemeanours. Indeed he had not even been punished. In view of the great pressure of business the lord admiral accepted the error as an oversight, but he made it clear that it was the sort of error that must not recur.³ Barely a month later the commissioners were again at fault, the lord admiral being dissatisfied with the leisurely manner in which the Happy Entrance was being prepared for urgent service at sea, and also with the apparent slowness in providing Lord Willoughby with his requirements.⁴

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1. See above p. 64 . There were four exchequer officials, two merchants, and Coke.
 2. Forty-two in 1626.
 3. B.M. Add. MSS. 37816, f.153v. Buckingham to the navy commissioners, 17th Aug. 1626.
 4. Ibid., f.166v. Buckingham to navy commissioners, 20th Sept. 1626.

Willoughby finally sailed from Plymouth in October, in command of a fleet which, it was hoped, would harass the Spaniards in their own waters. Lack of money was responsible for the fact that these indifferently supplied ships set out so late in the season. Pennington, aboard the Vanguard saw little hope of success in such company and indeed had endeavoured to get his ship discharged from the voyage. His forebodings were fulfilled perhaps much sooner than even he had suspected, for on the fourth day a great storm battered the fleet and drove it back to Plymouth whence it could not again leave until extensive repairs had been made to most of the ships.

This sorry affair and the discovery that for emptions and provisions, wages, freight charges and victualling the navy was in debt to the extent of £100,000 were the prime causes which led Buckingham to suggest to the privy council that a commission of enquiry be appointed to examine the state of the navy. On the 2nd November, the lord admiral formally made his proposals to the council with King Charles present. The council agreed and named

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1. Buckingham's critics have seized upon this event as providing indisputable evidence of the ill-prepared state of the ships. Some of the vessels, such as the Vanguard were not fit for so hazardous a voyage, but the effects of an October gale encountered off Cape Ushant should not be minimised. The best equipped fleet of the time would probably have been forced to return after such a battering, for there was a prolonged cruise ahead. If the fleet were to accomplish anything at all in Spanish waters it would have to arrive there in some strength and with its ships in a reasonable condition.
 2. S.P.(D.), Chas.I, lxiv, 46-7. Buckingham to the privy council, draft propositions 7th Oct. 1626. As commissioners, Buckingham suggested himself, the lord treasurer, lord president of the council, lord steward, Lord Dorset, Secretary Sir John Coke, the chancellors of the exchequer and of the Duchy of Lancaster.

17 commissioners.¹ The date on the earliest evidence of the commission at work on the survey is 13th December, but a memorandum by Coke makes it clear that the commissioners had met on several occasions in November.² The methods of the enquiry were much the same as those for its predecessor of 1618, although the 1626 commission never suggests the objectivity, self-confidence and directness of that of 1618.

One of the special commissioners attended the survey of each ship and in the case of the Victory, all were present.³ They were also aware of the dangers inherent in such a busy schedule, for strict orders were given to the masters of Trinity House and the others responsible for the practical assessment of each ship, that the report on each ship was to be written up in the evening of the day the survey had been made; and further, an estimate for all necessary repairs, furniture and rigging had to be entered at the same time, before the multiplicity of ships and surveys obscured the details.⁴ By the end of January, the survey had been completed, but with one fault. The commissioners complained that the reports on the cordage were too confusing, as all the sizes were mixed. Accordingly they issued a new warrant for the

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1. Acts of the Privy Council, 1626, pp.350-1. To the first three suggested by Buckingham it added Lords Totnes, Bridgwater, Denbigh, Wimbledon, Hervey and Herbert, Sir William Heydon, Sir Sackville Trevor, Sir Arthur Mainwaring, Capts. Love, Watts, Pennington, Giffard and Phineas Pett. The patent, S.P.(D.), Chas.I, xli, 84, also includes Weston, Savile, Sir Thomas Aylesbury, Sir Robert Cotton, Sir John Trevor and Sir Sackville Crowe.
 2. S.P.(D.), Chas.I, xl, 55.
 3. Ibid., xlii, 127. December 1626. In this case "all" probably refers to all the commissioners deputed for the actual surveys. These seem to have been Lord Denbigh, Lord Hervey, Heydon, Coke, Watts, Mainwaring and Giffard.
 4. Ibid., xlvi, 43-4. Special commissioners to the masters of Trinity House et al, 11th Jan. 1627.

survey to be re-taken under the guidance of Phineas Pett.¹

The special commissioners did not submit a formal report as had been done in 1618; consequently there is no table setting down the costs for making necessary repairs to the whole fleet. However, from various estimates made in January, 1627, it can be seen that complete repairs to 26 ships would cost £8,378,² an average of £348. Of the 26 ships, the Anne Royal and Pennington's Vanguard, were in by far the worst state, the estimates for repairs amounting to £973 and £903 respectively.³ It is difficult to say to what extent these estimates represent an indictment of the navy commissioners. The average cost seems rather high, although the amount of sea-service performed in the preceding two years had also been great.⁴ The special commissioners themselves probably put the problem in its true light when, in submitting an estimate to the lord admiral they wrote:

And now it rests only in your Grace to cause moneys to be instantly furnished, without which the workmenn will fall from the worke, or at least doe little.⁵

While the survey was being made, clerks, storekeepers and other office-holders were being examined under oath in the Star Chamber. The questions posed to clerks Parr, Edisbury, to storekeepers Wells and Acworth and to shipwright Edward Chandler have survived in documents, as have their several answers.⁶

1. S.P.(D.), Chas.I, lii, 16-17. 31st Jan. 1627.
2. Missing from this list are: the White Bear, by 1627 almost irreparable; the Antelope, the Happy Entrance; the Phoenix soon to be scrapped; and the pinnaces Moon, Desire, Seven Stars and Charles.
3. The Anne Royal had been rebuilt in 1608, the Vanguard in 1615, the latter at a cost of nearly £4,000.
4. For a true picture of any relationship between sea-service and necessary repairs, one would have to ignore the four Royal ships which were not suitable for normal duties.
5. S.P.(D.), Chas.I, li, 4. Special commissioners to Buckingham, 22nd Jan. 1627.
6. Ibid., xli, 93; and xlii, 19, 40-1, 60-1, 72-4.

The questions seem to concentrate on procedures, and in more than one instance there is a deliberate attempt to implicate Burrell in fraud and embezzlement. The answers, not surprisingly, seem to exculpate the subordinate officers, who insisted that they had frequently protested about irregularities, but could obtain no redress, even from Sir John Coke. Clearly, although there probably had been cases of abuse there was nothing on the same scale as the abuses found by the enquiry of 1613.

The special commissioners usually met in a private residence, frequently at the lord admiral's Wallingford House, or at his lodgings in Whitehall, if he was available to attend the meeting. At one of these meetings in Whitehall, Buckingham raised the question of what constituted an adequate guard, and suggested 20 ships disposed as follows: eight ships in the Downs, six between the Isle of Wight and Lands End, six for the North Sea coast, and special guards in Irish waters off Waterford, Cork and Kinsale.¹

The first plan proposed was that of Giffard.² He wished to build 30 more ships (or as many as could be afforded) of the size of the Happy Entrance or the Mary Rose, ten pinnaces of 80-100 tons burthen and 30 tartans of 12-15 tons each. The latter would be equipped to row or sail and would draw no more than three feet of water. The estimated cost would be about £55,000 (without rigging or furniture). This would give the king a total of 70 ships and thirty pinnaces which should be divided into three or four squadrons; two based on Chatham, one

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1. S.P.(D.), Chas.I, liii, 37. 9th Feb. 1627. The lord admiral's estimate seems to have been adequate based on the orthodox thinking of the time, but it is of course, merely a general outline. This may have been deliberate, for he requested detailed proposals from other members of the commission to be presented at the next meeting.
 2. Ibid., liv, 9. 15th Feb. 1627.

each at Portsmouth and Plymouth. Chatham would provide a squadron of 14 ships and four pinnaces for the north, of which there would always be four or five vessels at sea. Of the other squadron, 12 ships and three pinnaces were for the Narrow Seas, one would always be in the Downs while four more patrolled the width of the channel from the Isle of Wight to the French coast. The largest squadron of 28 ships and ten pinnaces would be based at Portsmouth to provide a patrol of six ships and two pinnaces for the area between the Isle of Wight and the Scillies. This patrol would sometimes work as a unit, at others in two equal divisions for a few days. The Plymouth squadron would contain 22 ships and ten tartans or small pinnaces which would provide a patrol of five or six ships and three pinnaces to range along the coast of Ireland; if it were found to be clear they could sail for the coast of Spain ranging from the North Cape to the Burkelings to meet Hamburgers bound for Lisbon via Scotland. The key to the whole plan was that patrols should not be victualled for more than three months (four months for the Irish coast) and that they should be relieved promptly by freshly cleaned ships, by which means almost any ship could be matched for speed.

Administration could be eased by having resident commissioners at each base, responsible for its squadron. Thus for each base there would be a comptroller, treasurer, surveyor, master shipwright, victualler and admiral, all under the supervision of the lord admiral. Duplicate crews would not be necessary; they could change ships each quarter. The use of small ships would have the following advantages: two could be built for the price of one large ship, two could outfight any one, even if it came to boarding, smaller ships could follow an enemy anywhere, and they would be easier to maintain and repair than

larger ones.

This imaginative proposal was greeted with derisive criticism from Mainwaring, Sackville-Trevor and Lord Hervey, who excluded vessels of less than 300 tons burthen, did not use to the full ships of 400 tons and insisted that the main service should come from ships of 600 tons burthen and greater.¹ Sackville-Trevor's plan was for 20 ships and two pinnaces apportioned much as the lord admiral's but with fewer in the west and more in the north. Lord Hervey's proposals included the use of four merchant ships among the 20 which were disposed almost exactly as those of the lord admiral.² The adherence to the big ship policy was maintained, apparently because they thought it a slight to the king that he should be represented by so small a vessel as a tartan, the dishonour being increased if one of his vessels should be captured; to which Giffard responded that such an event was unlikely when heavier ships were in attendance as he planned. In any case was it no less dishonourable to his majesty that his subjects should be chased to their own quaysides by similar small vessels from Dunkirk?

The chief problem posed by Giffard's plan was the cost, which made adoption in its entirety quite impractical. However, Buckingham was obviously impressed by the logic of its author's argument. As a result the ten Whelps were commissioned later the same year.³

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1. S.P.(D.), Chas.I, liv, 46. 19th Feb. 1627. Oppenheim's brief account of these proposals is misleading, p.253 n.l. He appears to have overlooked the considerable difference between Giffard's plan and those of Trevor and Hervey, and he completely ignores Giffard's second paper with its summary of his critics' proposals as made in committee.
 2. Ibid., liv, 12-13. 15th Feb. 1627. There are no accounts of plans submitted by others; however in an answer to his critics, ibid., f.46, Giffard summarises the objections to his plan.
 3. See above, pp.214-5.

The proceedings of the special commissioners enabled Coke at last to bring charges of abuse of the king's service against Burrell with some prospect of success. The answers to questions put to Roger Parr, who may well have replied in all honesty, suggested that Burrell was indeed suspect, and probably as a result of these testimonies on 15th December 1626, Burrell was immediately summoned to appear in Star Chamber at 9 a.m. the next day.¹ Burrell duly presented himself, and when asked what books, contracts, warrants or other papers concerning the navy were in his possession, replied that those he had were being prepared for the navy commissioners who had demanded that they be submitted by Monday 19th December. He therefore asked for permission to produce them to the special commissioners on that date or later. To suspicious enquirers, Burrell's comment that he was preparing the papers may have sounded ominous, but whatever the reason, order was given that all such papers in Burrell's houses and lodgings were to be seized immediately.² The inventory of the books impounded shows them to have been innocent enough and it seems very likely that the copies of contracts and a few quarter-books recovered in the search were the very documents quoted elsewhere in this work.³

The case against Burrell seems to have been based on the following points: that he acted without direction from or consultation with his fellow commissioners; that he forestalled the king in first obtaining for himself woods which lay convenient to the king's service; that he alone made bargains, set the price

1. S.P.(D.), Chas.I, xlii, 17.

2. Ibid., f.26. 16th Dec. 1626.

3. Ibid., f.27. The inventory of papers seized from Burrell's house in Poplar on 16th December 1626.

and was both "deliverer and expender"; that the prices were excessive; that most of the material was unserviceable.¹ To these were added the complaints concerning the ships built by Burrell.² Burrell's answers to these accusations seem reasonable enough, although an accurate independent assessment of evidence is impossible.³ Probably the truth lies somewhere midway between the two. Coke's tenacity seems rather strange especially since he had signed the report of 1623, at the end of the commission's first five years. Perhaps he could not bear to have had Burrell escape censure at that time, when the charges had been first laid; but certainly three years later the navy had greater worries than the shipwright's past iniquities. Clearly the best testament to Burrell's honesty of workmanship lies in the record of his ships.

Although isolated enquiries were made as late as May 1627, it is obvious that by early summer the commission's drive had lost impetus. In the absence of a formal report one is left with the distinct impression that the entire matter was deliberately allowed to die a natural death. Once more the reasons are not clear, although it may well be that a paragraph in a paper apparently written by Sir John Coke in November 1626, supplies a clue:

The Commission looks too much back whereas it should look on the present state of the navy and the causes why the same is defective without laying any aspersion or imputation on the Commissioners of the Navy who are most of them persons of quality and worthy and such as have received neither reward nor thanks for their pains, and if now instead thereof they shall have blame, noe wise or able men of any fashion

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1. Coke MSS. bundle 136. The extent of Coke's obsession with this business may be judged by the fact that this detailed document of some 38 foolscap pages is copied in Coke's own hand.
 2. See above, pp.211-2.
 3. Ibid., Burrell's rebuttal of the charges is contained in 17 pages.

will undertake the care to be the subject of soe
much reproof.¹

Perhaps Buckingham decided belatedly that no purpose would be served because the correction of the abuses uncovered would not outweigh the disrepute that the king's service would suffer from such publicity. The commissioners had been reprieved, but not for long.

During the preparations for the expedition to Rhé, the lord admiral had to rebuke the commissioners on several occasions. For example he complained of the slow progress of the preparation and the slackness that was current among captains and masters.² The commissioners' explanation was evidently not accepted, for in another letter four days later the lord admiral not only said as much, but also hinted that they might be removed if they could not do their job properly. He accepted the fact that stores were needed, but added somewhat caustically that stores were provided to be used, not merely to be counted.³

Perhaps the last straw was the failure to reinforce the troops besieging the citadel at St. Martin's after the rest of Rhé was in Buckingham's possession. The supplies for Holland's fleet had not been prepared and assembled as speedily as they might have, but the real reason for the delay was the adverse winds which had held supplies in the River preventing them being carried to Plymouth, and which had also prevented Holland from sailing with the provisions that were available. By 18th October, for example, the winds had already been contrary for

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1. S.P.(D.), Chas.I, xl, 55. Coke should perhaps have taken his own admonition to heart in connection with his persistent accusations against Burrell.
 2. B.M. Add. MSS. 37817, f.112v. Buckingham to navy commissioners, 4th June 1627.
 3. Ibid., f.114v. 8th June 1627.

almost a month.¹

The commissioners, it seems, had to pay the price of being in charge of the administration at a time when the obstacles were many and when the fighting arm they served suffered a defeat. It may or may not be true to say that they were made the scapegoats for the failure to reinforce the expedition, but it is almost certainly true that this, added to the events of the previous year which had made their efficiency suspect, caused the lord admiral to recommend the reinstatement of the principal officers. Accordingly, the commission was revoked on 21st April 1627, and a bill to that effect was prepared for the king's signature. The bill also confirmed all the acts of the commissioners and allowed them the power to subscribe all bills arising during their term of office.² The reason given by the council was that whereas the commission had been effective enough in peacetime, the urgent requirements of the country at war demanded a less cumbersome administration.

There may well have been much in the argument. If, in any case, the administration was to be chiefly in the hands of a few men whose professional life depended upon the navy, there was no real case to be made for continuing the commission. It seems significant, however, that the administration had been at its most efficient when there had been a group of three or four exchequer officials active in its affairs, their essential virtue being that they were not only competent officers, but were

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1. S.P.(D.), Chas.I, lxxxii, 20. Nicholas to Captain John Mason, 13th Oct. 1627.
 2. Ibid., ci, 43. Conway to Attorney-General Heath, 21st Apr. 1628; Acts of the Privy Council, 1627-28, p.308. The new officers were Sir Guilford Slingsby, comptroller; Sir William Russell, treasurer; Sir Thomas Aylesbury, surveyor; Denis Fleming, clerk of the acts.

independent of the navy office for their livelihood. Sir John Wolstenholme was the only commissioner whose qualifications approached this standard. Burrell received £300 p.a. as commissioner in charge of shipbuilding, a post of some prestige and additional value to him in ways well within the law. Fleming was a servant of the navy office, and Russell and Apsley, particularly the latter, each found his own private finances gradually becoming more and more involved with those of his office, a hazard forced upon him by the custom of the day. It would have been utterly impossible to have had an efficient administration solely in the hands of amateurs of course, but the combination had worked so well earlier that the administration's decline from the moment the "professionals" were in complete control is quite remarkable. There is no hint of the reason why the exchequer officers suddenly withdrew from the scene, and one might almost expect to have found complaints by other commissioners such as Apsley, that they were overworked as a consequence. Whether the members were overworked or not however, the commission was terminated after having been in force for a little over nine years and five months, and the principal officers were once more restored to power.

CHAPTER X

The Lord High Admiral

On the Isle of Rhé, Buckingham had failed by 24 hours, for Marshal Toiras, commanding the citadel had started negotiations and had decided to surrender the next day. Unfortunately, that night some cutters laden with supplies slipped through the blockading cordon and brought relief to the defenders of the fortress. Ironically, three months after landing on the island, it was the beseigers who were compelled to withdraw because of the lack of supplies.

The lord admiral could not hope to return to aid the French protestants until the late summer of the following year. Criticism of the Rhé expedition, inevitable after its eventual failure, made him all the more determined to try again. Intent on the preparations in hand, Buckingham was at Portsmouth in August 1628. As he left his breakfast-room on the morning of the 23rd, he was stabbed by John Felton, a former lieutenant of the Rhé expedition who felt that he had a grievance since he had been passed over for promotion.¹ The lord admiral's death was almost instantaneous.² The office he had held could not be left vacant for long, but the king could see no-one of sufficient eminence to fill it. After some slight delay, therefore, it was placed in commission, under the care of Lord Treasurer Weston, as chief admiralty commissioner. In order to ease the burden on Buckingham's family, for his financial affairs had become deeply involved with those of the crown, the king ordered that all the benefits of the office of lord admiral were to continue to be

1. Despite his personal grievance, which was undoubtedly the original source of Felton's malice, he seems also to have seen himself something of a patriot in murdering the duke.
2. Gardiner, VI, 349-50.

paid to the duke's widow until the crown's debt had been discharged.

The thesis of this work is that Buckingham was greatly involved with the navy's affairs and was far more active in both the executive and the administrative direction of its business than historians have suggested.¹ This has been demonstrated in part in the foregoing study of the navy from 1618 to 1628, but one may gauge the true contribution made by him only when it is examined against his conception of the office he held and the way in which former lord admirals interpreted its function.

The idea of committing the entire English navy into the hands of one man seems to have occurred for the first time in 1360 with the appointment of Sir John de Beauchamp,² but this admirable conception of command was short lived. Only nine years later the office was divided, as previously it had been since the term admiral was first used in connection with the English navy late in the thirteenth century. During the troubled times of the fifteenth century the office was occasionally vacant, and generally divided, but the accession of the Tudors brought recognition of the navy's importance. Henry VII did little towards establishing a navy in the modern sense of the term, but his contribution was far greater than that of any of

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1. In his summary of Buckingham's career as lord admiral, Oppenheim, p.290, is not unfair to the duke although in his text he does not show the part Buckingham played in the administration. Lewis, The Navy of Britain, p.351 suggests that Buckingham may have had some ability as an administrator, but adduces no facts. He seems to suggest also that Buckingham dismissed the principal officers. He makes no mention of the navy commissioners.
 2. The history of the office of lord high admiral is plainly set out by W.G. Perrin, "The Lord High Admiral and the Board of Admiralty", M.M. XII, 117-144.

his predecessors. His son, taught perhaps by his father to understand the real value of a navy, established a fleet of ships, the sole purpose of which was to implement the crown's foreign policy, and in particular of course, that part of it which concerned the defence of the kingdom. The new regard for the navy brought two significant changes in the office of the Admiralty of England. First, the admiral, or lord admiral, as he became known in the early sixteenth century, was thereafter always appointed to command the whole navy.¹ Second, the office was never again left vacant.

Meanwhile, apart from the duty of commanding the fleet, the lord admiral had also acquired other rights and responsibilities. The medieval kings of England had been plagued with legal disputes over prizes and shipwrecks; sometimes the problem was to obtain redress from a foreign country, sometimes it was to settle redress claimed upon English merchants. After the battle of Sluys in 1340 however, in the seas around England, Edward III could claim a sovereignty that was unchallengeable. In this strong position he established a Court of Admiralty, under the jurisdiction of the Admiral of England, to sit in judgment on all legal claims and disputes arising from maritime affairs.² The chief perquisite of this office took the form of a percentage of the value of the claim in dispute, a practice continued even after it was realised that the services of a professional lawyer were needed, for the appointment of a judge of the Admiralty Court

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1. Perrin, *op.cit.* states that the term Magnus Admirallus first appears in a patent of 1540, although the term "lord admiral" appeared in documents some twenty years earlier. The term "lord high admiral" appeared in Elizabeth's reign. It appears frequently in Jacobean documents, but less often than the simpler "lord admiral".
 2. R.G. Marsden, "Select Pleas in the Court of Admiralty 1390-1404", Selden Society, VI, xiv and xxxiv.

meant that the admiral took little or no part in the actual proceedings. Despite his very rare appearances at the court, however, the admiral's perquisites not only remained, but were frequently enlarged, becoming the real financial reward for the heavy responsibility of the defence of the kingdom.¹

The increase of shipping during the sixteenth century, coupled with the problem of dealing with the large number of prizes which resulted from Elizabeth's sanction of privateering, led to the appointment of vice-admirals of the coast.² A vice-admiralty usually coincided with the boundaries of a maritime county, and the vice-admiral looked after the interests of the lord admiral in local affairs. In most cases he was concerned only in matters involving the court of admiralty, although along the Channel coast where the king's ships often required harbour facilities, he was occasionally used to expedite navy business, especially the provision of victuals.³ Except in cases where they served as local administrative officers of the navy, the vice-admirals have no place in this work; similarly, apart from noting that it was the chief source of the lord admiral's income we are not concerned with the court of admiralty.

With the establishment set up for the navy by Henry VIII, the post of lord admiral, which in the absence of a standing army was the only permanent military command, became one of the most important offices in the service of the crown. This did not

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1. The fee for the lord admiral had never been more than nominal. In 1618 it was still £133.6s.8d, nearly £200 less than that for his deputy, the lieutenant of the admiralty, and smaller even than that of the surveyor, who at £145.6s.3d. was the least well paid of the three principal officers. S.P.(D.), Jas.I, ci, ff.7-8.
 2. R.G. Marsden, "Vice-admirals of the Coast", E.H.E., XXII (1907), 473.
 3. The most well-known vice admiral is Sir James Bagg for this very reason.

mean however that the holders were necessarily men of great military experience. Of the ten admirals whose tenure of office spans the sixteenth century, only one, Edward Clinton (1550-54 and 1557-85) had seen service at sea before his appointment. Few had experienced fighting, even as soldiers; most had already held office in the government or the household; all were courtiers. In no lord admiral's patent, issued before 1625, is there to be found any reference to administration. Indeed, in each of these lengthy documents, except for a few lines, the sole concern is with the rights accruing from the jurisdiction of the admiralty. The exceptions briefly give authority to press men and ships as required for the defence of the kingdom. The absence of any clearly expressed duties or responsibilities in the lord admiral's patent has a direct bearing on the appointment of Buckingham in 1618, for Nottingham carried out his duties strictly according to the requirements in his patent. Thus Nottingham's apparent indifference to the efficiency of the administration allowed and even encouraged the waste and corruption that was shown to have been rampant in the navy from 1605 to 1618, the exposure of which led eventually to his resignation.¹

In 1546 Henry VIII had established a committee or board of three principal officers who were to be responsible for the day-to-day administration of the navy and whose duties as comptroller, treasurer and surveyor have been dealt with elsewhere. Henry VIII also created the post of lieutenant of the admiralty, perhaps

1. Although Buckingham assumed the duties of lord admiral in October 1618, the letters patent were not issued until 28th Jan. 1619, patent roll C/66/2181.

with the intention that he should be the chief administrative official.¹ In fact, however, his duties were as ill-defined as those of the lord admiral, for the privy seals from which the patents were written make no mention of the purpose or function of the lieutenant. Whatever purpose the office was intended to serve, it was indifferently used, for between 1546 and the nomination of Mansell in 1620, only three lieutenants were appointed, their combined periods in office totalling at the very most, no more than 15 years.² Technically, at least, both the treasurer and the surveyor were subordinate to the comptroller. It immediately becomes clear however, that in the absence of firm guidance and strong character in the person of the comptroller, the treasurer's efficiency, or lack of it, could influence the whole administration. Conscientious accounting allows no room for peculation in any department. On the other hand misappropriation of stores is difficult to check anywhere, no matter how careful the officer, if the accounting is slipshod. Thus there was a need for supervision by someone superior to the treasurer. In the absence of a lieutenant, this undoubtedly should have been a role for the lord admiral, but in the long tenure of office of the Earl of Nottingham (1535-1618), who was perhaps the most famous, there is

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1. Oppenheim, p.86, asserts this as a fact, but gives no reference. Presumably his evidence comes from an undated state paper, believed to be of the year 1560, S.P.(D.), Eliz. xv, 4. It purports to list the duties of the chief officers of the navy, and certainly suggests that the lieutenant of the admiralty (or vice-admiral of England) was primarily responsible for their efficiency.
 2. E.g. the first two lieutenants appointed were Sir Thomas Clere, 24th Apr. 1546, PRO C/82/850 and Sir William Woodhouse, 16th Dec. 1552, *ibid.*, 955; the only lieutenant appointed by James I, was Sir Robert Mansell, 14th May 1620, S.P.(D.), Eliz. cccxxvii, 84-6 (copy of the patent).

little or no evidence of his being conscious of any deficiency in the administration, and none at all which might show an attempt to improve it. Clearly he considered his function to be entirely executive, a view completely justifiable by the terms of his patent,¹ and certainly this was the first responsibility of the lord admiral: to use the navy as a weapon to implement the policies of the king.

As might be expected, by far the largest body of evidence concerning Buckingham's direction of the navy deals with the assignment of men and ships to particular duties, their manner of execution and their recall or replacement according to the needs of policy and the strength available; in other words the executive direction of the navy.

As far as appointments were concerned, Buckingham was personally responsible for the appointment of all captains and admirals.² Subordinate officers were also appointed by the lord admiral's warrant, which was usually issued on receipt of a suitable recommendation from the navy commissioners.³ However, the recommendations were often required in some detail and the fact that they were not accepted blindly is demonstrated on the occasion when the commissioners inadvertently recommended promotion for a man previously found guilty of embezzlement.⁴

The reports the lord admiral received were many and various; from the commissioners on the availability of vessels, from port towns on the depredations of pirates, from merchants on the preparations of the enemy, and not least from the captains and

1. Patent roll, 8th July 1587, C/66/1263.

2. E.g. B.M. Add. MSS. 37816, ff.35v-36. 8th July 1625.

3. See above, p. 130.

4. See above, p. 257.

admirals on the state of their ships and their actions since previously reporting. Commanding admirals such as Palmer, Watts and Pennington, particularly the latter, sent in frequent and detailed accounts of their movements. Individual captains did the same, not unreasonably hoping to be remembered favourably, especially if they had recently seen action. The lord admiral's orders covered an equally wide field.

For Mansell, in command of the Algiers expedition, Buckingham made special arrangements to obtain information from Spain and Ireland about the pirates known to be at sea.¹

In 1622 again after reports of piracy, Buckingham had occasion to reprimand the commissioners for their slowness in preparing the pinnaces Soy and Mercury which had been ordered to sea.² Eighteen months later, his own words express to the commissioners his concern with naval affairs in another letter, also prompted by complaints about pirates.

Though heretofore when theise [seas] might be used safely and honourably I studied as much as in me laye to lessen his majesty's charge and expense and withdraw all unnecessary imployments seeing that necessity now requireth a more sufficient guard . . .³

The purpose of the letter was to request an estimate of the number of properly manned vessels that would be required to clear the seas of pirates from Dover to Lands End and the Irish coast.

Buckingham frequently used Sir John Hippisley, the lieutenant of Dover castle as an ex-officio vice-admiral, a

1. Monson, Naval Tracts, III, 103.
2. Sackville-Knole MSS. 3877, Buckingham to Cranfield, 3rd Sept. 1622, which demonstrates that the lord admiral at least was not unduly biased towards the idea that his honour could be adequately maintained only by big ships.
3. S.P.(D.), Jas.I, clxviii, 36. 24th June 1624.

trusted, shore-based official in frequent contact with the ships on the Narrow Seas since most ships using the Channel passed close by and all put in to the Downs if the weather looked unfavourable. A long communication to him in August 1625 dealt with, among other things, the hastening on of naval vessels calling at Dover, the defence in the port itself, and the staying of any ships or goods belonging to Spain. Hippisley was also ordered to look into the possible sinking of blockships in Dunkirk harbour, or a raid there by fire-ships.¹ Three days later a letter to Palmer as admiral of the Narrow Seas ordered the staying in the Downs or Dover harbour for the defence of that coast, all merchant ships bearing more than ten pieces of ordnance. Any refractory or disobedient captain was to be reported to the lord admiral immediately.²

In moments of emergency, Buckingham did not rely upon subordinates but acted in person. In October 1625, a great storm in the Channel wrecked four, and dismasted 18 more, of the Hollanders who by arrangement were blockading the entrance to Dunkirk harbour. This left only ten men-of-war in the Channel and Pennington had already reported that 22 Dunkirkers had sailed as the storm died. When last seen their course had been northerly and in any event the strong westerly and south-westerly winds would prevent them from sailing westwards. This posed a grave threat to English ships and harbours. Having learned that Coke had taken immediate and sufficient steps to safeguard the Thames estuary while at the same time hastening on the preparation of the king's ships that might be posted as additional guards,

1. S.P.(D.), Chas.I, i, 48. 27th Aug. 1625.

2. Ibid., v, 102. Buckingham to admiral Narrow Seas.

Buckingham ordered Conway to restrain Sir William St. John from sending his prizes eastward from Plymouth. He, the lord admiral, posted at once to Harwich to ensure the pressing of eight merchantmen known to be there.¹

The correspondence between Buckingham and Pennington provides excellent examples of explicit instructions and detailed reports. Typical of the former is that of 24th December 1626. The lord admiral having received intelligence that the King of France had bought four ships lying at St. Malo to use against England, he ordered Pennington to seek them out, provoke a fight and destroy them as soon as possible. The French were to be made to appear the aggressors if possible, but in any event they were to be destroyed. These instructions were to be a close secret, to be revealed only to those considered trustworthy, and not then until his majesty's service made it absolutely necessary.² This order suggests perhaps, on a smaller scale, the boldness of Nelson's action at Copenhagen. Unfortunately when Pennington arrived at St. Malo, the ships had gone. Finally, in connection with handling a fleet in action, Buckingham shows that he endeavoured to profit from earlier errors. One of the major complaints made concerning the action at Cadiz in 1625 was that the hired merchant ships did not sufficiently support the king's ships, and press home their attack. It was in an attempt to avoid such a situation arising a second time that the privy council, on Buckingham's recommendation, ordered that in future

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1. S.P.(D.), Chas.I, viii, 23. Pennington to Buckingham, 23rd Oct. 1625 (from the Downs); f.10, Buckingham to Conway, 24th Oct. 1625.
 2. Ibid., xlii, 79 and 81. The Nicholas Papers, B.M. Add. 193. 37316-7 contain many examples of the lord admiral's letters to Pennington and other captains.

expeditions no man might be appointed master of a vessel of which he was in any way part owner. Such men, understandably, were reluctant to hazard their ship in action, despite the captain's orders.¹

Apart from the difficulties caused by lack of money for its preparation, one of the chief faults with the Cadiz expedition was in the choice of commander. To what extent Buckingham bears responsibility for the selection of Wimbledon is not known. It must be remembered, however, that seventeenth-century convention demanded that the commander-in-chief should be a gentleman amateur rather than a professional. This accepted, it seems doubtful whether any alternative commander would have been an improvement, modest though Wimbledon's military accomplishments were. It is significant that Buckingham endeavoured to remedy this weakness by assuming command himself during the expedition to the Isle of Rhé, and that he was much more successful.

As commander-in-chief in 1627, Buckingham was no man to be treated contemptuously by his sea-captains as Wimbledon and Willoughby had been, and anyone foolhardy enough to attempt it would have received short shrift. As a soldier Buckingham had little or no experience, yet the accounts of his leadership on Rhé show clearly his courage under fire and his imagination in tactics. Had his chief professionals been as wholehearted in the affair as was the lord admiral perhaps the disasters of the last few days might have been avoided. For the expedition, Apsley himself ordered the victualling, and the single act of folly in deciding to send wheat instead of flour when there was only one mill on the island

1. Acts of the Privy Council, 1626, p.67.

added greatly to the suffering of the troops.¹

Before leaving England, Buckingham had given Nicholas, his secretary, full instructions for conducting the lord admiral's affairs in his absence. Two particular points to be noted are that he was to get the commissioners to hasten out ships as required with all speed, and that he was to inform Buckingham if any of the officers or commissioners were guilty of neglect.² Perhaps this instructions had some bearing on the dismissal of the commissioners in the following February.

As far as the conventions of the time permitted Buckingham seems to have demanded a reasonable standard of discipline from his captains. When any fleet put to sea, its commander received detailed instructions from the lord admiral. The details however, usually concerned the standard regulations to be followed for the maintenance of discipline, the efficient running of the ship and the prevention of fire, the greatest of the terrors facing the men who served in wooden ships.³ One of the standing regulations ordered that as soon as any prize had been taken the hatches were to be sealed until the goods were presented for inspection by the officers of the court of admiralty. It soon became evident that the instructions might not be ignored with impunity, for early in 1623, Sir Henry Mervin, admiral of the Narrow Seas, and Sir William St. John were charged with the confiscation of prize goods which they converted to their own use. The matter was not treated lightly for they were arrested and detained without bail until the king's pleasure was known. Mervin seems to have been

1. S.P.(D.), Chas.I, lxxi, 61,65; 38,56 and lxxiv, 10. The first two references are to the accounts by a Mr. Graham which formed the basis of the printed accounts of 1627, Journal of the Duke of Buckingham.

2. Ibid., lxxii, 33. 4th May 1627.

3. Ibid., Jas.I, cxxi, 57. Buckingham to Thos. Wilbraham, captain of the Victory, 29th May 1622.

the chief culprit, and although he sought to make a personal confession and throw himself upon the king's mercy he was not employed at sea again until three years later.¹ At other times both Mervin and Sir Henry Palmer received curt reprimands from the lord admiral. Palmer was ordered to put his ship to sea instead of lying idle in harbour,² and Mervin, who had sent a deputy as captain, was ordered to present himself aboard his ship and carry out his duties forthwith or he would find himself replaced permanently.³

At times, Buckingham was prepared to step beyond the bounds of seventeenth-century custom in order to retain proper control. While preparations were in progress for the despatch of the fleet under Willoughby in 1626, the lord admiral received a report concerning desertion from the ships at Portsmouth. Since all captains had been ordered to remain on board with the express purpose of reducing the number of runaways, he ordered Matthew Brooks, the clerk at Portsmouth, to muster all officers and men, including the captains, and make an immediate return of all absentees.⁴ However, although many of the captains must have resented such an indignity they would doubtless have admitted that the lord admiral was at least consistent in his support of them concerning jurisdiction within their own commands. Later in the same year, Denbigh as vice-admiral to Willoughby, was informed that despite his rank, all affairs directly concerning his flagship were the responsibility of the captain.⁵

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1. B.M. Add. MSS. 37316, f.142v. Buckingham to Sir Henry Mervin, 28th July 1626.
 2. Ibid., f.96. 26th Apr. 1626.
 3. Ibid., 37817, f.78v. 29th Apr. 1627.
 4. Ibid., 37816, f.114. 3rd June 1626.
 5. Ibid., f.49. 23rd Sept. 1625.

One rather bizarre episode in the story of the early Stuart navy cannot be omitted entirely, although it has in fact little connection with Buckingham's ability as lord admiral. Late in 1624 a plan was proposed in which a fleet of English and Dutch ships should attack the Spaniards at Genoa in support of French troops. The attack was to be made in the name of the King of France who was to hire the warships just as a merchant might hire ships for his own purposes. The English ships consisted of the Vanguard and seven merchant ships, but trouble arose when it seemed likely that they would be used against the protestants of La Rochelle.¹ The lord admiral's role seems to have been somewhat equivocal although it is clear that his actions were motivated by purely political considerations. The ships were eventually handed over to the French, but the crews refused to serve and returned to England.²

It was in the field of administration however, that Buckingham made the greatest contribution to the development of the office of lord high admiral. The commissioners played an important but essentially subordinate role in the administration, as the correspondence between the lord admiral and the navy office shows. Nicholas, who was in a position to know, made it clear that the drive in the administration came from Buckingham.³ While it cannot be denied that Nicholas rarely missed an opportunity to benefit himself, and therefore the value of his opinion of his master might well be suspect, as Oppenheim points out, the opinion was given after Buckingham's death when there was nothing to be

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1. The best account of the whole affair seems to be that in Gardiner, V, 375-94.
 2. The ships were received by the French on 5th and 6th August 1625; they were returned to England on 3rd May 1626.
 3. S.P.(D.), Chas.I, ccxli, 85-6. June 1633.

by the lord admiral himself.¹

As far as the financial side of the navy was concerned, the lord admiral did not institute any changes, although it should be remembered that through Coke and Cranfield he kept a close watch on the accounting. He did however expend vast sums of his own money for the service--even to the extent of pledging his jewels in Holland for some £34,400.² In 1621 occurs the first evidence that Buckingham was concerned about the payment of the men who served under him. In that year on the return of Mansell's expedition, it was not the seamen who failed to obtain their pay, but the captains of the merchantmen hired to join the fleet. Their wages were to be found jointly by the crown and the merchants, and after a letter from the lord admiral on their behalf to Cranfield, the king's share was paid by the navy commissioners early in 1623.³ With regard to the increase in wages granted in 1626, although it is not clear whether it was originally proposed by the king or the lord admiral, it is at least plain that if it was indeed the former, Buckingham wholeheartedly supported the plan. At about the time the new rates were approved, his views were expressed in a letter to Russell, ordering him to pay men from the

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1. It would appear that several of those copied for the Nicholas Papers, B.M. Add. MSS. 37816, were originally written by Buckingham himself. They have the initials G.B. copied after the letter (e.g. f.46v), which, since many of the letters that the lord admiral obviously did sign have no such initials added, seems to suggest that the letters G.B. were meant by the clerk as an indication that the original was in Buckingham's hand. This theory is strengthened by the fact that the memoranda written below a petition and which concerns the action to be taken thereon are invariably marked with the initials. Where there are instructions written on original petitions to the lord admiral, which are now in the state papers, the instructions appear always to have been written by the duke himself.
 2. S.P.(D.), Chas.I, xxvi, 59. 6/16th May 1626.
 3. Sackville-Knoles MSS. 173. Buckingham to Cranfield, 11th Dec. 1622.

St. George or any other ship when they presented him with tickets. The letter seems to show a moral sense that historians in the past have denied Buckingham,

As I shalbe redde to punish such as without leave forsake their shipp, soe shall I be willing to encourage all such as depart not without lycense.¹

In view of the hitherto commonly held view of Buckingham, the most striking fact that emerges from a study of his ability as an administrator is his concern for the men under his command. The aid, apparently readily forthcoming, which was given to deserving cases such as Widow Mann or applicants for assistance from the Chatham Chest is in keeping with the solicitude shown in a letter to John Glanville, the recorder of Plymouth who was sent with the Cadiz expedition of 1625, as the official recording secretary.²

I understand that since your return from sea you have not had your health in such measure as I wish it, and doubting least by contrarie winds his majesty's fleets may be kepte in Ireland longer than may stand with the constitution of your body which it seems not agrees with that ayre I have thought good here by to lycense and pray you to come into England as soone and when you please . . . and desiring you presentlie upon your arrivall here (and assoone as with your health you may) to repayre unto me. For which this shalbe your warrant. And thus wishing you a safe and good voyage into our countrye, I rest, your verie loving friend,

There is evidence of the lord admiral making efforts to provide the men with clothing on several occasions, perhaps the best pointer to his concern being the immediate response given when the cost was to be taken merely from his own income as opposed to the necessary funds having to be pried from a

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1. B.M. Add. MSS. 37816, f.98. 29th Apr. 1626.
 2. Gardiner, VI, 13, suggests that Buckingham chose Glanville out of sheer malice, but this fits oddly with the letter quoted.
 3. B.M. Add. MSS. 37816, f.65. 6th Feb. 1626.

reluctant lord treasurer. There are several hints that Buckingham was behind the recognition given to chaplains for the navy, and whilst there is no firm evidence that he was responsible for the considerable changes in naval medicine in the sixteen-twenties, the point has already been made that the reforms did all occur within his tenure of office and that in any case, it is unlikely that they would have been successfully introduced without his backing.

Buckingham seems to have been just as conscious of the problems in the dockyards, and in particular the navy's needs in that direction. The idea of extricating the fleet from the confines of the Thames was an imaginative proposal, and in consequence the facilities at Chatham were increased enormously. The large-scale use of Portsmouth was not an original idea, but like several other schemes which remained permanent in one form or another, it was under Buckingham's authority that it came into steady use, and he obviously had long term plans for making it a major base.

With regard to the products of the dockyards, the lord admiral seems to have been no more persuaded of the correctness of tradition than he had been in the dispersal of the navy. The nature of Giffard's proposals suggests that the idea of countering the Dunkirkers with small vessels came from him. Perhaps it did, but it is significant that 15 months before Giffard's proposals, Buckingham had been sufficiently conscious of the value of fast, small sailing craft to have requested

1. Bodleian Rawlinson MSS. A 455, ff.115-6. Navy commissioners to Buckingham, 2nd Aug. 1620. In reply to a suggestion from the lord admiral, the commissioners replied that there was no precedent for allowing Mansell an imprest for "preachers, surgeons, physicians" on the voyage to Algiers.

that a pinnacle forfeited to him should be delivered at once, so that she might join the fleet.¹ This is another occasion when the lord admiral voluntarily put the king's service before his own interests. On a similar occasion, although there is no account of the vessel's sailing qualities, a ship captured under letters of Marque was handed over to the men who captured her as compensation for the loss of their own ship while bringing in the prize.² Nor was the lord admiral's sense of justice confined to rewarding Englishmen. A French (Protestant) ship had brought a prize in to Plymouth and had been detained by Bagg. Buckingham ordered that the French captain must pay the La Rochelle deputies such sums as he would have paid had he gone to La Rochelle. He was at the same time discharged from tenths owing to the lord admiral.³

Once again this is not the kind of action that many historians would attribute to Buckingham. The origins of the popular view of the lord admiral are easy enough to trace. Among the writers who lived through the years upon which judgment on Buckingham has been based, one finds support for each side. Sir Simonds D'Ewes' account of the expedition to Rhé, for example, is a scurrilous document.⁴ On the other hand Sir Henry Wotton, with his rather sympathetic view of the duke, was more circumspect, doubtless because of the dates of his publications.⁵ Since that time two facts have combined to produce the overwhelming verdict

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1. S.P.(D.), Chas.I, dxxi, 95. Buckingham to Conway, 7th July 1625; so ordered next day, ibid., f.97.
 2. Ibid., lvi, 91. Buckingham to Sir Henry Marten, judge of admiralty court in response to the petition of Capt. Salleneuve and the crew of the Nicholas of Weymouth.
 3. Ibid., cxv, 44. Buckingham to Bagg, 19th July 1623; see a similar instance ibid., f.45. 4th Aug. 1623.
 4. Historia vitae et regni Ricardi II, Angliae regis . . . pp.371-88.
 5. A parallel between Robert Late Earle of Essex, and George Late Duke of Buckingham (1641); and A Short View of the Life and Death of George Villiers Duke of Buckingham (1642)

that has been given against Buckingham. First, the success of parliament resulted in widespread attacks against all who had held office under the king, and particularly against Buckingham. Second, these attacks were continued by the Whig historians, and since the most prolific writers of history were Whig by political persuasion, theirs has been the legacy inherited by the modern student. Unfortunately no historian of the past fifty years has seriously attempted research upon Buckingham's career. M.A. Gibb concentrated on the duke's private life while everyone who has commented on any facet of his public life has been content to rest upon the findings of Gardiner and, for Buckingham's connection with the navy, of Oppenheim.¹

The latter says, somewhat blandly, "we know the Duke had no grasp of detail".² But this is something that the evidence refutes. Examples have been given earlier of Buckingham's concern for detail, inasmuch as in ordering ships into dock for repairs, he followed the proper administrative procedure. Normally such cases were reported to the commissioners, who then decided which was the best place to have the repairs carried out, and applied to the lord admiral for the necessary warrant. Had Buckingham not been concerned with such detail, in respect of the Red Lion in 1627, she would have arrived at Woolwich only to find the dry dock already occupied. Similarly, when summoning Pennington to London to report in person, Buckingham was careful to remind him to give all necessary and sufficient instructions to his captains concerning their remaining on

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1. In the most recent volume which has any bearing on the subject, Menna Prestwich, Cranfield: Politics and Profits Under the Early Stuarts (1966), pp.211-18, draws some demonstrably wrong conclusions about Buckingham and the navy, none of which can be ascribed to Gardiner or Oppenheim.
 2. Op.cit., p.280.

board and keeping a close supervision of the men to discourage runaways.¹ In the letter to Giffard permitting him to resign his command of the Swiftsure in 1626, the lord admiral also reminded him of the problems to be dealt with if he had to leave before Lord Hervey arrived to replace him.² Finally an excellent example of attention to detail may be seen in Buckingham's letter to the navy commissioners concerning Pennington's mission to blockade Dunkirk. The commissioners were to replace the Happy Entrance in the Downs with another ship or good pinnace, and make her ready for Pennington. The lord admiral then reminded them that since she was to lie off Dunkirk, the Happy Entrance would need good anchors and ground tackle.³ The many letters and orders sent by Buckingham in answer to reports, or seeking information, show a regard for administrative detail that is quite uncommon among men of his eminence, particularly when one considers his complete lack of any naval training.

A sure sign of Buckingham's ability as an administrator lies in the confident way in which he was able to delegate authority to chosen lieutenants. Cranfield, Coke, Wolstenholme after 1625, and to a certain extent Pennington and Hippisley were all appointed to particular tasks by Buckingham, and they carried them out with trust and diligence. It is the absence of such figures at Rhé which causes Buckingham to be seen trying to do everything himself.⁴ Unfortunately, of the two men on whom he should have been able to rely completely, Sir William Heydon,

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1. S.P.(D.), Chas.I, lxiii, 56. 15th May 1627.
 2. B.M. Add. MSS. 37316, f.162v. 11th Sept. 1626.
 3. Ibid., f.33. 13th Aug. 1625.
 4. S.P.(D.), Chas.I, lxxiv, 39. Henry de Vic to Conway; ibid., lxvii, 13. Same to same, 27th July 1627.

the expedition's master of ordnance, was drowned in the landing on the first day, and Sir John Burroughs lost heart in the enterprise, thereafter tending to obstruct the duke in the council-of-war rather than to assist him. In the expedition's early councils Buckingham is seen almost eagerly seeking advice on the best method of executing his plans. The same is true of his attempts to combat the pirate menace. In the case of the proposals sought from Sackville-Trevor, Lord Hervey, and Giffard, he adapted his own idea on the disposition of the guard to include as much of Giffard's plan as was economically practical because he realised the value of the latter's scheme.

However, all this is not to deny the serious faults in the preparations made for the Cadiz, Rhé and Rochelle expeditions. These faults stemmed from the same source, lack of adequate funds; and to mount successfully such military ventures in the face of so great a handicap would have called for administrative genius greater than that of Pepys or of William Cecil. This is particularly true of the victualling problems, the solution of which was not found for a further 200 years, and which defeated many administrators of the highest calibre. Small wonder then that the administrative system of the time broke down, especially when it was so badly handicapped financially as well. We are accustomed to think of the difficulties of military logistics in terms of hundreds of thousands of men, but the more primitive transportation, the un-organised state of food manufacture and preparation, and the often vital question of wind direction brought problems just as difficult to the seventeenth-century administrators, for all that they handled more modest numbers. The fault in the case

of Buckingham's expeditions lay in the strategical concept. But one is not concerned here with his failings in that field. Given moderately favourable circumstances, Buckingham was a good administrator, and his interest brought a new dimension to the faculties expected in future holders of the office of lord high admiral of England. It seems unlikely that it was mere chance that whereas all previous patents had scarcely hinted at administrative duties, that issued on the 20th September 1628, when the office was put into commission in the hands of Weston and others, is full of detailed instructions concerning administrative responsibility. Buckingham and the experience of his years as lord admiral had shown the way.

APPENDIX I

The Pay Scale 1626¹

	500-400			300-250			200-160			120-100			80-70-60			50-40		
	£	s	d	£	s	d	£	s	d	£	s	d	£	s	d	£	s	d
Captain	1	14	0 0		11	4 0		9	6 8		7	0 0		5	12 0		4	13 4
Lieutenant	1	3	10 0		3	10 0												
Master	1	4	13 9	1	4	10 0		3	15 0		3	7 6		3	0 0		2	6 8
Pilot		2	5 0		2	0 0		1	17 6		1	13 9		1	10 0			
Masters mates	3	2	5 0	2	2	0 0	1	1	17 6	1	1	13 9	1	1	10 0	1	1	3 4
Boatswain		2	5 0		2	0 0		1	13 4		1	10 0		1	6 8		1	3 4
" mates	2	1	6 3	2	1	5 0	1	1	0 8	1	1	0 8	1	1	0 8	1	1	0 8
Quarter-master	4	4	10 0	4	1	5 0	4	1	5 0	4	1	5 0	2	1	5 0	2	1	0 0
" mates	4	1	0 5	4	1	0 8	2	1	0 8	2	1	0 8	2	1	0 8	2		17 6
Yeomen	4	1	5 0	4	1	1 0	2	1	1 0	2	1	0 0						
Corporal	1	1	10 4	1	1	8 0	1	1	5 8	1	1	3 4	1	1	0 0	1		13 8
Master Carpenter		1	17 6		1	17 6		1	10 0		1	6 8		1	3 4		1	1 0
" mates	2	1	15 0	1	1	6 3	1	1	3 4	1	1	1 6	1		19 2	1		13 8
Carpenters	9	1	8 0	6	1	0 0	4	1	0 0	3	1	0 0						
Purser		2	0 0		1	16 8		1	10 0		1	6 8		1	3 4		1	3 4
Steward		1	5 0		1	5 0		1	5 0		1	6 8		1	3 4		1	3 4
Cook		1	5 0		1	5 0		1	5 0		1	3 4		1	3 4			
Stewards mates	3	1	8 0	1	1	8 0	1	1	8 0	1	1	8 0						
Cooks mates	2	1	8 0	1	1	8 0	1	1	8 0	1	1	8 0						
Surgeon		1	16 0		1	10 0		1	10 0		1	10 0		1	10 0		1	10 0
" mates	1	1	0 0	1	1	0 0	1	1	0 0									
Master Trumpeter		1	8 0		1	6 8		1	5 0		1	5 0		1	5 0		1	1 0
Trumpeters	4	1	3 4	3	1	3 4												
Drummer		1	0 0		1	0 0		1	0 0		1	0 0						
Fifer		1	0 0		1	0 0		1	0 0		1	0 0						
Coxswain		1	5 0		1	5 0		1	3 4		1	0 0						
" mate		1	8 0		1	8 0			19 2									
Skifswain		1	0 0															
" mate			17 6															
Swabber	2	1	0 8	1	1	0 8	1		13 8		13 8		13 8					17 6
" mates				1		17 10	1		16 8									
Armourer		1	1 0		1	1 0		1	1 0		1	1 0						
Gunmaker		1	1 0		1	1 0												
Master Gunner		2	0 0		1	16 8		1	10 0		1	6 8		1	3 4		1	3 4
	2	1	2 6	2	1	1 0	2	1	0 0	1	1	0 0	1	1	0 0	1		13 8
Quarter gunners	4	1	0 0	4		13 8	4		13 8	4		13 8	4		17 6	2		17 6
" mates	4		13 8	4		17 6												
Yeoman of Powderroom		1	0 0			13 8			13 8			13 8						
Master cooper			16 8			16 8			16 8			16 8						

	500-400		300-250		200-160		120-100		80-70-60		50-40							
	£	s	d	£	s	d	£	s	d	£	s	d						
Common men 4 per 100 (Captain's retinue)	365	15	0	204	15	0	146	15	0	65	15	0	31	15	0	23	15	0
Grommets	6	11	3	5	11	3	4	11	3	3	11	3	2	11	3	1	11	3
Boys	5	7	6	4	7	6	3	7	6	2	7	6	2	7	6	1	7	6

APPENDIX II

The Annual Charge and Expenditure in the Ordinary
and Extraordinary 1604-281

year	amount charged to treasurer	ordinary	extra- ordinary	total	excess expenditure carried over from previous year
	£	£	£	£	£
1604	24,009	6,789	17,151	24,002	
1605	29,025	6,110	22,493	28,672	
1606	22,286	6,874	12,051	18,984	
1607	21,000	5,242	19,900	25,200	
1608	38,424	8,106	28,356	36,554	
1609	43,823	6,926	36,331	43,396	
1610	37,057	8,675	27,602	36,358	
1611	43,066	8,143	31,921	40,154	
1612	37,123	8,867	24,937	33,930	
1613	50,360	10,099	45,786	55,986	
1614	43,463	9,049	42,437	43,463	5,671
1615	44,505	8,243	11,219	57,933	13,428
1616	40,515	3,808	24,955	28,099	12,416
1617	26,208	1,001	23,684	26,208	797
1618	29,286	13,754	13,667	27,489	
1619	31,606	5,080	27,460	33,313	
1620	39,005	7,666	26,411	35,872	1,712
1621	57,398	10,717	40,209	51,742	
1622	52,385	11,659	33,694	46,157	
1623	66,183	11,635	41,063	62,927	
1624	30,947	10,669	12,309	27,033	
1625	170,763	17,153	143,797	168,426	
1626	117,791	16,758	110,497	134,367	16,576
1627	63,754	11,955	52,769	65,640	1,890
1628	155,751	10,096	108,391	122,115	

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1. Declared accounts, Pipe Office 2242-66.
 2. Including £3,548 paid in to exchequer 18th Nov. 1618.
 3. Including £708 debts owing to navy treasurer.
 4. Including £9,202 paid in debts on Chatham ordinary 1612-13.
 5. Beginning 1624 the declared accounts include the ordinary sea-service in the ordinary expenditure. For the purposes of this table the ordinary is shown minus the sea-service charge.
 6. Including £903 debts owing to navy treasurer.
 7. Including £4,458 debts owing to navy treasurer.
 8. Including £4,419 debts owing to navy treasurer. Russell's account continues to 4th Apr. 1627 and shows £16,576 excess expenditure over receipt.

APPENDIX III

Length of service of the ships built by William Burrell
at Deptford 1619-231

	Built		service ended	disposal
<u>Constant Reformation</u>	1619		1651	lost at sea
<u>Happy Entrance</u>	1619		1658	burnt
<u>Victory</u>	1620	rebuilt 1666	?	?
<u>Garland</u>	1620		1652	captured by the Dutch
<u>Swiftsure</u>	1621	rebuilt 1653	?	?
<u>Bonaventure</u>	1621		1653	blown up in action
<u>St. George</u>	1622	hulk in 1687		last mentioned 1697
<u>St. Andrew</u>	1622		1666	wrecked
<u>Triumph</u>	1623		1633	sold
<u>Mary Rose</u>	1623		1650	wrecked

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1. R.C. Anderson. Lists of Men of War 1650-1700, Society for Nautical Research publications no.5, pt.I (Cambridge, 1939).

APPENDIX IV

Some early Stuart warships: their size, complement and ordnance¹

	Length	Breadth	Depth	Ton and tonnage	Men in harbour	Men at sea	Mariners	Gunners	Soldiers	Pieces of ord.	Canon- pieces	Demi- cannon	Culverins	Demi-culverins	Sakers	Minions	Falcons	Port-pieces	Fowlers
<u>Triumph</u>	110	37	17	921	20	400	263	32	100	42	2	2	16	12	12	8	-	-	4
<u>St. George</u>	110	37	16 $\frac{1}{2}$	830	9	250	150	30	70	42	2	2	16	12	4	-	2	-	4
<u>St. Andrew</u>	110	37	16 $\frac{1}{2}$	830	9	250	150	30	70	42	2	2	16	12	4	-	2	-	4
<u>Swiftsure</u>	106	35 $\frac{5}{6}$	16 $\frac{2}{3}$	876	9	250	150	30	70	42	2	2	16	12	4	-	2	-	4
<u>Victory</u>	108	35 $\frac{3}{4}$	17	870	9	250	150	30	70	42	2	2	16	12	4	-	2	-	4
<u>Constant</u> <u>Reformation</u>	106	35 $\frac{1}{2}$	15	750	9	250	150	30	70	42	2	2	16	12	4	-	2	-	4
<u>Garland</u>	97	33	16	630	7	200	130	20	50	32	-	-	4	12	10	2	-	-	4
<u>Bonaventure</u>	98	33	15 $\frac{2}{3}$	674	7	200	130	20	50	34	-	-	4	14	10	2	-	-	4
<u>Vanguard</u>) <u>Rainbow</u>)	102	35	14	650	9	250	150	30	70	40	2	2	14	12	4	-	2	-	4
<u>Red Lion</u>	91	34 $\frac{1}{2}$	16	650	9	250	150	30	70	38	-	-	14	12	4	-	2	-	4
<u>Warspite</u>	92	35	15	650	9	250	150	30	70	38	2	2	13	13	4	-	2	-	4
<u>Happy</u> <u>Entrance</u>	96	32 $\frac{1}{2}$	14	530	7	200	130	20	50	32	-	-	4	12	10	2	-	-	4
<u>Mary Rose</u>	83	27	13	333	6	120	83	12	20	26	-	-	-	8	10	4	-	-	4
<u>4th Whelp</u>	64 $\frac{1}{2}$			130															
<u>9th Whelp</u>	67 $\frac{1}{2}$			130															
<u>Whelps</u> (remainder)	62	25	9	160	3	60													
<u>Moon</u>				140															
<u>Seven Stars</u>				140															
<u>Henrietta</u>) <u>Maria</u>)	52	15	6	30															

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