

**WOMEN NAVAL DOCKYARD WORKERS IN TWO
19TH CENTURY DOCKYARD TOWNS: CHATHAM
AND PLYMOUTH**

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A thesis submitted in partial fulfillment of the requirements of the University
of Greenwich for the Degree of Master of Philosophy

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DECLARATION

I certify that this work has not been accepted in substance for any degree, and is not concurrently being submitted for any degree other than that of Master of Philosophy being studied at the University of Greenwich. I also declare that this work is the result of my own investigations except where otherwise identified by reference and that I have not plagiarised the work of others.

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ABSTRACT

The study focuses on various aspects of the employment of women in the Royal Naval Dockyards of Chatham and Plymouth in the nineteenth century in order to enlarge the current body of knowledge about the lives of women workers. Through an examination of the history of the two towns and the impact of the dockyards on their inhabitants it is shown that distinctive communities evolved in these areas, with their particular version of a maritime heritage.

The dockyard workers studied here fit some but not all of the accepted theories about women's employment, in particular that they illustrated the norms of gender-defined and very low paid work, while the differences are largely connected with their unusual position in an extremely large government organisation of longstanding, overwhelmingly dominated by male workers. Women were not employed to work alongside men in traditional dockyard crafts, but operated in specific areas. The reasons for the decisions to employ women in each case are examined, together with discussion of the developing technology associated with some of these decisions. The reasons are shown to vary, mainly between labour shortages and cost-cutting.

Comparisons are made between working in commercial enterprises in rope making and in a government organisation particularly through the Report of a Royal Commission and some trades union records. The key features are size, modern equipment and labour relations.

Information has been gathered about the ages, addresses and family status of some of the women, and used to assess the composition and social position of this segment of the female workforce. It is concluded that long standing beliefs that the workforce consisted only of widows and orphans were misplaced and also that the ambivalent position of these women in their communities is further evidence of the fine gradations within the working class.

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ABBREVIATIONS

| | |
|-----|------------------------------|
| NAA | The National Archives |
| NMM | The National Maritime Museum |
| WDM | The Western Daily Mercury |

CHAPTER 1

INTRODUCTION

The study is concerned with women employed in Royal Naval Dockyards in England and Wales in the nineteenth century. These yards, government institutions building, repairing and equipping the vessels of the Royal Navy provided an unusual, even unique, work environment for women. The home dockyards, at Chatham, Plymouth/Devonport, Portsmouth, Sheerness, Woolwich and Deptford were extremely large and employed thousands of men, and the numbers of women were always very modest, initially only about half a dozen in each yard. They did not work alongside men, but were employed in specific areas, the manufacture of ropes and flags - on clearly defined terms. The earliest were taken on, in all the yards, to repair “colours”, i.e. flags, during the Napoleonic Wars, intended to be for the duration of the war only, but remaining, in fact, throughout the century and beyond. A different small group worked at the Devonport yard only, on twinespinning, which is the first stage of ropemaking, certainly in 1806, and certainly in 1858, but the record is not clear on the continuity of their employment. The largest groups, whose employment began in the 1860s, were taken on as part of the general modernisation of the dockyards and ropemaking in particular, when they operated newly developed spinning machines, at Chatham and, a little later, at Devonport. By the end of the nineteenth century there were also a few women tracers as civil service posts were opened to women, but this study is concerned with the manual workers.

The aims of the project therefore, are to demonstrate why women came to be employed in the Royal Naval Dockyards in the nineteenth century and to consider their position and significance in the workforce and the community, and also to locate their experience in the wider, emerging picture of women’s employment in the nineteenth century.

This thesis shows how and why women came to be employed in particular areas of the work of the Royal Naval Dockyards in the nineteenth century, focusing particularly on Chatham and Plymouth. This requires appreciation of changing technology and

requirements to cut costs and of the pressures on the dockyard managers in time of war as well as social attitudes about the employment of women. As well as situating some of the individual women in their local communities, the study also places these workers in the complex wider picture of growing knowledge about women's lives in the nineteenth century.

Although the actual work of the machine-spinning of rope was similar to other types of machine-spinning, the conditions and surroundings of the dockyards were very different from commercial cotton or woollen mills and also of commercial rope production. The conditions were different in that, although the manufacture of rope was a crucial element in the fitting out of ships, the ropery was only a small section of the work of a dockyard where the very numerous shipwrights and other highly skilled artisans set the tone of the workforce. Unlike a private ropeworks or cotton or woollen mill, the employer was not either a local striving entrepreneur or an established wealthy company, but an arm of the state, making discipline and security, aspects of daily routine. Does this mean therefore, that the dockyard women occupied a particular place in the overall structure of women's employment and that they do not fit into the general pattern of theories and analyses of this period?

The study has to be located on the broad canvas of the history of women's work in the nineteenth century, and it needs to be set within the body of theory that has emerged in the 30 years or so since *Hidden from History*¹ challenged the accepted notions of women's activities and significance at work. With its highly focused and detailed view, this study could either reinforce or contradict some of the concepts that have become standard elements in understanding this aspect of the history of women and also of the working class. It is, therefore, an essential contribution to our growing knowledge in this area. While it is necessary to show how thinking about women's employment has evolved in general, of particular relevance is a thesis put forward by Jane Humphries in 1995,² in which she argues for the necessity of looking in detail at the operation of the specific ways,

¹ Sheila Rowbotham, *Hidden from History*, (London, Pluto, 1973).

² J.Humphries, "Women and paid work" in J.Purvis, ed. *Women's History: Britain, 1850-1945* (London, UCL, 1995).

and especially the timing of developments in which women have been disadvantaged in the labour market, to be able to make sense of the long term tendencies. It is, however, a fairly long road with some major diversions along it that takes us from *Hidden From History* in 1969 to 1995.

Much earlier in the twentieth century, in 1929, despite the burst of energy and activity surrounding the winning of the franchise for women in Britain, Virginia Woolf deplored the dearth of histories of women. She said:

The history of England is the history of the male line, not of the female. Of our fathers we know always some fact, some distinction. They were soldiers or they were sailors; they filled that office or they made that law. But of our mothers, our grandmothers, our great-grandmothers, what remains? We know nothing of their marriages and the number of children they bore.³

The truth was not so much that no histories had been written but that they never entered the mainstream. At the time, Woolf could also have complained that the available histories contained little about men in general, as opposed to the notable few. At that time, and for long after, thinking about history, for the most part, meant thinking about major political events and the leaders associated with them.

In the nineteenth century the few histories of women that were published tended to be either collections of carefully constructed biographies of women celebrated for their achievements or “good works”, and intended to provide examples for young women to aspire to, or were studies of the lives of queens or princesses. One writer of the former type was Mrs Clara Lucas Balfour, whose titles included *Working women of the last half century: the lessons of their lives* and *Women worth emulating*.⁴ The subjects were notable for their successes in science and astronomy for example, but also for their womanly traits such as self-sacrifice and humility. Other biographers typically dealt with Florence Nightingale, but portrayed her as the devoted “Lady with the Lamp” rather than the

³ V. Woolf, “Women and fiction” in V. Woolf, *Collected Essays*, Vol 2 (London, Hogarth Press, 1966).

⁴ Quoted in June Purvis, ed. *Women's History: Britain 1850-1945*, (London: UCL Press, 1995).

determined and ambitious reformer of systems, still with the aim of inspiring the young to follow the feminine ideal.

Some of the studies of queens and princesses were actually serious pieces of academic research undertaken by the newly emerging female graduates of the late nineteenth century. There were also histories written by various campaigners for the vote and for higher education. Charlotte Cameron Stopes, an early graduate and campaigner for the vote, published in 1894, *British freewomen, their historical privileges*.⁵ Two years later, Georgina Hill challenged the Whiggish drift of contemporary history in *Women in English life from mediaeval to modern times*,⁶ claiming that for women while there had been improvement in one direction there had been deterioration in another. These however, did not become part of the history taught in schools.

In the 1890s with the rise of social investigations, particularly associated with the London School of Economics and the Fabian Society, there was interest shown in the experience of women in the Industrial Revolution and after. Some of the studies of the contemporary situation, often written as part of campaigns by active members of the Fabian Society, have become classics, used as primary source material today. Examples are B.L Hutchins, *Women in Modern History*,⁷ published in 1915, Maud Pember Reeves, *Round About a Pound a Week*⁸, Clementina Black, *Married Women's Work*.⁹ The same environment nurtured others who did groundbreaking work such as Alice Clark, who wrote, *Working Life of Women in the seventeenth century*¹⁰ and Ivy Pinchbeck, who, in 1930, published *Women Workers and the Industrial Revolution*,¹¹ still required reading for this topic.

Although this work was appearing alongside more general inquiries into working class life, such as Booth's and Rowntree's noted studies of London and York respectively, the work

⁵ Quoted in June Purvis, *Women's History*, p 2.

⁶ Quoted in June Purvis, *Women's History*, p 4.

⁷ B.L.Hutchins *Women in Modern History*, (London, G.Bell and Sons Ltd, 1915). Reprinted 1978.

⁸ M. Pember Reeves, *Round About a Pound a Week*, (London, G.Bell and Sons Ltd, 1913). Reprinted by Virago, 1979.

⁹ Clementina Black, *Married Women's Work*, (London, G.Bell and Sons, 1915) Reprinted by Virago, 1983.

¹⁰ A. Clark, *Working Life of Women in the Seventeenth Century* (London: Routledge and Sons Ltd, 1919).

on women was sidelined. It is true that all these early studies in social and economic history remained to some extent, the preserve of university researchers and social and political activists rather than being taken up in school curricula or as popular history, and that the contemporary social surveys were, of course, not history anyway, but the historical material was not used in school and university teaching. When the Industrial Revolution was taught in schools, it was a matter of Spinning Jennies and steam engines, rather than workers' lives. It was always noted though, that women and children worked in the textile mills. However, the energy and activism of the early feminists did not lead to a popular re-appraisal of the history of working women at the time.

With the rise of a new wave of feminism, new work began to appear in the 1970s and 80s. It mostly had a clearly discernible political basis. Rowbotham's path breaking text, like many others, was influenced by the experience of women on the left in politics, who, in an era of rapid changes in thinking about society, often found that women's inequality, both in the past and in the present, was not a major concern of their male colleagues. Concern with women's inequalities was, indeed, described as a diversion from the main aim, which was to transform society along socialist lines, thereby ending all forms of injustice. Many left-wing women felt that without specific action on women's situation, nothing would be achieved. In this climate, many of them became involved in the emerging feminist movement, the "second wave", and in investigating women's history.

It could be said that feminists set the pace for this new research, defining the main aims and so setting the agenda. Women's history then tended to develop alongside mainstream history but for a long time, slightly apart. A distinction began to be made between feminist history and women's history. Women's history is concerned with women as the subject of the study and might or might not be written from a feminist point of view. Feminist history, on the other hand, is written from a feminist point of view, whatever the subject. Women's history and feminist history are not therefore, interchangeable terms, although they are frequently used as if they were. In the early years of this development, hostility was expressed by some prominent male historians, particularly to feminist history, and this

¹¹ I. Pinchbeck, *Women Workers and the Industrial Revolution 1750-1850* (London, Routledge 1930),

has not disappeared. This hostility led to many years of non acceptance of women's history in mainstream curricula.

In a comparatively short time feminism began to show marked divisions. From the earliest days of the new movement there had always been a division between the socialist and liberal feminists, though these frequently worked together comfortably enough. However, radical feminists often working on ideas connected with the concept of patriarchy, and then increasingly, lesbian feminists undermined the initial shows of unity, so that, even as women's studies and women's history courses began to appear in university, college and even school programmes, the earlier big organisations, which had given life to these, largely disappeared.

In the years since, issues of gender and debates about the meaning of gender have become more prevalent, influenced by the growth of more theoretical approaches in feminist literary studies. These can be generally grouped together as postmodernist in outlook and proceeding from a view that puts language and discourse at the centre of study rather than material reality. While this has been welcomed on some sides,¹² there has also been a growth of anxiety that what is being welcomed by some as a tool of historical analysis, is actually inimical to the study of history. Joan Hoff writing in 1994¹³ argues that postmodern theory is "hostile to the basic concept of linear time and of cause and effect" and can be dangerously paralysing in "analysing myriad representations of cultural forms and discourses, disconnected by material reality". There is a case then for saying that this type of theoretical approach is not likely to be fruitful in the project undertaken here. However, alongside the postmodernists, more traditional historical analysis continues to flourish, even in women's history, though usually with at least a nod to the importance of discourse and relative values. For example, Krista Cowman's *Women of the Right Spirit: Paid Organisers of the Women's Social and Political Union, 1904-18*,¹⁴ published in 2007, aims to recapture a sense of what membership of the organisation meant to the majority of

reprinted 1969, 1981.

¹² Joan W. Scott, "Gender: a Useful Category of Analysis" in *American History Review*, 91, 1986.

¹³ J.Hoff, "Gender as a postmodern category of paralysis" in *Women's History Review* 3 (2) 1994.

¹⁴ K.Cowman, *Women of the Right Spirit: Paid Organisers of the Women's Social and Political Union, 1904-18*, (Manchester, Manchester University Press, 2007).

its adherents, by focusing on the records of the activities of the 150 paid workers for whom there is good information. Interestingly, the series editors for *Gender in History* of which the book is part, have a foreword in which they say, “The expansion of research into the history of women and gender since the 1970s has changed the face of history. Using the insights of feminist theory and of historians of women, gender historians have explored the configurations in the past of gender identities and relations between the sexes.....Yet gender history has not abandoned the original, inspirational project of women’s history: to recover and reveal the lived experience of women in the past and the present.”¹⁵

Another recent study (2005) that uses traditional empirical methods alongside contemporary gender issues is Marjorie McIntosh’s, *Working Women in English Society, 1300-1620*.¹⁶ In this she discusses the material available for the pre-industrial period and questions the conventional idea of a “Golden Age” when women were much better able to work independently, showing that in traditional industries such as brewing, in which women had always been prominent while it was mainly a domestic operation, as the scale of operations developed – though not to the factory stage- women were excluded. In contrast, Katrina Honeyman, in *Women, Gender and Industrialisation in England, 1700-1870*, published in 2000, places gender firmly in the centre of both the enquiry and the conclusions drawn, still, however, using material evidence drawn from a wide range empirically based studies. Honeyman says: “This book has analysed the process of industrialisation and the making of industrial society through the lens of genderIt has shown how every aspect of the history of industrialisation has a gendered component, each of which was vital to the operation of the whole process”.¹⁷ She argues that gender was “important in determining the nature of industrialisation” and also that “industrialisation was a process that “made” gender,”¹⁸ conclusions that reflect both women’s history and gender history.

¹⁵ K. Cowman, *Women of the Right Spirit*, Introduction by Series Editors, Pam Sharpe, Patricia Shriner and Penny Summerfield.

¹⁶ M.K.McIntosh, *Working Women in English Society 1300-1620*, (Cambridge, Cambridge University Press, 2005).

¹⁷ K. Honeyman, *Women, Gender and Industrialisation in England, 1700-1870*. (London, Palgrave, MacMillan, 2000), pp 138, 147.

Having followed the thread of feminist history and feminist theory through to present times, it is necessary to look more closely at how thinking about the history of women's work developed.

Women workers have always been visible, of course. In pre-industrial times they were part of the agricultural workforce, unremarkable as milkmaids, dairymaids, fruitpickers, shepherdesses, goosegirls and so on.¹⁹ In those times, they also worked as fish gutters and in coal mines as well as working at, or near home, spinning wool and linen and in other phases of textile manufacture, and in a wide variety of needle trades, lacemaking, straw plaiting, not to mention domestic service in all its forms. With the advent of factory production, however, these activities were increasingly seen by middle and upper class observers, as problematic. Some of the activities themselves, such as working underground in coal mines, were seen as too dangerous, both morally and physically²⁰, but many more gave rise to worries connected with the women being away from their homes and the supervision of their fathers and husbands. Girls working outside the home would not learn the domestic arts and with their own wages, would become too independent. Married women working outside the home would neglect their children and their household duties as well as being exposed to moral dangers.²¹ During the nineteenth century, philanthropists and some aristocratic women concerned themselves with these anxieties, as well as well-meaning middle class women, themselves released from participation in their own family businesses by the growth in scale of workshops, factories and shops and the subsequent separation of home and workplace. Within the middle class, the notion of "separate spheres" for women and men dictated that while women had an important (though not independent) role to play in the home, the world outside the home belonged to men, and women in the workplace were increasingly seen as an aberration.²² Within the working class, while many may have aspired to a life where the husband and father earned enough

¹⁸ K. Honeyman, *Women, Gender*, pp 138-9.

¹⁹ They appear in numerous nursery rhymes and fairy tales. Also, see M.McIntosh, *Working Women in English Society 1300-1620*, chapter 1.

²⁰ For a full discussion see A..John, *By the Sweat of Their Brow: Women Workers in Victorian Coal Mines*, (London, Routledge and Kegan Paul, 1984)

²¹ As discussed by F. Engels, *The Condition of the Working Class in England*, (Reprinted London, Penguin, 1987)

to keep his wife and daughters at home, the level of wages made this impossible for large swathes of the labouring class. However, among skilled artisans it was possible and practised.²³ The concept of a “family wage” developed and was defended by Trades Unionists, particularly in the skilled, better paid trades. The idea was that any man’s wages should be set at a level that would sustain a wife and several dependent children, whether or not he had in fact, got any dependents at all.²⁴ Alongside this, was a justification for women’s wages being lower than men’s, usually a third or half as much, on the grounds that a father or husband also contributed to their maintenance, disregarding the circumstances of the thousands of widows, deserted women and mature single women living independently, with or without dependents.

Despite its distance from reality, this ideology based on separate spheres and family wage, appears to have been very powerful in the latter part of the nineteenth century, contributing strongly to a perception of women in the workplace as abnormal, “other”, requiring either control and restriction or special measures for their safety. Hence the gradual exclusion of women from skilled trades on the one hand and the various Factory Acts and protective legislation on the other.²⁵ It should be noted, however, that there was always resistance to this ideology as well as a conscious, perhaps cynical, use of it by some campaigners to achieve improvements in working conditions for all. Resistance was found among those who supported the efforts of working women to continue in occupations deemed unsuitable, and, of course, in the long running struggles of the minority of middle and

²² See L. Davidoff and C. Hall, “The Architecture of Public and Private Life: English Middle Class Society in a Provincial Town” in A. Sutcliffe, ed *The Pursuit of Urban Life* (London, Edward Arnold, 1983).

²³ While there is virtually no fresh debate about the nature or existence of “separate spheres” for middle-class women and men, interest in the “male breadwinner” or “family wage” in working class contexts continues as more data comes to light. See A. Janssens, “The rise and decline of the male breadwinner family? An overview of the debate” in *International Review of Social History*, 42, supplement 5. 1997. pp 1-23. Also, Van Poppel, Van Dalen and Walhout, “Diffusion of a social norm: tracing the emergence of the housewife in the Netherlands, 1812-1922” in *Economic History Review* Vol 62, no1, February 2009 and C. Creighton, “The rise and fall of the “male breadwinner family” in Britain” in *Cambridge Journal of Economics*, 23, 1999.

²⁴ See Michelle Barrett and Mary McIntosh, “The Family Wage” in Whitelegg, ed *The Changing Experience of Women* (Oxford, Blackwell, 1892), J. Humphries, “Protective Legislation, the Capitalist State and Working Class Men” in *Feminist Review* no 7, 1981

²⁵ See Olive Banks, *Faces of Feminism*, (Oxford, Martin Robertson, 1981)

upper class women to be involved in public and professional life, with its associated struggle to enter and provide secondary and higher education for girls and women.²⁶

Nevertheless, by the end of the century, the prevailing thinking about women at work outside the home seems to have been that it was not normal, even among many working class women. This surely explains the stir caused by the employment of women during the First World War. Young women left domestic service to work in munitions factories in huge numbers, but also left various poorly paid industrial jobs for the better pay of the munitions factories or the transport system.²⁷ Conspicuously, middle class women took up office and hospital work and the misleading impression was created that women were out at work on a vast scale for the first time. Something similar happened in the Second World War, so that in the second half of the twentieth century, there was a widespread belief that it was only the advent of the two world wars that had brought women into employment.

When, in the 1960s and 70s, with the rise of both the Women's Liberation Movement and "History from Below", people, women mostly, looked back on their history and started to research working class life in detail and particularly women's occupations, there was an air of discovery as the range, diversity and importance of women's involvement in the labour force were charted. By 1986, Angela John, in the Introduction to *Unequal Opportunities*,²⁸ commented that by then there were studies of women's employment in single industries and institutions and collections of Victorian documents, though a lack of overall studies and still the need to address some key issues in women's history. Professor John outlines the problems of defining women's social class, of obscuring the problems of unemployment by focusing on paid work and of the broad problems of categorisation of work, full or part-time for example. However, this volume in tackling questions of sex, status and skill through detailed studies of particular industries was to provide a significant advance and a point of reference for development of theories about women's employment, which were then to appear.

²⁶ See J. McDermid "Women and Education" in J. Purvis ed, *Women's History*.

²⁷ G. Braybon and P. Summerfield, *Out of the Cage* (London, Pandora, 1987)

²⁸ A.V John ed *Unequal Opportunities: Women's Employment in England 1800-1918* (Oxford, Basil Blackwell, 1986)

From the research and publications of the late twentieth century, it can be generalised that, in the nineteenth century although industrialisation and modernisation provided some opportunities for women, and they did participate in the hard won improvements in wages and working conditions, women were mostly and deliberately excluded from the most highly rewarded occupations and increasingly to be found in the least skilled and worst paid levels of industry, often in areas of work confined to women. As technological advance led to deskilling, women were not infrequently used to oust men from better paid work,²⁹ thus increasing the resentment often expressed by male trade unionists. In the work that appeared in the 1970s and 80s, whether writing about the contemporary situation or historically, there were attempts to fit the experience of women into Dual Labour Market theory, which analysed the labour market to show that work generally could be divided between a primary and a secondary sector, and that workers did not have the means or opportunities to move freely over the range of occupations and that, in the less rewarded secondary sector, pay, conditions, security, and incidental benefits like pensions and sick pay were absent or significantly inferior. It was always problematic to fit women's work into the secondary sector as some theorists tried to do.³⁰ Not only did women typically have work patterns that were different from men's and influenced pay and prospects but also, given the high numbers employed in the public sector at that time, factors like security and pensions did not fit the pattern. It appears that this theory has a certain dynamism since efforts are still being made to find measurements and formulae in order to reveal the relationship of women's to men's work experience.³¹ More successful attempts were made to fit women as a special category into the Marxist reserve army of labour theory, notably by Irene Breugel³² in 1979. Her conclusion has resonance in 2010 as she argued that, while on the one hand, discriminatory policies had often disadvantaged women, in the context of the 1970s, where although unemployment was at a high level, such growth as there was tended to be in low paid work in the service sector, so that in that

²⁹ See many examples in K. Honeyman, *Women, Gender*.

³⁰ R. D. Barron and G.M Norris, "Sexual divisions and the labour market", in D. Leonard and S. Allen, eds, *Dependence and exploitation in Work and Marriage* (London, Longman, 1976).

³¹ See C. Siegarth Meyer and S. Mukerjee, "Investigating Dual Labour Market Theory for Women" in *Eastern Economic Journal* Vol33, No3, Summer 2007.

³² I. Breugel, "Women as a reserve army of labour" in *Feminist Review* 1979, 3.

particular situation the “reserve army” theory did not perfectly apply. Commentators are raising the concern that in the economic climate of 2010, and the expected contraction of service industries of all kinds, women may be particularly vulnerable.³³

The argument put forward by Jane Humphries,³⁴ referred to previously, is persuasive and particularly interesting for this study of the dockyard women. In summary, she suggests a need for revised periodisation in understanding women’s position in the labour market and also more reference to the prevailing socio-economic context. Humphries argues that, while there is general agreement that the early stages of industrialisation probably did provide new opportunities for women but that workforce participation by women had declined by the end of the century, rather more rigour in charting the timing of changes is required. She suggests that the customary view of a long decline over the nineteenth century is not borne out by the evidence and that we should rather see a sharper difference between the early and later periods. Using census data to illustrate workforce participation, she shows that in the classic industrialisation period, before much effective protective legislation was in force and before trade unions were well organised, there were new opportunities for women to work outside the home. This was accompanied by the loss of traditional employment such as spinning at home and some forms of agricultural work, but, overall, the evidence points to more paid work being available, even though there might be less flexibility in location and hours worked. However, in the latter part of the century, the situation was different. Not only was legislation more effectual in reducing hours, participation by women and children in certain industries and also restrictive labour organisation developing, but also the changed socio-economic context was significant. Humphries argues that the relative slowdown in economic growth, creating conditions of persistent underemployment, itself contributed to the exclusion of women from many sectors of employment and to strengthening of the domestic ideal for women. How this thesis fits the specialised circumstances of employment by the government in royal naval dockyards is discussed below in the chapter dealing with the introduction of machine-spinning in the 1860s.

³³ Ruth Sunderland, “The real victims of this credit crunch? Women” in *The Observer*, 18.01.09

While the main thrust of this study is to add to knowledge about women's employment in general, it also adds to the existing picture of women associated with the maritime scene in particular. There are still many gaps to be filled. Previously some attention has been focused on women at sea, the crossdressers, the wives of mariners, female contractors in shipbuilding and supplying the dockyards, and women as a social presence on ships and in dockyards, collecting pay for example, rather than working as part of the institution. There was also a seventeenth century and eighteenth century tradition of wives of labourers' protesting on their husbands' behalf against deteriorating working conditions and petitions for arrears of pay.³⁵ The employees in the Roperies and the Colour Lofts had unremarkable jobs, seldom in the news at all, so low key that their records are patchy and quite difficult to trace, where they exist at all. They were, however, part of the dockyard community and their story fills out the story of the whole, and is therefore, valuable.

Sources and Methodology

In straightforward terms, the basic methodology used in tracing the experience of these hitherto obscure groups of dockyard workers is to look for them in the official dockyard and Admiralty papers and in other previously published and unpublished writing on the dockyards and the towns in which they were situated. Other material has been sought in the history of rope making. These findings need to be informed by more general material about the period written or gathered for relevant purposes such as histories of women, of labour, of the working class and theories about how these should be approached. There is an abundance of the latter general material, but germane material on the women themselves is mostly found in the form of small items, lurking in large, unindexed documents.

³⁴ Jane Humphries, "Women and Paid Work" in June Purvis, ed, *Women's History: Britain, 1850-1950*.

³⁵ See Ann V. Coats, "Breakfast and chips – symbols of power relations in Deptford and Woolwich dockyards in the seventeenth and eighteenth centuries" in R.Owen, ed and publisher, *Shipbuilding on the Thames and Thames-built Ships, Proceedings of a Symposium*, 2004. p105-122

The usual problems with social history apply. Very general conclusions may be drawn, but ultimately, each study has been set up to ask of its particular material, not only specific questions, but questions asked from a particular point of view. In recent times, we do not perhaps find either such polarised approaches as “the optimistic” or “the pessimistic” view of industrialisation or so many such strictly schematic approaches as the Marxist for example, but there are still built-in assumptions to be aware of. In women’s and gender history, as has been shown above, similar positional issues apply. For example, this can be all too evident as an inclination to over- estimate the power of male trades unionists. Bearing in mind all such caveats, it has still seemed reasonable to draw on much of this work,³⁶ in the attempt made here to understand the social position of workers in an employment situation that does not quite fit the nineteenth century standard. While many social histories describe the general impoverishment of the unskilled working class with its attendant insecurity, lack of education and prospects, far fewer deal with the more prosperous sections of the working class. One of these, Geoffrey Crossick’s³⁷ is of particular interest because the workers in question are skilled artisans of course, but also because of the importance of the Woolwich Arsenal, the main employer in the town. The skilled workers of the Arsenal had much in common with the shipwrights and other skilled workers in the dockyards and so this study contains some useful material on their social attitudes and influence. One theme of significance in discussing the dockyard workers is the idea of respectability. This, however, has proved elusive as a central idea in the literature and must mostly be inferred from work such as Crossick’s. The notion of respectability arises in virtually every discussion of the characteristics of skilled artisans, including dockyard workers, and their influence, wherever they are situated. In relation to the female workforce studied here, questions arise as to whether they were members of the elite stratum as widows and orphans of dockyardmen and petty officers, as is often asserted, or whether they were, in fact, just as likely to belong to the poorest labouring class, though still constrained by the need for respectability to get employment in the yards.

³⁶ For example, J. Benson, *The Working Class in Britain 1859-1939* (London, Longman, 1989; E. Hopkins, *Working-class Self-Help* (London, UCL, 1995).

³⁷ G. Crossick, *An Artisan Elite in Victorian London: Kentish London 1840-1880* (London, Croom Helm, 1978)

The handful of works on the organisation of and particular issues within the dockyards are invaluable, but hardly mention women. Roger Morriss's study, *The Royal Dockyards during the Revolutionary and Napoleonic Wars*³⁸ and his later work, *Naval Power and British Culture, 1760-1850*,³⁹ are islands in an uncharted sea; Mavis Waters' PhD, *A Social History of the Chatham Dockyard Workforce, 1860-1906*⁴⁰ casts light on an otherwise hidden community, and she does write about the women labourers, though the women play a peripheral role, because her interest is mainly in the political activities of the dockyardmen. However she does very usefully discuss aspects of the impact of the dockyardmen on the culture of the Medway towns. Similarly, Mary Hilson in her PhD, *Working Class Politics in Plymouth, 1890-1920*⁴¹ refers to the women working in Devonport dockyard, but because of their small number and her acceptance of the belief that the jobs were all given to widows and orphans, does not find them significant in her study of the particular style of politics in Plymouth and Devonport in which the dockyardmen figure strongly. A history of the Plymouth and Devonport yards, *The Devonport Dockyard Story*,⁴² though concerned with some workforce issues alongside the physical development of the yard, does not mention female employees in the nineteenth century at all. Contributions by Mavis Waters, Roger Knight, R. Morriss, P. MacDougall and N. Casey in *History of Work and Labour Relations in the Royal Dockyards*, edited by K. Lunn and A. Day⁴³ add to an understanding of the work of the yards and its importance in the towns in the nineteenth century, but are not concerned with the female workforce. Other articles by Mavis Waters in various journals add insights into the nature of the Chatham Dockyard workforce and their influence on the culture of the Medway Towns.⁴⁴ Falling outside these, but still having an interesting point of view about the importance of

³⁸R. Morriss, *The Royal Dockyards during the Revolutionary and Napoleonic Wars* (Leicester University Press, 1983)

³⁹ R. Morriss, *Naval Power and British Culture, 1760-1850* (Aldershot, Ashgate, 2004)

⁴⁰ M. Waters, *A Social History of the Chatham Dockyard Workforce*, Ph D, University of Essex, 1979.

⁴¹ M. Hilson, *Working Class Politics in Plymouth, 1890-1920*, PhD, University of Exeter, 1998.

⁴² K. V. Burns, *The Devonport Dockyard Story*, (Liskeard, Maritime Books, 1984).

⁴³ K. Lunn and A. Day, eds, *History of Work and Labour relations in the Royal Dockyards*, (London, Mansell, 1999).

⁴⁴ See, for example, "The Dockyard Workforce: A picture of Chatham Dockyard c. 1860", in *Archaeologia Cantiana*, Vol.97, 1981, "Changes in the Chatham Dockyard workforce, 1860-1887, in *Mariners' Mirror*, Vol 69, 1983, "Dockyard and Parliament: a study of the unskilled workers in Chatham Yard, 1860-1900", in *Southern History*, 6, 1984.

the dockyard in Chatham is *The Chatham Scandal: a history of Medway's prostitution in the late nineteenth century*,⁴⁵ by Brian Joyce. The fact that the dockyard towns as naval and garrison towns were subject to the Contagious Diseases Acts of the 1860s,⁴⁶ until they were repealed in 1886, is one of the factors that have to be taken into account in understanding the local communities. Judith Walkowitz's book and articles⁴⁷ on the working of the CD Acts in Plymouth are helpful here, as well as contributing to the picture of Plymouth in general. These studies, Walkowitz's in particular, are especially valuable in that they focus on the everyday lives of working class women. Walkowitz saw the Acts as representing "an attempt to clarify the relationship between the unrespectable and respectable poor"⁴⁸ and as well as discussing the operation of the laws and their impact, ties in her findings to the "social economy of the laboring poor".

For the chapter on the towns themselves, there are surprisingly few studies of Plymouth⁴⁹ available, and not much in very recent times. The most useful general work is by C. Gill, published in 1979, which in two volumes covers the whole of Plymouth's past, with helpful explanations of the Three Towns, which confusingly make up Plymouth. The development of the dockyard is described in various admiralty papers and also by J. Coad in *Historic Architecture of the Royal Navy*⁵⁰, but for the town itself it proved necessary to search journals such as *Proceedings of the Devonshire Association for the Advancement of Science, Literature and Art* for glimpses of the life of the town in the nineteenth century. Descriptions of the development of the local transport system, street lighting, libraries, (there was a Carnegie library), museum and gallery, parks and open spaces are available in a recent *History and Guide* by John Van Der Kiste⁵¹ but this is not analytical. Because Plymouth was notorious as an area of poor housing and overcrowding, it attracted the

⁴⁵ B. Joyce, *The Chatham Scandal: a history of Medway's prostitution in the late nineteenth century* (Rochester, Baggins Book Bazaar/Bruce Aubry, 1999)

⁴⁶ See E. M. Sigsworth and T. J. Wyke, "A Study of Victorian Prostitution and Venereal Disease" in M. Vicinus, ed. *Suffer and Be Still: Women in the Victorian Age* (London, Methuen, 1980)

⁴⁷ J. Walkowitz, *Prostitution and Victorian Society: women, class and the state*. (Cambridge, Cambridge University Press, 1980).

⁴⁸ J. Walkowitz, "The Making of an outcast group: Prostitutes and Working Women in Nineteenth-Century Plymouth and Southampton" in M. Vicinus, ed. *A Widening Sphere: Changing Roles of Victorian Women*, (London, Methuen, 1980)

⁴⁹ C. Gill, *Plymouth: A New History* (Vermont, David and Charles, 1979)

⁵⁰ J. Coad, *Historic Architecture of the Royal Navy* (London, Gollancz, 1983).

⁵¹ J. Van Der Kiste, *Plymouth: History and Guide*, (Stroud, History Press, 2009).

attention of philanthropists, and records of their work have been useful. In particular, the biography of Priscilla Lydia Sellon who took up charitable work in Plymouth for religious motives was helpful. Information on the area was also gathered from studies of the cholera outbreaks in 1830, 1850 and 1890.⁵²

For Chatham, there are useful local studies of Chatham⁵³ and Gillingham,⁵⁴ investigating their earliest beginnings and tracing their development to modern times. Perhaps inevitably, these contain material that has been subsequently queried, such as the dating of the foundation of the dockyard, but they offer, nevertheless, thoughtful explanations and a strong sense of the character of the towns and the logistical development of the two towns which together with, to a lesser extent, the city of Rochester, housed Chatham dockyard and most of its workers. More recently, Philip MacDougall has published *Chatham Past*⁵⁵ which concentrates on the period between the establishment of the dockyard in 1568 and the end of the twentieth century. Brian Joyce's book mentioned above also has useful detail on employment in the town and its growth in the nineteenth century. For the early years of the nineteenth century, two books published in the wake of two disastrous fires in Chatham give a most unusual insight into employment and incomes. These were published in 1801 and 1810 by William Jefferys,⁵⁶ treasurer to the relief committee that was set up following the first fire. As well as a description of the fire of 1800 and the setting up of the subscription fund with all the subscribers, the book contains names and details of all those who received help. The details show the claimant's occupation, family size and amounts claimed and paid out. After the second fire in which two pawnshops were burned down, the committee accepted claims from people who had lost pledged items in the fire. This book therefore contains names, occupations, family sizes and the value claimed for the articles lost and in many cases, their incomes. For both Plymouth and Chatham, there are short descriptions by the naval Surgeons, reporting on the dockyards in the series *The*

⁵² Neville C. Oswald, "Epidemics in Devon" in *Proceedings of the Devonshire Association for the Advancement of Science, Literature and Art*, Vol 109, 1977.

⁵³ J.Presnail, *Chatham, The Story of a Dockyard Town* (Chatham, Medway Borough Council, 1976).

⁵⁴ Ronald A. Baldwin, *The Gillingham Chronicles* (Rochester, Baggins Book Bazaar/Bruce Aubry, 1998).

⁵⁵ P. MacDougall, *Chatham Past* (Chichester, Phillimore, 1999).

⁵⁶ W Jefferys, *An Account of the Great Fire which happened at Chatham on the 30th June, 1800* (Chatham, Ambrose Etherington, 1801).

Health of the Navy, held in the Admiralty Library at the Royal Naval Museum.⁵⁷ Although the series is a very long one, dockyards were included for only a relatively short run of years, happily though, these include the years of the introduction of machine ropespinning. Apart from the Waters thesis on Chatham, and the Hilson thesis on Plymouth already mentioned, there are no available studies centred on the nineteenth century workforces of either Plymouth or Chatham dockyards, or indeed of the towns generally, although labour issues feature importantly in Morriss's work and the collection edited by Lunn and Day. This present study, therefore, begins to fill this gap.

The discussion of the development of ropemaking is based on a mixture of secondary material and primary material, primary in that the books used date from the nineteenth century. Among the very few books available on this subject, D.S. MacMillan's study of the Sydney, Australia, firm of Archibald Forsyth⁵⁸ had useful information about the level of mechanisation in the commercial industry in the mid nineteenth century. This was reinforced by W. Tyson's *Rope, A history of the Cordage Industry of the United Kingdom*, published in 1966. A history by the firm itself of Frost Brothers, established in 1790, called *The Old Industry of Ropemaking with Modern Plant*, published in 1906, was interesting because of its photographs of the turn of the century machinery, but said little of change and nothing of the workers. More technical information was available from *A Treatise on Ropemaking as practised in Private and Public Ropeyards* by Robert Chapman, formerly Foreman to a Limehouse ropemaker and also Master Ropemaker of the Royal Deptford Dockyard, published in 1857⁵⁹ with a revised edition in 1868 that, although generally highly technical and mathematical, also gives details of the numbers of spinners to wheelturners, tenders and hatchellers and the relationship of their pay. Apart from Tyson, however, the most useful discovery was the section on *Ropemaking in Rees' Manufacturing Industry, 1819-1820*, edited by Neil Cossons in a David and Charles reprint.⁶⁰

⁵⁷ *Statistical Report on the Health of the Navy for the years 1868, 9, 70, 71, 72, 73, 74, 75, 76*. House of Commons Papers, numbers and dates in Bibliography.

⁵⁸ D. S. Macmillan, *Archibald Forsyth and Co: One Hundred Years of Ropemaking, 1865-1965* (Sydney, A. Forsyth and Co. Pty Ltd)

⁵⁹ R. Chapman, *A Treatise on Ropemaking* (London, Waterlow, 1857)

⁶⁰ A. Rees, *Manufacturing Industry; 1819-1820*, (Reprinted by David and Charles, Newton Abbott, 1970).

The primary material on the women workers has been drawn from Admiralty papers of various kinds, supplemented by newspaper reports. There is one official government report that is valuable, the *Report of the Committee on Dockyard Economy, 1859-60*.⁶¹ Otherwise almost all of the material comes from official letters. Some of the earliest mentions of a decision to take on a small number of women to assist in repairing colours, i.e. flags, can be found in series which can be cross referenced, that is to say, they can be seen in letters going to the Admiralty, then in replies back to the original dockyard, Chatham, in this case, and then followed up in orders sent out to all the yards. But this is unusual over the long period. By no means complete sets of letter books survive, and for Plymouth, there are no dockyard letters at all for the period when the spinning machinery was introduced. On the other hand, while pay books for Plymouth show women twine spinners for 1806 and 1807, and also many of the appointments of the rope spinners after 1867, there are no pay books for Chatham at all. Some of the material used is in the large run of papers at The National Archives, ADM which is catalogued and indexed very thoroughly, making it very accessible, but much of it comes from Chatham Dockyard Papers lodged at the National Maritime Museum in the Caird Library (CHA series). While this is a very substantial collection, it does not have complete runs of years in any of the various sections, such as letters to or from the Officers of the Yard and the Navy Board, or the Admiralty or to and from the Captain Superintendent. These papers in the years studied are, with very few exceptions, not annotated by subject, a few do not have page numbers. Although so valuable, therefore, they are quite difficult to use and there is always a danger of items being overlooked. The main volumes consulted were:

CHA/A/4 1766-1815 Abstracts of Admiralty Orders.

CHA/B/5 1802-1803 Out Letters to the Navy Board.

CHA/B/8 Out Letters

CHA/B/10 1805-6 Out Letters.

CHA/E/115 and 116. In letters for January to April, 1815.

CHA/E/73,74,79,80,83 In Letters for 1802,1804-5.

CHA/F 29 1816 In Letters.

⁶¹ Report of Committee Appointed by Admiralty 1859(sess2) xviii .

CHA/H/85 1852, CHA/99 and all volumes to CHA/H/145 In Letters for 1859-72.

At The National Archives the volumes consulted were mainly in the series ADM 106 and 174. ADM contains the letters and warrants concerning the employment of women in the early years of the 19th century and ADM174 contains material relating to Plymouth/Devonport.

Chatham Dockyard Historical Society has preserved and published a small quantity of information showing women and men employed in the sail and colour lofts at Chatham around the turn of the century.⁶² This material has useful detail in that it shows the starting date of the employment and the addresses of the workers. Devonport Dockyard Museum holds pay books for some years in the 1880s, showing the date of entry and date and place of birth and the employment record of workers in the ropery.⁶³

Newspapers, mostly local, have been an important source. While major events like the first employment of women in the spinning rooms were reported in *The Times* and photographs of the women at Chatham in the colour loft and in the spinning rooms appeared in the *Army and Navy Gazette*, most of the reports come from weekly columns in the Chatham and Plymouth papers. The Chatham paper most used is *The Chatham News*, which runs from the 1850s, with some material from the *Chatham Observer*. The Plymouth paper most used is the *Western Daily Mercury* which covers the years when the spinning machines were established at Plymouth. Plymouth was the scene of very many, but mostly short lived local papers.

Census material has been used in different parts of the thesis. In the discussion about the widespread nature and importance of ropemaking, the printed census on occupations following the 1851 census was analysed to discover the balance between male and female workers in different parts of the country.⁶⁴ Census material for Plymouth was consulted in studying its industrial growth in the early part of the nineteenth century and in attempts to trace workers there. The Enumerators' Census for the Medway towns is the basis for most

⁶² Chatham Dockyard Historical Society *Research Paper No 18, Workers of the Sail and Colour Lofts, 1800-1946* 2001.

⁶³ Devonport Dockyard Museum, paybooks shelved at DH1, DH3

⁶⁴ Census of Occupations, 1844 xxvii, vol 13, and 1851 Lxxxviii, vols 1,2.

of the information about individual women working at Chatham, using the census years 1851, 61, 71, 81 and 91. Medway Archives has the benefit of work done by volunteers who have extracted names from the Enumerators' Census for each of the years and then put them together in families. The records are then kept in alphabetical order for consultation. Mistakes can be easily made in this process, though identified fairly readily, but the results in establishing the growth and whereabouts of families are impressive. Similarly, the City of Plymouth Archives and Records have been used to try to trace workers there, however, there is not the useful gathering of material as at Chatham. The parish marriage registers for the central Plymouth area have been digitized, and an index based on both brides' and grooms' names produced,⁶⁵ but of course, it does not include civil marriages nor those solemnized in the non-conformist churches, so limiting the chances of finding the women named in the pay books. A further problem is that without addresses, it is much less certain that any record found really does relate to the particular woman in the pay records, with possible exceptions where there are very distinctive names. Occupations for brides are seldom given on marriage certificates in this period.

To investigate the position and significance of the women employed in the dockyards, the thesis is arranged as follows. Chapter Two locates the nineteenth century dockyards geographically and discusses the particular characteristics of the two towns, Chatham and Plymouth, where the roperies were to be developed in the 1860s. Chapter Three traces the thinking behind and eventual employment of the Colour Women, and of the early twine spinners at Plymouth. Chapter Four deals with the changing technology that led to the installation of rope spinning machinery and the employment of women and girls. Chapter Five traces the workers as far as is possible, and puts them into their local families and backgrounds, and also considers their working conditions, and their fate as the navy's need for rope, and/or the level of government spending varied. Chapter Six reconsiders the themes running through the study, of the need to evaluate the influences of new technology, changing ideologies and the significance of local situations.

⁶⁵ Devon FHS and Plymouth and West Devon Record Office, *Plymouth Marriage Index. An index of brides and grooms taken from the post- 1837 Plymouth Church of England marriage registers.* 2003.

CHAPTER 2

TWO DOCKYARD TOWNS: CHATHAM AND PLYMOUTH

The Towns

In this chapter it will be argued that, despite many essential differences in the earlier histories of Chatham and Plymouth, by the middle of the nineteenth century their dominance by the royal naval dockyards produced a population in both cases marked by characteristics associated with various aspects of dockyard life.

The growth and development of both Chatham and Plymouth from the sixteenth century onwards were much influenced by their close association with the Royal Navy and their identification as the sites of Royal Naval Dockyards. While Plymouth had long been an important port and base for merchant adventurers and voyages of exploration, Chatham only became significant with the development of its dockyard. It was not the first royal dockyard. Portsmouth claims to be the oldest Royal yard, having been started in 1495 by Henry VII, who also established yards on the Thames at Woolwich and Deptford¹ between 1512 and 1514, while Chatham was begun in 1568.²

In that year, from having been an unremarkable fishing village on the banks of the river Medway, with a population of about 200, Chatham began to change into a fast growing industrial complex as storehouses, a mast pond, forges, a wharf and then a dry dock were constructed. As ships began to be built, skilled workers, particularly shipwrights, were drawn to the town and its population increased dramatically. Some workers came from the nearby Thames area, where there were older yards, privately owned as well as the royal ones, for example at Deptford, but they also came from further afield. Local people also found work in the new dockyard in less skilled and more general types of work, and, of course, provided the later generations of trainees and apprentices for a broad range of

¹ J. G. Coad, *Historic Architecture of the Royal Navy* (London, Gollancz, 1983)

² P. MacDougall, *Chatham Past*, (Chichester, Phillimore, 1999)

occupations. The dockyard became the most significant local employer, a situation that continued until the mid twentieth century.

Other employment in the area in the period prior to the establishment of the dockyard was mainly based on agriculture. Mixed farming was characteristic of the area where extensive crops of wheat and barley were grown and sheep and cattle grazed on the marshy ground near the river. There was also a small fishing community, taking fish from the river. There appears to be no sign here of an older tradition of shipbuilding as on the Thames and elsewhere, and neither Chatham nor its bigger and more important neighbour, Rochester, had been part of the ancient system of providing ships for the defence of the country, like the south coast towns of Hythe, Dover and Sandwich. The town then, was decisively shaped by the government decision to build a dockyard there, initiating a relationship that was to characterise the town for the next four hundred years. To gain a clear picture of the local context of the dockyard it will be necessary to note also developments in Rochester to a certain extent, and more so, in Gillingham. The three towns have been closely linked from very early times although formally separate in local authority terms until the late twentieth century.³

The appeal of the area for the Tudor monarchs, by then establishing a sizeable and permanent fleet, was the shelter offered by the River Medway. Admiral Monson, writing in the early 17th century, noted that the anchorage at Chatham was:

So safe and secure a port for the ships to ride in that his Majesty's may better ride with a hawser at Chatham than with a cable at Portsmouth.⁴

Throughout the next three hundred years or so, the natural advantages of the Medway, its proximity to London and the fact that the enemies who threatened the country from time to time, mostly came from across the North Sea, ensured that the government continued to invest in the dockyard, albeit unevenly, and also to garrison troops there to guard it.

³ Rochester City Council and Chatham Borough Council were amalgamated in 1974 to form a new District Council, originally Medway District Council, later Rochester -upon – Medway City Council. Gillingham Borough Council and Rochester City Council were combined to form Medway Council, a county borough, in 1996. Details in Medway CityArk website, cityark.medway.gov.uk/about/Medway.

Therefore the town thrived and grew and its character as a “government” town was established. Despite having handsome buildings in the dockyard and some of the army barracks, the town itself lacked elegance, having instead, it has been judged by a recent commentator, “pinching poverty in civic architecture and social amenity”⁵ and as a place to live, became notorious for its poor health and living conditions. It did, eventually, however, have the Chatham and Rochester Literary and Philosophical Institute, founded in 1827⁶ and a Mechanics Institute, established in 1837.⁷

Rochester is an ancient settlement, in existence before the arrival of the Romans from whose camps the name evolved. The mediaeval cathedral city spread beyond its walls but remained separate from Chatham until the surge of activity following the establishment of the dockyard led to buildings appearing all along the road from the bridge across the Medway, through the centre of Rochester and on through the centre of Chatham. In Rochester the Hearth Tax Assessments for the 1660s and 1670s show that a small area round the cathedral contained the largest houses⁸ and presumably the wealthiest inhabitants. Here was the commercial centre and the homes of the small social elite. Along the road through to Chatham and in the surrounding areas, evidence of wealth declined rapidly. The dockyard was of great significance in Rochester as well as Chatham, but Rochester did also have some coastal and import and export trade independently of the government establishments. The single most important cargo was imported coal, but a variety of foodstuff was imported and some luxury goods, wine and tobacco. The main exports were oats, fullers earth and oysters, all clearly on a modest scale. It is suggested that “the gentry did not form as large or as important an element in the Medway Towns as in some others”.⁹ In the early 1700s, Defoe commented, of the area, “it is marshy and unhealthy, by its situation among the waters: so that it is embarrassed with business, such as shipbuilders, fishermen, seafaring-men and husband-men, or such as depend upon them,

⁴ Quoted in P. MacDougall, *Chatham Past*, p 9.

⁵ James Presnail, *Chatham: The Story of a Dockyard Town and the Birthplace of the British Navy*. (Chatham, Medway Borough Council, 1976) Presnail attributes the lack of amenity to absentee landlordship dating from the twelfth century.

⁶ P. MacDougall, *Chatham Past*, p66

⁷ P. MacDougall, *Chatham Past*, p83

⁸ A .J. F. Dullely, “People and Homes in the Medway Towns 1687-1783” in Margaret Roake and John Whyman, eds *Essays in Kentish History* (London, Cass, 1973).

and very few families of note are found among them".¹⁰ However, such elegant houses and fashionable society as were to be found in the towns, outside the dockyard, were in Rochester.

The development of Gillingham was also closely linked to the growth of the dockyard. The first buildings of the original dockyard were in fact, in Gillingham. When, with the expansion of the navy in Henry VIII's reign, new lying-up places were sought beyond the Thames, Gillingham offered the required space and shelter. The early buildings, perhaps as early as 1536,¹¹ were in an area now clearly within Gillingham. By 1536, there were 34 ships laid up off Gillingham, and there were storehouses to hold the sails, masts and rigging.¹² But as the installations grew and particularly with the construction of a dry dock, the area of activity moved along to Chatham. The land at the river edge was less marshy and more conducive to construction than at the earliest sites. The workers at the original sites, who had tended to live in the nearby Brompton area of Gillingham, were kept on as the yard was enlarged, and Brompton continued to be strongly associated with the yard. Brompton also housed the barracks that were built for the Royal Engineers and for the Royal Artillery, the latter of noted architectural merit. Here also, the Royal Sappers and Miners were developed and established. The celebrated school of the Sappers and Miners was highly unusual for the time in teaching mathematics and science not only to the officers of the corps, but also the N.C.O.s and men. In time they became expert divers and were trained in each new branch of science as the great strides of the nineteenth century were made. This strength in technical education was to become a feature of the education provided in Gillingham, in a broader area not noted for good educational provision, but is of interest as the importance of the Dockyard School grew.

Away from the dockyard, developments in Gillingham were much less spectacular. Many trades providing services to the yard appeared. Otherwise brickmaking was significant, with much of the output going to London by barge, and in the nineteenth century, cement

⁹ A. J. F. Dullely, *People and Homes in the Medway Towns*, p110.

¹⁰ D. Defoe. *A Tour through the Whole Island of Great Britain* (1724-6, reprinted, London, Penguin, 1971), p131.

¹¹ R. A. Baldwin, *Gillingham Chronicles*, p78

¹² R. A. Baldwin, *Gillingham Chronicles*, p79

making became important. Although there had been no ancient tradition of shipbuilding, an industry grew up from the seventeenth century onwards, again connected with the dockyard – sometimes illegally so, as wood and other materials found their way out of the yard. A certain amount of shipbuilding went on at other points along the river, notably at Frindsbury on the other shore,¹³ but, outside the dockyard, never developed on the grand scale.

With the dockyard established the town of Chatham began to grow, although the early workers brought in were not expected to settle, as the system of payment of temporary lodging allowances that was in force until after 1611 reveals.¹⁴ With the ending of the allowances there was a need for more houses and the opportunity for some entrepreneurial activity among the wealthy in selling off land in small plots to allow the building of cheap, low standard houses.¹⁵ With the substantial growth of the yard, the population of Chatham town swelled. Housing was built on the flat land near to the yard. Many of these houses also benefited from wood stolen from the yard (the notorious “chips”) and not at all just the houses of the poorer workers. The more well-to-do, including some naval and army officers, had houses along the Brook, still a stream with bridges crossing it, while poorer houses clustered round the parish church and towards the dockyard. By the end of the seventeenth century, Chatham was the most important of the royal dockyards and the town’s life clearly dominated by it.

The significance of the dockyard and its ancillary establishments is revealed in the twenty years or so of peace in the early eighteenth century. Numbers employed fell, and there is evidence that the population of the town declined. Hardship among the unemployed was so severe that it was decided by the parish officers that a workhouse was needed. The building was completed in 1727, but proved insufficient for the numbers seeking relief.¹⁶ Later in the century the town’s fortunes revived with plans to build a series of forts to defend the yard and with returning prosperity, a group of influential inhabitants set about

¹³ Helen Doe, Challenging Images: Mrs Mary Ross of Rochester, nineteenth century Businesswoman and Warship Builder in *Journal for Maritime Research*, May 2000.

¹⁴ P. MacDougall, *Chatham Past*, p18

¹⁵ P. MacDougall, *Chatham Past*, p 20.

¹⁶ P. MacDougall, *Chatham Past*, p37.

improving the town and tackling problems like lighting and street cleaning, at least, in those parts of the town where the inhabitants were judged likely to be able to pay the increased rate. A new road had been opened in the 1770s, to cut across from Star Hill in Rochester, to the bottom of Chatham Hill, on the way to Gillingham, to avoid the marshland and also Chatham High Street “so unsafe and disagreeable a thoroughfare” according to Hasted. In time, parts of the New Road were lined with elegant Georgian town houses, though more of it with modest, often clapboard dwellings. The town’s development can also be traced in the provision of churches, chapels and a synagogue. The parish church of Chatham, situated near the dockyard, was rebuilt during the eighteenth century but Chatham was noted for its strong community of nonconformists, with a Baptist chapel that dated back to 1644 and a Congregationalist chapel from 1648. A Roman Catholic church was opened in 1868. One of the earliest provincial synagogues was built on land purchased in 1750. In the history of the Chatham Memorial Synagogue,¹⁷ Gabriel Lancaster suggests that that the Jewish community was founded by people who originally came to the town in the longstanding local trade with the Baltic ports, stayed and became involved in buying sailors’ Prize money shares, and moved into other local business, particularly as ships’ chandlers and military tailors, when Prize Money was stopped. Like so many others, their presence in the town was dependent on the dockyard.

By the beginning of our period it is clear that Chatham is an old dockyard town, very much the product of its past. The size and importance of the long-established yard, with its extensive associated defences, the forts and garrisons, heavily influenced both the physical shape of the town and its character. This is also true of Gillingham, but only to a lesser extent of Rochester.

We can gain some insight into Chatham as an urban settlement at the start of our period as a result of the survival of certain records relating to the aftermath of two local events. At the beginning of the nineteenth century, the population of Chatham was tightly clustered close to the river, in mainly wooden houses, very vulnerable to fire. Two serious fires caused extensive damage, in 1800 and again in 1820, though, fortunately, very little loss of

¹⁷ G. Lancaster, A History of the Chatham Memorial Synagogue, internet site,

life. On both occasions a group formed to raise and distribute relief funds, and the organiser and clerk to the group, kept a record that was published, giving useful information about the townspeople. In 1801, the record shows that though sixty houses were burnt down, 138 separate householders claimed for lost possessions, suggesting most of the houses were in multi occupation. That said, the density of occupation appears to be more favourable than in many industrial areas and certainly an improvement on conditions in Plymouth at the time. The record also shows a sizeable number of people claiming on the value of goods they had left in pawn, which had been lost when the pawnshops were burned down. In both cases, in order to claim, the people had to give details about their occupations, number of dependants and income. For the most part, incomes were modest in the extreme, and the dependency on the dockyard and the military confirmed.¹⁸ In the account of the relief given after the second fire, 212 people claimed for goods lost in one of the pawnshops, Frid's. Of these, 31 were women, nearly all widows and shown as existing on meagre incomes. Only 6 were shown as having dependent children, one with 4 children lived on 18 pence per week from Gillingham Parish. Mostly they lived by going out to nurse, to do washing or took in lodgers or needlework. Only a few earned wages, 17 shillings was the highest amount, 12 shillings the least, 5 had regular or occasional help from the parish. The pawnshop inevitably played an important role for all of these and many others in a local economy where the major employer paid wages only once a quarter. The dependence of working class households generally, on pawnshops, in the nineteenth century (and beyond) is well documented, but in the dockyard towns, where wages were low anyway, the practice of quarterly paydays meant families were frequently in debt.¹⁹

As the years passed the town continued to grow,²⁰ as is illustrated by the maps in the appendix showing the district in the 1850s and again in the 1890s. Hemmed in, as it was, by the river, the North Downs and the expanding dockyard, houses climbed the low hills near the river and began to stretch eastwards. Later new building stretched out further

<http://www.chathamshul.org.uk>.

¹⁸ William Jefferys, *An Account of the Great Fire which happened at Chatham on the 30th June, 1800*, (Chatham, Ambrose Etherington, 1801)

¹⁹ Despite the hardship caused and the many complaints, the system persisted until 1812. See R. Morriss, *The Royal Dockyards*, p105.

eastwards to incorporate the village of Luton. This became, in effect, a working class dormitory area, and with the major expansion and industrialisation of the yard in the 1860s, housed very many of the unskilled and semi-skilled workers now in demand. Another newly built area that catered for the yard's growing workforce was a part of Gillingham, called New Brompton, contiguous with Chatham on the other side to Rochester. This is also shown clearly on the second map. Gillingham had remained mostly rural, but as the yard developed, and particularly with the building of New Brompton, the three areas, that is, the ancient city of Rochester, the town of Chatham and the developing town of Gillingham, became an unbroken urban stretch, with no visible boundaries to the uninitiated.²¹ While this hardly compared with the vast sprawls of London and the big northern industrial towns, it did produce a thoroughly urbanised population, almost totally dependent on the dockyard for its livelihoods. The population of Chatham in the 1831 Census is shown as 16,485, excluding military. By 1871 it was 26,184.²²

Chatham had suffered the cholera outbreaks of the first half of the century and moves were made to clean the water supply and make some provision for dealing with refuse, but since the town was not incorporated until 1890 it had only limited powers. Gillingham, where New Brompton was located, was not incorporated until 1903.²³ Although the population in Chatham and Gillingham had grown fast, there was little or no diversification in employment. Services of all kinds such as shops, schools, public houses, churches, mail coaches and railways had appeared, but all to serve the workers in the various government establishments. Since there was not really any other significant underpinning to the local economy, there was, perhaps, a lack of substantial local business leaders keen to make progressive changes, but local government slowly took shape, largely through the Local Board of Health, set up under the provisions of the Public Health Act of 1848, and the

²⁰ According to Presnail, *Chatham*, p193, in 1760 the number of rateable properties had been 1,204, and by 1819 this number had risen to 2,648.

²¹ Charles Dickens wrote, "If anybody present knows to a nicety where Rochester ends and Chatham begins, it is more than I do". Quoted in J. Presnail, *Chatham*, p199.

²² It is not possible to give comparative figures for the populations of the Medway Towns from each nineteenth century census because of changes in the registration districts.

²³ R. A Baldwin, *The Gillingham Chronicles*, Baldwin emphasises the pleasant rural nature of New Brompton in the nineteenth century and that many of the dockyard workers owned their own houses.

necessity to administer the Poor Law.²⁴ A report on the condition of Chatham came out in 1852, after an enquiry by a member of the General Board of Health.²⁵ It focused on the dangers from open sewers and unswept streets, and the necessity of providing a clean water supply. A local board was set up and it tackled a programme of improvements. However, as with other industrial areas of the time, it was still not a healthy place. In fact, it was, with its riverside situation, a particularly unhealthy place. There are comments from many different sides and over the centuries about the dangers to health of living in these low-lying marshy areas. The whole of the Thames and Medway estuaries, the Stour and Romney Marsh have the same reputation. These convictions have in recent times been tested through study of parish registers and shown to have some foundation. Death rates in these areas, as reconstructed using the parish data set, were three to four times higher than elsewhere in Kent. The “bad airs” and stagnant waters were believed to cause fever, but it is now clear that the fever was malaria, caused by a mosquito common in Kent.²⁶

In 1869, the Royal Navy’s local Medical Officer described the town in his annual contribution to the report on the health of the Navy.²⁷ He wrote:

Bearing in mind the large and very poor population of these towns, that, excepting for the Government establishments, there is no system of sewerage but the old objectionable system of cesspits, and that at the same time, many of the houses obtain their water supply from wells, it is not to be wondered at that the morbid agencies generating these diseases (zymotic fevers) are found to be, in greater or less degree, in almost continuous operation.

In the reports, which only cover the years 1869 to 1877, there is constant reference to the problems of smallpox and enteric fever. There is suspicion that the drainage systems cause problems. The Chatham surgeon writes in 1875,

²⁴ J. Presnail, *Chatham*, p233-42.

²⁵ P. MacDougall, *Chatham Past*, p65

²⁶ A. Armstrong, *The Economy of Kent, 1640-1914*, (London. Boyd and Brewer, 1996), quoting, M.J.Dobson, “Marsh Fever: the geography of Malaria in England” in *Journal of Historical Geography* vi 9 1980, pp557-89.

²⁷ *Statistical Report on the Health of the Navy for the year 1869*, House of Commons Papers, 384, 25 July, 1871.

The habitations of these men are not on all occasions such as might be desired, and this, I fear, contributes somewhat to disease. Many of them live a long distance from their work; the walks and exposure early in the winter mornings try some of their constitutions severely; and the day's work being over, the system becomes somewhat exhausted by their return, and then to pass their nights, as I fear many of them do, in abodes badly drained and ventilated, contributes much to the disease; and if one is to judge of the internal arrangements by the surroundings, some of them must be very bad, for in many places, more especially New Brompton, it appears to have been the work of individuals to build houses, but the work of the public to make roads to them, and in the former they have succeeded tolerably; still the houses are left standing in mud pools, some of them many inches deep.²⁸

By 1876, he wrote,

Of the improvements of the towns and localities around us, I can say but little; some few of the thoroughfares and streets about New Brompton are decidedly improving, and others very gradually improving; but I am informed that much more extensive improvement may be looked for in the coming spring; so that we may eventually hope to see this place fit for habitation; and when advanced in the right direction, it will no doubt, contain a very large proportion of the houses of the dockyard men, as a large proportion of them already reside there.²⁹

New Brompton was far from being the unhealthiest part of the area. The district close to the dockyard, clustered round a partly culverted stream, the Brook, once the most desirable residential area, had long been (and was to remain so well into the twentieth century) identified with dreadful living conditions, not to say immoral and criminal activity. When the town achieved municipal borough status in 1890, some of the earliest clearances of old, substandard houses and public houses associated with criminal activity were done in the area of the Brook, and replaced with the Town Hall, new offices, wider streets and so on.³⁰

Another problem associated with the lack of incorporation, was policing.³¹ Chatham had to rely on the county constabulary and leading inhabitants constantly complained of the

²⁸ *Statistical Report on the Health of the Navy for the year 1875*, House of Commons Papers 376, 24 July, 1876.

²⁹ *Statistical Report on the Health of the Navy for the year 1876*, House of Commons Papers 407, 10 August, 1877.

³⁰ P. MacDougall, *Chatham Past*, p.75.

³¹ P. MacDougall, *Chatham Past*, p75

inadequate numbers provided. For much of the period, the dockyard was policed by detachments of the Metropolitan Police, and during the operation of the Contagious Diseases Acts (1864-86), they were used to enforce them. But policing remained a grievance locally. So, despite a relatively dependable level of economic security for some, Chatham provided a poor and unhealthy environment.

According to Presnail, and much unsubstantiated folklore, the town also provided a distinctive cultural environment. He argues that by the end of the reign of the Stuarts, the town had taken its modern shape and lost all signs of the original village. The inhabitants formed a community distinct from neighbouring Rochester and the surrounding villages in its economic activity, but also in its speech and attitudes. He asserts that “socially, Chatham stood as a rock-bound island cut off from intercourse with the outer world; alien to its surrounding elements, and alienated from sympathetic understanding of those who fringed closest to its boundaries.”³²

The difference in speech is explained by the influx of workers from the Thames-side shipyards, but the difference in outlook has more to do with working conditions. The town was virtually a new town, with no traditions to restrain it or to pass on “day-dream of civic splendour, of noble architecture, of broad avenues or magnificent horizons”. Philistines then, notably given to non-conformity, supporters of Parliament in the Civil War, lacking the humanising influence of traditional working relationships in a huge, bureaucratic organisation, Presnail sees the denizens of Chatham as unlikely to co-exist comfortably with their neighbours in the cathedral city next door. While locals would easily discern differences in the social make-up of the three towns down to the twentieth century, the isolation described by Presnail had been modified by the middle of the nineteenth century. However, the dockyard continued to shape the towns. Distinct areas of Chatham and Gillingham can be identified with groups of dockyard workers. New Brompton in Gillingham was home to large numbers of the skilled artisans, whereas Luton, in Chatham, housed some artisans but many of the skilled and ordinary labourers. The old central area of Chatham contained the poorest of the residents and, with its very numerous public

³² J. Presnail, *Chatham*, p133.

houses, also catered to the substantial numbers of soldiers, sailors and marines based in the area. MacDougall describes the chaos and disorder in this area particularly associated with the naval and military presence and frequently reported in the local press.³³ He quotes a resident writing in 1868 about the number of prostitutes and “drunken worthless soldiers out all night”. The return of naval ships to port routinely led to fights in the High Street and occasionally “large-scale riots”. MacDougall comments on the frequent use of the terms “respectable” and “roughs” in the local press and there is indeed a sharp contrast between the “rough” behaviour of those frequenting the old town centre at night and the world described by Waters of the inhabitants of New Brompton with its co-operative society which provided lectures, evening classes and a library. This distinctive mix of the outrageously rough and the fiercely respectable, gave the towns their character. While almost any town may have a wide range of social habits and behaviour, the juxtaposition of substantial numbers of the military and the dockyard artisans created exceptionally sharp contrasts. It will be shown that the same conditions existed in Plymouth. The effects of these contrasts and their significance for the women employees of the dockyards will be returned to in more detail Chapter 5.

Plymouth, for all its status as the major city in the south west, after Bristol, and its long history of significant events and people, had become, by the nineteenth century, notorious for its atrocious living conditions. Its dockyard was begun in 1691³⁴ and as well as providing employment for the already sizeable population, attracted a workforce from the country areas close by in Devon and also from further afield in Cornwall. The workers tended to converge on the parishes close to the yard, which became overcrowded and a byword for all the problems of urban life. By 1808, 2,741 men were employed in the yard and by this time the Three Towns³⁵ which make up Plymouth were the fifth largest town in England.³⁶

³³ P. MacDougall, *Chatham Past*, p 72.

³⁴ C Gill, *Plymouth: A New History*.

³⁵ Plymouth, Devonport and Stonehouse. The towns formed a continuous urban sprawl from the early 1800s but were not officially recognised as one town until 1911. Details in Website for Plymouth, <http://www.plymouth.gov.uk>

Plymouth's earlier history is quite unlike Chatham's. Described as populous and wealthy by Defoe in the 1720s,³⁷ it had been an important port from earliest times, exporting goods from its hinterland and importing fish from Newfoundland. Later, tobacco, sugar and all the other new goods identified with the West Indian islands became more important. The import and export trades led to the setting up of processing industries of various sorts in and around the town. In its day, Plymouth had also been associated with privateering. It had links with the religious groups that formed the early American settlements and some of its wealthy citizens became involved in colonising New England. Plymouth was a rich town, with many wealthy inhabitants, who made bequests for schools and other charities. In the seventeenth century, large sums were spent on improving its Guildhall, quays and main streets.³⁸

Plymouth began to figure more largely in the government's defence plans in the late 1600s. The Navy Board planned yards and buildings in 1662, but, with the exigencies of war, these plans did not materialise, and, instead, a citadel, or fort was built, incorporating Drake's fort. Dockyard work, such as careening and repair was, however, being carried out by 1667, but no dock had been started. There were problems in deciding exactly where to place a dock, to do with tides and winds as well as the busy nature of the rivers, but work finally began in 1691,³⁹ and the yard grew steadily throughout the eighteenth century, becoming second only to Portsmouth by the 1770s.

The growth of the yard was paralleled by the growth of the town's population. The early workers were brought from other parts and housed in hulks on the rivers, but, following petitions from the men, a start was made on building houses near the dockyard, which was located some 2 miles from the old centre of Plymouth. Despite early problems acquiring land, what was effectively a new town, quickly grew. From nothing in 1700, the population had grown to 3,000 by 1733, and 4,000 by the 1750s. Although it was laid out fairly spaciouly, the houses were not substantial, and the new town, being outside the

³⁶ C. Gill. *Plymouth*, p104. The bigger towns were Manchester, Liverpool, Birmingham and Bristol, in that order.

³⁷ D.Defoe, *A Tour Through the Whole Island of Great Britain*, p227.

³⁸ C. Gill, *Plymouth*, p43.

³⁹ R. Morriss, *The Royal Dockyards*..

boundaries of Plymouth proper, shared none of the amenities of the wealthy old town. There were no schools, for example, no proper market or shops, except for beer shops.⁴⁰

During the eighteenth century, as the government investment in Plymouth continued, the earlier diversified trade became diminished in importance. The town exemplifies the phenomenon examined by Sarah Palmer in the *Cambridge Urban History*⁴¹ by which the connection with naval dockyard could positively hamper commercial development. However, C. Gill writes that there were enough jobs, contracts, fat commissions and other inducements to keep the freemen happy. In business, he says, “it was finding it easier to make money out of the dockyard than by the old-style trade”.⁴² The new social mixture enhanced the richer end of Plymouth society, long associated with the county gentry and royalty anyway, and the wealth of the town continued to grow and see expression in new assembly rooms, theatre and hotels, but also libraries, and even a Public Dispensary aimed at helping the poor.⁴³ Records exist of the very lively social life accessible to the privileged classes in Plymouth, with details of frequent carriage and horse rides, boat trips, parties and dinners.⁴⁴

In the nineteenth century, after recovery from the depression following the end of the Napoleonic Wars, Plymouth continued its rapid growth, as is evident in the two maps showing development between the middle of the century and the end. The dockyard continued to expand, new barracks were built and more defensive forts, but also some new industries were established, such as soap, glass and biscuit making, while the old established breweries continued to flourish.⁴⁵ All this meant very fast population growth as is shown on the graph. Although the built up area had spread and numbers of houses had been built, there was never enough accommodation for the constantly growing population. In stark contrast to the gracious living available to the rich and comfortably off segment of

⁴⁰ C. Gill, *Plymouth*, p59.

⁴¹ S. Palmer, “Ports 1840-197” in M. Daunton, ed. *Cambridge Urban History of Britain III*, Cambridge, Cambridge University Press, 2000.

⁴² C. Gill, *Plymouth*, p76.

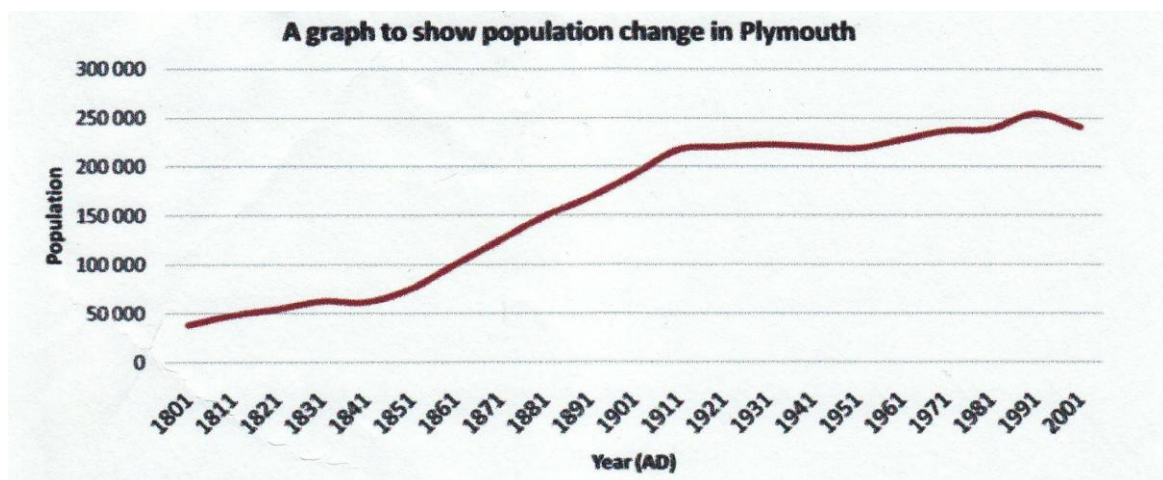
⁴³ C. Gill, *Plymouth*, p96.

⁴⁴ C W S Hartley. “Sir Charles Hartley and the Improvement of Sutton Harbour”, in *Proceedings of the Devonshire Association for the Advancement of Science, Literature and Art*, Vol 115, 1983.

⁴⁵ C. Gill, *Plymouth*, pp122-7.

the population, Plymouth's poor lived in overcrowded conditions, worse even than in London and Liverpool.⁴⁶ These packed houses lacked any amenity, for example, 825 people living in 67 houses, 57 of which with no water laid on. The towns lacked drainage systems, the streets were not cleaned, and so, as in Chatham, ill health and epidemics were commonplace.

Graph 1: Population Change in Plymouth 1800-2001
(Taken from Plymouth Local Government website).



As elsewhere, the cholera outbreaks around 1848-9 sparked action, but it took many years to achieve significant results. Unlike Chatham, Plymouth and the new town built around the dockyard, which became Devonport, were not hampered by lack of incorporation. Plymouth was an old borough⁴⁷ and Devonport in 1836 was the first town to be incorporated under the Municipal Corporations Act of 1835.

Devonport, and Plymouth however, became notorious as a place of terrible deprivation, associated in the minds of the religious, with a lack of any training in Christian morality and beliefs. One woman moved by the plight of the benighted inhabitants of Devonport, was Priscilla Lydia Sellon, who moved there in 1847, to save souls but also to work in

⁴⁶ C. Gill, *Plymouth*, p148. The figures given are, in 1850, Plymouth 10 people to a house, London and Liverpool, 7, national average, 5.

practical ways to improve lives. She led a group of middle class women, who while forming themselves into a religious community, also established schools, clubs, and cared for the sick. Her biographer describes desperate poverty and grim living conditions in Devonport.⁴⁸ Other evidence for the state of Plymouth comes from the record of the cholera outbreaks. The first, which began in Sunderland in 1831 and spread via the Midlands industrial towns, to Bristol and the south west, caused 1901 deaths in Devon, of which 1063 were in Plymouth. Devon suffered the highest mortality rate in this outbreak after London, Lancashire and Yorkshire.⁴⁹ Deaths occurred at twice the average rate in all three Plymouth parishes. A report of 1850 said Plymouth was “one of the most unsanitary in the Kingdom, as bad as Warsaw.”⁵⁰ H. F. Whitfield, writing in 1900⁵¹ described appalling housing conditions that prevailed at that time, improvised drains, crowded rooms, uncared for streets swarming with children “who border on a state of nudity and with men and women not much better clothed”. The local naval Staff Surgeon in his Annual Report of 1869 comments on the distances that some dockyardmen are forced to live away from their work because of the shortage of houses and also that, though the newer houses are better “within a short distance of the yard gates are to be found residences barely fit for human habitation”.⁵²

It is clear then that Plymouth, like Chatham, provided a harsh and unhealthy environment. As in Chatham, but on a bigger scale, the nineteenth century saw leading local citizens actively campaigning for improvements in water supply, drainage and sewerage systems, hospital provision, education and local transport. Possibly because of the continuing fast growth of the population, the housing problem was not solved and despite an early programme of building council houses (in 1896), Plymouth went into the twentieth century with a shortage of housing and many inhabitants living in overcrowded and slum

⁴⁷ Plymouth was incorporated by Act of Parliament in the reign of Henry VI according to *Plymouth Municipal Records*, 1893

⁴⁸ Thomas Jay Williams, *Priscilla Lydia Sellon*, London, 1950.

⁴⁹ Neville C. Oswald, “Epidemics in Devon” in *Proceedings of the Devonshire Association for the Advancement of Science, Literature and Art*, Vol. 109, 1977.

⁵⁰ Quoted in C. W. S. Hartley, Sir Charles Hartley.

⁵¹ H. F. Whitfield *Plymouth and Devonport in times of War and Peace*, Plymouth 1900, quoted in C. W. S. Hartley, Sir Charles Hartley.

⁵² *Statistical Report on the Health of the Navy for the year 1869*, House of Commons Papers 384, 25 July, 1871.

conditions.⁵³ The town spread outwards incorporating villages and, there was some new building within the older areas, but the large amount of land owned by the government restricted development. As in the Medway area, certain districts became particularly identified with dockyard workers, although they were to be found all over Plymouth. As in Gillingham and Chatham, but to a much stronger extent, the Co-operative movement took off in Plymouth and was associated with a range of activities well beyond retail stores, actively pursued by the relatively economically secure working class, including many dockyard families. In her study of working-class politics in Plymouth, Mary Hilson makes a detailed analysis of the Plymouth Co-operative Society's membership and activities – in business but also in cultural, charitable, and political spheres, and shows members aware of distance between themselves and the very poor among their neighbours, while remaining consciously working class in outlook.⁵⁴ Plymouth was, therefore, also a place of marked contrast between its “rough” and “respectable” elements.

Both towns also shared the lack of diversity of employment for women characteristic of areas where heavy industry prevailed.⁵⁵ Port and dockyard towns do not, perhaps, immediately suggest themselves as having the characteristics of heavy industry, but with Chatham's dependence on the dockyard and its increasing importance in Plymouth, the employment profile of the towns was similar to any other town dominated by shipbuilding and engineering. Typically, almost the only work for women in these areas was in domestic service and various forms of dressmaking.⁵⁶ The dockyards, very much the largest local employers, traditionally did not employ women, except in very small numbers, as will be shown. Hilson writes:

The existence of jobs exclusively for women should not be taken at face value. They were explicitly intended as a form of pension, paid directly to the women concerned only in lieu of payment to former male

⁵³ The 1901 census showed 20.19% of the population of Plymouth, 17.38% of Devonport and 24.32% of Stonehouse living in overcrowded conditions, compared with the national average of 8.9% and 1.19% in Portsmouth which was about the same size as the Three Towns of Plymouth. Figures quoted in M.Hilson, *Working Class Politics*, p233. She also shows rents as the highest outside London.

⁵⁴ M. Hilson, *Working Class Politics*. p248.

⁵⁵ As discussed by Jane Lewis in *Women in England, 1870-1960*, Ch 4.

⁵⁶ See E. Roberts, *Women's Work 1840-1940*, (London, Macmillan, , 1988), Chapter 1, for a discussion of regional variations in women's work patterns.

dockyard workers, and as such, they represented a key plank of the paternalist strategy.⁵⁷

This notion of women's work in the yards just as a form of charity is not supported by the evidence, but the question of paternalism is one that will recur several times, in looking at the yards in general and women's work in particular.

Chatham and Plymouth shared the notoriety and the intrusive effects of being what was called a "subjected area" under the Contagious Diseases Acts of 1864-88. They were among the first group of places named where the problem of epidemic sexually transmitted diseases among the military was to be tackled by trying to identify infected women working as prostitutes and removing them to lock hospitals, where they were required to stay until the danger of infection had passed, since although the pattern of the main diseases was known, cures were not yet available. Officers of the Metropolitan Police, working in plain clothes were drafted in to find the women and require them to report for regular inspections. The injustices and the fact that they apparently sanctioned prostitution resulted in strong resistance to the Acts, not just among the women being penalized, but also among middle class women and men who formed societies to try to have the Acts repealed. The Acts were not operated from 1883 and repealed in 1888, but during the years of their operation many heated exchanges for and against the Acts and newspaper reports of the various associated activities add to the picture of life in the rougher parts of the towns.

Interest in the working and significance of the Acts grew out of explorations of Victorian sexuality that were part of the upsurge of feminist and social history in the 1960s and 70s. Judith Walkowitz's work and particularly her *Prostitution and Victorian Society*, published in 1980, is probably the most focused and comprehensive treatment of the Acts which she uses "to study class and gender relations in mid-Victorian Britain".⁵⁸ As it happens, Walkowitz uses Plymouth (along with Southampton) as a case study giving detail useful to the present study. However, Walkowitz does not accept that the pragmatic aims of

⁵⁷ M. Hilson, *Working Class Politics*, p73.

⁵⁸ J. Walkowitz, *Prostitution and Victorian Society*, p vii.

improving the health of the military were the true intentions of the Acts. She argues that they were part of “a new enthusiasm for state intervention into the lives of the unrespectable poor”⁵⁹ and furthermore that they illustrated Foucauldian ideas about the nature of the modern state in that it sought to exercise power over society by classifying and creating outcast groups. She considers that the attempts after 1869 to have the Acts extended to extensive other parts of the country, unconnected with the military or ports, which led to the growth of significant resistance and the repeal campaign, reveal that simple concern for the health of the military was not the issue. Though the book is mostly concerned with resistance among prostitutes and the repeal campaigns, particularly the feminist aspects of these, it does pay attention to the ordinary working class women and how they were affected by living in these areas. Not surprisingly, there were varying attitudes towards prostitutes, some bitterly resentful of the notoriety brought to their home districts, others more supportive and particularly against the treatment of prostitutes by the police, some willing to report on their neighbours and some intimidated by the police and the fear of being accused of immoral behaviour to the extent of moving away from Plymouth. One aspect of the power exercised by the police mentioned by Walkowitz was the possibility of informing against government employees and pensioners who let rooms to prostitutes, which could lead to dismissal or the stopping of a pension.⁶⁰

Writing about Chatham,⁶¹ Brian Joyce, although discussing the broader aspects of the “Social Evil” as prostitution was called, appears not to challenge the intentions of the Acts, while supporting much of what Walkowitz says about the heavy handedness of the police and the importance of the repeal campaigns. He gives details of many local court cases involving women identified as “common prostitutes” by the police, although the court cases were concerned with theft or unruly behaviour usually associated with drunkenness rather than prostitution per se. As he says, the names of the women involved, often repeatedly, became well known locally, whereas their quiet and respectable neighbours go unrecorded - though in a few cases, they are named as reporting or complaining about the unruly ones. For example, Elizabeth Wilson, wife of a dockyard labourer, living on the

⁵⁹ J. Walkowitz, *Prostitution and Victorian Society*, p3

⁶⁰ J. Walkowitz, *Prostitution and Victorian Society*, p205.

⁶¹ B. Joyce, *Chatham Scandal*

Brook, gave evidence in a case in 1875.⁶² He makes the point, however, that although vast numbers of prostitutes passed through the Magistrates' courts in Rochester and Chatham, accused of theft mainly, hundreds more appeared on similar charges who were not labelled prostitute, suggesting that the prostitutes were hardly a class apart from their neighbours in poor districts. Joyce reports the widespread belief among leading citizens that when the Acts were suspended and the Metropolitan Police withdrawn, the numbers of prostitutes on the streets grew again, and their behaviour became increasingly outrageous, but notes that as Chatham was allocated more of the county's police and then acquired borough status in 1890, the situation was brought under control. The picture given of wild behavior descending into riot on a fairly regular basis in the 1870s and 80s and involving not just the soldiers, sailors and women friends, but crowds of local young men too, is in sharp contrast to that of the industrious, and even, cultured members of Co-operative and Friendly Societies.

The Dockyards

Chatham dockyard, after its Tudor beginnings, was developed much further in the 17th century. Dry docks were added, a brick storehouse for the ropery, further mast houses, houses for the officers and new walls were built.⁶³ Roger Morriss considers that the yard, by the time of the Restoration, had become the most important in the kingdom,⁶⁴ though its relative importance was about to decline as the need for more westerly ports grew and the size of ships grew while the river Medway was increasingly silted up.

Plymouth yard grew rapidly throughout the eighteenth century, being ideally placed given the growing importance of the Atlantic as a scene of operations and natural defences it enjoyed.

These two dockyards were among the six royal yards operated by the government, employing some 9,000 men by the 1790s and over 15,000 by 1813. New departments to

⁶² B. Joyce, *Chatham Scandal*, p143

⁶³ P. MacDougall, *Chatham Past*, p29

⁶⁴ R. Morriss, *The Royal Dockyards*, p2

run them were set up. Overall authority for naval administration, including the dockyards, was vested in the Board of Admiralty. However, despite being officially directed by the Board of Admiralty, by the end of the eighteenth century effective control was in the hands of the Navy Board, which had evolved through the previous two hundred years and in its complex relationship with the Board of Admiralty which controlled dockyard appointments, the Navy Board sometimes ignored Admiralty directions. The Navy Board itself grew as its responsibilities were enlarged and it became semi-autonomous since the members of it had semi-permanent tenure, being appointed by letters patent from the sovereign, unlike the political appointees of the Admiralty, whose term of office might end with a change of government. The commissioners of the Navy Board therefore could acquire authority through experience. It operated from the centre of government but oversaw the operations in the six yards and numerous small offshoots, as well as manning and paying the fleet. The Board attracted much criticism for its various mistakes and sometimes poor administration and in the early 19th century was the target of attempts at far reaching reform. Friction between the two levels of management and changed government thinking about the principles of management led to the abolition of the Navy Board in 1832⁶⁵ with all its duties being subsumed into the Board of Admiralty.

The importance of the yards to the towns cannot be overestimated, as already shown. In the case of Chatham, the establishment of the yard transformed the original village into a significant naval and military base. In the case of Plymouth, the town had many other important components in its development, but the growth of the yard overshadowed the other economic activities according to Gill, as shown above, so that the town came to rely on the yard and the naval establishment and its inhabitants were less inclined to pursue trade and commerce than they had previously.

When the decision to build a dock at Chatham was taken in 1547, there were already yards at Portsmouth and on the Thames at Woolwich and Deptford. But Chatham was swiftly to become the most important and was to remain so until the 18th century. The reasons are

⁶⁵ See P. MacDougall, *Chatham Dockyard*, p319.

succinctly summed up by Coad in *Historic Architecture of the Royal Navy*.⁶⁶ He points out that what set some yards apart from the rest, all of which were required to build and maintain the fleet, was their suitability as naval bases. For this, there needed to be “safe and sheltered moorings, ordnance yards, gunpowder stores, victualling yards and – eventually and long overdue – naval hospitals.”⁶⁷ Additionally, whichever potential enemy threatened, determined where most investment by the government of the day would go. So, in the years when the Dutch were seen as the major threat, Chatham, with its space for all the required facilities, was the leading yard. In the 18th century, the perceived threat meant that Portsmouth and Plymouth, begun in the 1690s, became more important and expansion at Chatham became more patchy. Moreover, there were navigational problems as ships became larger and efforts to dredge and deepen the Medway were only partly successful. All the same, additional facilities continued to be built and Daniel Defoe, visiting in the 1720s, wrote:

This being the chief arsenal of the Royal Navy of Great Britain. The buildings here are indeed like the ships themselves, surprisingly large, and in their several kinds beautiful. The warehouses, or rather streets of warehouses and storehouses for laying up the naval treasures are the largest in dimension, and the most in number that are to be seen anywhere in the world.⁶⁸

The building of the yards until the late 18th century was mostly done from within the dockyards themselves.⁶⁹ Master shipwrights were generally required to draw up plans for new buildings as needed, to be approved by the Navy Board. From 1795 onwards, however, professional architects designed the installations, including terraces of elegant houses for the Yard Officers, which were then built partly by dockyard labour and partly by outside contractors. These contracts were significant enterprises as the yards developed on a massive scale, becoming, before the general spread of industrialisation, centres of the most highly advanced technology. However, long term planning was not a feature of early development. Finance was always problematic and new projects usually the result of urgent need rather than long term considerations. Generally speaking, not until the

⁶⁶ J. G. Coad, *Historic Architecture of the Royal Navy*, London, Gollancz, 1983.

⁶⁷ J. G. Coad, *Historic Architecture*, p 19

⁶⁸ Quoted in P. MacDougall, *Chatham Past*., p29

⁶⁹ J. Coad, *Historic Architecture*, pp 24-28

wholesale modernisation of the yards in the mid 19th century, were funds more readily available. Even then, after the scale and expense of the elaborate new buildings at Plymouth in the 1840s led to questions in Parliament, the 1860s expansion at Chatham was carried out in a more economical style.⁷⁰ Overall, nevertheless, the result of the Navy Board's and the Admiralty's policies, was to endow the major dockyard towns with a wealth of handsome and durable buildings, at least within the dockyard walls.

In the earliest years of Chatham yard, or Gillingham yard as it was originally, the navy paid for land on which to build storehouses for the winter storage of rigging etc, while ships were laid up. Soon however, the ships were being refitted and modified by skilled workers brought in as discussed above. By 1570 a mast pond had been constructed and by 1582 a dry dock built. The dry docks were always the centre of activities, with all the material and ancillary work, often requiring further storehouses, collected nearby. Chatham yard expanded at a fast rate in the 17th century, more wharves, stores and workshops appeared and with them, a permanent workforce of over 250, even though shipwrights still had to be brought from other areas.

As more aspects of the yard work evolved, a growing range of trades and skills was required, from ropemakers and sawyers to carvers and gilders. The dockyard workers formed the elite of the working population in the growing towns. The yard system of apprenticeship and, later, education for specific trades became extremely important in the social stratification of the towns. It was usual for skilled men to take on their sons and nephews as apprentices, as in private businesses and trades. This system, later criticised as nepotistic, favoured not only the families involved, but the Navy Board and the Admiralty too, as it supplied a regular stream of reliable recruits. Equally, it nurtured a paternalistic style of management, which will be returned to later. It was not unusual for skilled workers to be sent from one yard to another, or for them to ask for transfers. The whole development of the workforce can be seen as calling into being, a distinct community, with ties to the various other dockyards, as they or their relatives moved.

⁷⁰ J. Coad., *Historic Architecture*, p82.

These workers suffered chronic delays in payment of wages. Though their skills were recognised in high rates of pay, shipwrights and all the other yard workers were left with their pay months and even years in arrears, and so, of course, forced to live on credit. Apparently they accepted working on these terms to a large extent, but from time to time, made protests, leading to marches to London and raids on storehouses and ships, for example in 1628.⁷¹ The custom of allowing “chips” evolved, linked to delays and wage levels. It originally meant that men could take home small offcuts of the wood being worked on, an armful of lengths no more than 3 feet. However, abuse of the system became widespread and enough wood to make furniture and finish houses was being taken. Clearly the workers saw it as a form of compensation for lack of wages, but equally obviously, the authorities saw it as theft and pursued many court cases and investigations.

From earliest times there were allegations of corruption at all levels in the yards. Phineas Pett, first in a prominent family of dockyard officers at Chatham and elsewhere, was employed in 1598 and became Master Shipwright. In 1608 he was found to have used dockyard materials to build, in a privately set up shipyard, a naval ship, but was only reprimanded at this stage. In 1634 he was suspended for having sold dockyard cordage and other materials, but survived and later became Commissioner of the Navy. Accusations of corruption, dishonesty and plain idleness recurred throughout the history of all the dockyards, most commentators now saying that these were only partly justified.⁷² Interestingly, although many criticisms came from the Royal Navy about dockyard practices, it also appears that the navy showed a preference for dockyard built ships over those of the private yards, believing that dockyard work was done to a higher standard.

At times, for example at the end of the 18th century and again in the mid 19th century, the Navy Board and then the Admiralty were seen as not taking up new technology as fast as they might have done. The use of steam engines at the end of the 18th century seemed to offer many possibilities, but they were only slowly introduced. In fact, as refinements in the basic techniques meant more varied applications were possible, the dockyards did take

⁷¹ R. Baldwin, *Gillingham Chronicles*, p86

⁷² For example, R. Morriss, *The Royal Dockyards*, p127, R. Knight, “From Impressment to Task Work” in K.Lunn and A. Day, eds, *History of Work and Labour Relations*, p13.

up and develop the new methods. Special machines for making ships' blocks and sawmills were particular successes.⁷³ As will be discussed later, the introduction of steam engines in the various ropehouses was slow because of an entirely understandable fear of fire in them. The huge ropehouses that were built at Chatham and at Plymouth were the result of rebuilding after earlier disastrous fires. Criticisms of the dockyards led to a major investigation into all aspects of their working in the 1850s, which in turn led to a thoroughgoing modernisation and rationalisation of the yards. More machines were introduced and the nature of the work changed, requiring more labourers and fewer of the traditional craftsmen. The established crafts retained their elite positions, but the balance of the work shifted, most noticeably as the Navy turned from wooden sailing ships to metal steamships.

The various studies of work in the royal naval yards, whether written from the point of view of their organization and management, Morriss for example, or as social and or political history, Waters and Hilson and also Lunn and Day and the contributors to *History of Work and Labour Relations in the Royal Dockyards*, all describe distinctive characteristics associated with working in these establishments. Lunn and Day in their introduction to the volume make the point that the dockyard workers are not cut off from general experience and analyzing their work relations has wider significance in the history of work and labour, nevertheless there is a range of defining features peculiar to the yards. These include the division between "established" workers and "hired", which Lunn and Day believe were apparent outside the yards "through residential patterns, social and cultural hierarchies and models of consumption and leisure".⁷⁴ The paternalism already referred to is part of this and the strong patterns of family involvement and also the tradition of dealing with grievances through a well-established process of petitions. All of these were part of the experience of the women workers.

The practice of negotiating pay and working conditions by petitioning was a distinctive element of employment in the dockyards in the nineteenth century. Philip MacDougall in

⁷³ J. Coad, *Historic Architecture*, p39, and Coad, *The Portsmouth Block Mills: Bentham, Brunel and the start of the Royal Navy's Industrial Revolution*, (Swindon, English Heritage, 2005).

⁷⁴ K. Lunn and A. Day, eds, *History of Work and Labour Relations*, pxii

“The Changing Nature of the Dockyard Dispute, 1790-1840”⁷⁵ shows how the dockyardmen, often in combination across the yards, increasingly turned away from strike action and towards petitions to achieve their aims in this period, with a reasonable degree of success. The required deferential wording of the petition and the fact that the Admiralty had treated strikers harshly in actions around 1800, might suggest a submissive, not to say cowed, workforce, but the analysis put forward by Mavis Waters as she takes up the question in a later chapter of the book⁷⁶ argues otherwise. She maintains that the transition to petitioning “need not reflect a diminution of their sense of independence,” but that it represents the beginnings of new forms of labour relations that eventually led to the Whitley Councils of the post First World War period. In a generally approving account of the way that the dockyard education and training practices and the systems of promotion that were available, she suggests that what was produced was a workforce that exhibited confidence, political awareness and some sophistication in weighing up the best methods of achieving its aims. While trade union activity and a changing political outlook associated with the entry of far more labourers in the yard from the 1860s on, became significant, the use of the petition continued.

The yards then, provided the underpinning of the economies of Chatham and Plymouth, furnished the towns with buildings of character and style and shaped the lives of the majority of the population of Chatham and of a large part of Plymouth.

⁷⁵ In K.Lunn and A. Day, eds *History of Work and Labour Relations*.

⁷⁶ Lunn and Day, eds, *History of Work and Labour Relations*, Chapter 5

CHAPTER THREE

EARLY EMPLOYEES: SEWING AND TWINE SPINNING

In this chapter, the work of the early women employees, mainly colourwomen, in the Royal Naval Dockyards is located in the more general activities of the Yards and the particular stresses of the wartime period and the changes that were initiated during the wars, but carried through over the succeeding decades.

Proposals to take on women for parts of the ropemaking process are also noted with discussion about the reasons why this did not occur in the first half of the nineteenth century. Some of these reasons will tend to suggest that the processes in the naval dockyards were much in line with commercial practice, while others illustrate the significance of the particular environment of the dockyards.

Not very much is discoverable about the small number of colourwomen who worked in all the Royal Naval Dockyards from the beginning of the nineteenth century, though it is clear that their employment began during the difficult wartime years of the early 1800s. Records of them as individuals have not survived among Chatham or Plymouth Dockyard papers and the census material of the earlier periods does not show them. However, this chapter is mainly concerned with the reasons for and circumstances in which women did work in the yards before 1860 and also the discussions that began very early on, about taking on women for other jobs.

The Napoleonic and Revolutionary Wars have been compared with the World Wars of the twentieth century in terms of their impact on the economy, the size of the military and naval commitment and less tangible considerations such as the use of propaganda.¹ The war at sea was hugely significant and the need for ships pressing and urgent throughout. For the Royal Dockyards this meant constant demands and many complaints and led to

¹ See, for example, C. Emsley, *British Society and the French Wars 1793-1815*, 1979.

serious overhauling of the administration and control, wage payments and training schemes, though not of the fundamental methods of shipbuilding and repair.²

The long period of war, from 1793 to 1815 with the brief let-up in 1802-3, put the Dockyards under severe strain. By the time of the outbreak of war with France in 1793, Chatham Dockyard had grown in size and importance, employing 2,000 men (compared with Portsmouth 2,900 and Plymouth 2,800).³ The Yards were a vital resource in building and keeping navy ships repaired, supplied and in good order and in converting ships for hospital or prison use. Equally essential was the production and assembly of the myriad variety of goods and materials needed to finish new or repaired ships to fit them for sea.

Among these materials were colours - flags perhaps to the layperson, and rope and items such as hammocks. It is in the provision of these vital items that women are first found as employees. It should be noted that women figure as dockyard contractors at this time and long before,⁴ and though it seems generally that the women contractors were widows who had taken over their late husbands' businesses, it could well be that they had worked in those businesses during their husbands' lifetimes as well as in widowhood. However, since they are not employees in the yards, they fall outside the scope of this study.

The strain experienced by the Dockyards in meeting the extra demands of wartime is discussed at length by Roger Morriss in *The Royal Dockyards during the Revolutionary and Napoleonic Wars*.⁵ It had led to breakdowns in labour relations among more than one group of workers in the Yards. At Chatham, as elsewhere, at this stage, highly trained craftsmen dominated the workforce. The shipwrights, with a closely organized set of restrictive work practices, were at the top of the pecking order, and the most numerous, but other craftsmen, including carpenters and ropemakers for example, were also employed in large numbers, while the number of labourers, perhaps rather surprisingly to the

² Discussed fully in R. Morriss *The Royal Dockyards*.

³ Quoted in P. MacDougall *Chatham Past*, p124.

⁴ Women contractors appear regularly in the Dockyard letterbooks, e.g. 3 April, 1802, "a parcel of links from Mrs Jessop has been returned to her from their very inferior quality" NMM CHA/ B5. They are also referred to in connection with repairing Wheelbands, TNA ADM 174/37 and supplying team horses, TNA ADM 174/36.

contemporary reader was rather small.⁶ Although the skilled men were crucial to the working of the Yards, they were not well paid in comparison with workers in the private shipbuilding yards and, indeed, they were not even paid regularly, their pay being frequently in long arrears.⁷ Although the comparative security of Dockyard work, with sick pay and superannuation for “established” men was some compensation, the much higher rates of pay available in private yards during the rush to build new warships meant that the Naval Dockyards were constantly short of skilled workers in wartime. A range of new techniques and practices was tried out in an attempt to make good both the scarcity of men and also of traditional materials, especially timber⁸ and also of the various types of hemp and other raw materials for ropemaking.⁹

The importance of colours for signalling in the pre-electronic age cannot be overestimated and there were problems here too. On 27th November 1802, after listing various items in store, the Chatham Officers wrote:

We beg leave to observe that no part of the foregoing Colours can be made in the Yard at present, the Taylor being fully employed in repairing the Colours returned from the Fleet and in making and repairing Colours for the Ships in Ordinary at this Port.¹⁰

It was in this atmosphere of shortage, trial and expediency that women were taken on to make up old material – buntin – being returned to the Stores, into new signal flags. There is evidence that women were employed at the Royal Arsenal, Woolwich well before 1800, in sewing bags for shot¹¹ but the earliest references to the employment of women at Dockyards appear to be in 1803. In April of that year, Commissioner Hope of Chatham Yard wrote to the Navy Board proposing taking on six women to assist the taylor (sic)

⁵ R. Morriss, *The Royal Dockyards, passim*.

⁶For example, the workforce on 26 March, 1814 at Chatham included 186 carpenters and joiners, 167 sawyers, 783 shipwrights, 120 smiths and numerous other artificers and 520 labourers. Quoted in R. Morriss, *The Royal Dockyards*, p109.

⁷ R. Morriss, *The Royal Dockyards*, p103.

⁸ R. Morriss, *The Royal Dockyards*, p102.

⁹ Examples throughout NMM CHA B.

¹⁰ NMM CHA B 5 27.11.02.

¹¹ O. F. G. Hogg, *The Royal Arsenal. Its background, origin and subsequent history*. (London, OUP, 1963). He quotes Hasted, 1778, Vol 1, p46, “The making of canvas bags for the use of the Warren furnishes employment for a great number of women in the town”.

employed in the storehouse, to use up buntin being returned to store, to make signal colours.¹² The Board had to be reminded to reply,¹³ but seems to have agreed readily to the proposal and also to the terms of pay and hours suggested by Commissioner Hope.¹⁴

The other Yards, Deptford, Portsmouth, Woolwich, Sheerness and Plymouth, were soon required to follow the Chatham example as is made clear by a warrant of 1805:

The Contractor for Colours having had an immense number due from him from an early period of the War, which has occasioned great inconvenience to the Service and there being no probability of his being able to furnish Colours so fast as the wants of the Service will require throughout the War, and having found that by employing Women to assist the Taylor at Chatham in making Colours of every sort, except Spanish and silk, the wants of that yard have been supplied without often having recourse to the Contractor. These are to direct and require you to adopt the same Plan for the remainder of the War, whenever your store of Buntin is such to admit thereof without subjecting the Service to inconvenience for want of that Article,¹⁵ and to demand Buntin immediately for that purpose, and from time to time as wanted: The Women are to be employed from Breakfast time to Bellringing at Nights allowing them an hour for Dinner and you are to allow them 2/- p Day.¹⁶

So by 1805 a system was in place. For the first few years, the local officers had to apply to the Board for permission to pay the women every six months, (men were paid quarterly at this time) though it was only at Chatham that the women were paid on that basis. Women at Portsmouth were paid weekly¹⁷ and at Plymouth by the month.¹⁸ These orders are laid out without any explanation for the differences, though it appears that the decision to pay the Plymouth women monthly was in accession to their own request.¹⁹ By 1806, the letters asking for permission to employ the women stopped appearing in the Chatham papers but the women continued to be employed since in 1807²⁰ and 1809,²¹ letters from the Chatham

¹²NMM CHA L/36, p341

¹³NMM CHA L/ 36, p349.

¹⁴NMM CHA F/ 7, 20.4.03.

¹⁵ The phrase “without subjecting the Service to inconvenience for Want of that Article” is frequently used in correspondence from the Navy Board usually suggesting that the local officers are to keep normal requirements in mind, not allow stocks to run out etc.

¹⁶ TNA ADM 106 2516, Warrant 26, 28.01.05.

¹⁷ TNA ADM 106 2534, Order of 6 Feb.

¹⁸ TNA ADM 106 2534, Order of 4 May.

¹⁹ TNA ADM 174 41. Letter of 4 May, 1805, stating that the women had asked for this.

²⁰ NMM CHA B/ 10, 3.2.07.

Officers appear, suggesting taking on four extra women for two months in the first case and three months in the latter, to meet the exceptional demand being experienced. The implication is, therefore, that the local officers were no longer required to ask for this permission but it is not recorded in the letterbooks.

The demand for colours kept up to the end of the war and beyond. A Warrant of 31st March, 1815 gave orders that the war allowance of “Colours and French Flags (both the Royal and the Tricoloureds) be supplied “at the present crisis”.²² Then in 1816, a letter to the Yard, dated 6th July, said:

We desire you will cause the Women who are employed in making signal colours to work from 5 o'clock in the morning until eight o'clock in the evening, until the whole of the Signal Colors wanted are completed.
P.S. The officers are to be particular in seeing that the seams of the Colors are not puckered.²³

This severe demand requiring the women to work 3 hours extra in the mornings and 2 hours extra in the evenings, clearly caused some concern. Commissioner Cunningham (of Deptford and Woolwich) wrote suggesting the women be allowed to start at 6 o'clock, not 5 o'clock and the Board approved this for all the Yards, adding that the pay for the extra hours was to be twopence per hour.²⁴

In August the Navy Office wrote again about the need for colours, saying the women were to be employed for “some time longer” since not all the ships requiring new colours had yet got them, but the women were not to be allowed the “extra hours”.²⁵ Then on 4th September, 1816, the following significant letter was received at the Yard:

Having determined that in future the Signal Flags required for H.M. Ships and Vessels shall be made in the Dockyards by Women entered for the purpose. We desire that you will inform us, after a sufficient

²¹ NMM CHA B/ 11, 28.3.09.

²² NMM CHA E/ 116, 31.3.15.

²³ NMM CHA F/ 29, 6.7.16, p 205.

²⁴ NMM CHA F/29, 10.7.16, p 214..

²⁵ NMM CHA F/29, 3.8.16, p239.

store shall have been provided, what numbers of Women it will be proper to continue to meet the demands for these flags.

The letter is marked with the note that it was replied to on 20th January, 1817, but there is no record of what was said. However, it is clear that the colourwomen had been accepted as a permanent part of the workforce, despite the original intention that they were to be taken on for the war years only.

In all cases, there is no discussion about who should be recruited or how they should be found, and, after the first round, about the hours and pay. These had been clearly set out in the instructions to take on the women in 1803 and 1805.²⁶ The rate of pay of 2 shillings a day was a rather surprisingly generous one given that labourers earned less than this.²⁷ Since, almost universally, women earned significantly less than men²⁸ - a third of men's pay was common - this rate of pay suggests a requirement and acknowledgement of a degree of skill, although the comment in 1816 about puckering seams suggests some complaints had been received. The pay for the apparently compulsory overtime, 2d per hour for 24 hours would have brought in an extra 4/- a week. However, the women were never given "established" status, which would have given them the right to pensions. Some of them did qualify for gratuities on retirement however, as is shown by notices in the local newspapers from the 1860s on.

These women form a tantalising group in that their very small numbers, mostly six, and the fact that they were originally employed on a short term temporary basis, makes it difficult to track them as individuals. They are always referred to as the Six Women and are never named. The tailor at Chatham at this stage was William Trevannick, who, by chance, appears in 1812, when a Dockyard Officer writes in concern at finding a category on his books described as 'Taylors'. He points out that there has only been one, William Trevannick, for the past eleven years, and he has been being paid as a Storehouse labourer of the First Class. The Yard required clarification about his future classification though the

²⁶ TNA ADM 106 2516

²⁷ Table from R. Morriss, *The Royal Dockyards*, p101. "Rates of pay in the dockyards, 1690-1812."

²⁸ For further discussion of women's pay rates, see chapter below.

original level of payment is claimed as justified under a warrant of 1783.²⁹ Neither Trevannick himself nor anyone else of that name appears in census enumerator or Church of England parish records for Chatham and Rochester and so far, none of the women have been traced under this occupation early in the century, though they appear from mid-century on in the census records.

The hours worked, although slightly less than the men³⁰ – from 8 in the morning till “Bellringing”- 6p.m. in the summer i.e. from February to 1st November, earlier, according to daylight in the winter – would have made work difficult to combine with running a house, but the skill required suggests a certain maturity was probable, so it is very likely the women were widows, as tradition suggests. However, at this stage of their employment, there seem to have been no conditions laid down about this, though custom and practice are referred to much later.

There is some evidence about their skill. Although elaborate silk flags were still supplied only by an external contractor,³¹ the dockyard women were efficient in making ordinary colours. For example, in a reply to the Navy Board of 10th April 1806, the Chatham officers, who had been asked to comment on Portsmouth officers having said that they could not match the contractor’s prices, said:

We beg leave to state to your Honourable Board that one of the Women employed in the Storeroom here, can make a Union Jack of 12 breadths in 2 and a ½ days, the Expense of which amounts to 5/- considering her allowance of 2/- a day, whereas the Contractor charges only 4/6d for the making of one; but as they have hitherto been provided from serviceable Buntin returned from ships, we are humbly of opinion that it will be of more advantage to the Service to continue their being made by the Women in the Yard and especially as we have such a Quantity of worn Buntin in Store fit for converting into small Ensigns, Jacks and Signal Colours, as may supply the current Service of this Yard for some years to come.³²

²⁹NMM CHA B/ 18, 10.6.12.

³⁰TNA ADM 106 2516

³¹Details of silk flags (made for the Marines) in NMM CHA E 75, 2 June.

³²NMM CHA B 10.10.4.06.

Just as elusive are the artificers' wives who sewed hammocks at times of particular need. Probably these worked at home because all there is in the Chatham papers, are some references to the Navy Board "desiring to know whether worn canvas can be made into hammocks by the Wives and Daughters of Artificers belonging to the Dockyard"³³ in September 1806. The Yard Officers reply that there are "22 women of that description" but they differ in their prices, 8d, 7d or 6d each hammock. The hammocks were to be cut out in the Sail Loft and issued by the Storekeeper at a rate not to exceed 2 dozen to each Party. The Yard Officers recommended that the job would be better put out to contract, to achieve regularity and ensure responsibility, but on 22 November the Board issued a warrant for the job to be done by the wives and daughters (at 6d each).³⁴ The Warrant prescribed the job in some detail, requiring "the Persons who make them [to find] the Twine, which must be of Two Threads Seaming Twine worked double.....the canvas to be cut into proper lengths and, breadths to Make into Hammocks 5ft 10ins long and 4ft 2ins wide when made and to cause each piece to be stamped with the name of your Yard and to place with each sufficient white line for going round it cut to the proper length..."and so on. Although, on several occasions up till mid 1806,³⁵ the Yard Officers said they could make use of worn canvas for hammock making, there are no further discussions of how it was to be done. In October 1808 they say they have no need of worn canvas from another Yard because they have "an increase in stores of hammocks" which is because "a certain number have been washed and found in perfectly serviceable condition".³⁶ It seems that, by then the crisis in the supply of hammocks had been resolved and the contractors could provide all the new ones needed.

The involvement of women in the twine spinning stage of rope making also comes up at this period of trial and shortage when women were taken on at Plymouth, initially, like the colourwomen, temporarily. This is significant since, at the beginning of the 19th century, ropemaking was still an all-male craft occupation in the Royal Dockyards, though not exclusively elsewhere, as will be shown. Apart from the twine spinning, while rope

³³ NMM CHA B/11, 23.9.06..

³⁴ NMM CHA E/ 86, 12.3.03.

³⁵ NMM CHA B/13, 11.7.07..

³⁶ NMM CHA B/14, 26.10.08.

making was done in several distinct stages and while it was still essentially a hand craft, there had been attempts to mechanize certain stages of the process from at least the late 18th century on, and mentions of women begin to occur as new and improved devices were patented and it was claimed that women and children would be able to use them.³⁷

Various pointers suggest that women have had a long association with rope making, both before and after it became a completely mechanised industry. Rope making was a very widespread traditional industry, as already indicated; ropewalks, which were needed to make long lengths of rope, were found in all parts of the country, evidence of their existence often remaining in present day street names. Ropes were used in agriculture and almost every branch of industry and traditional forms of transport. They varied immensely between lightweight yarns and strong, thick and heavy hawsers, used in heavy industry and ships. However, manufacture of all the different varieties depended on the initial stages of threads being twisted into fine yarn and there is evidence that, in some parts of the country at least, women were involved at this point of the process both over the long period when almost all the work was done by hand, and, even more so as machines were introduced.

The correspondence between the Admiralty and the officers of Plymouth Dockyard in the early years of the nineteenth century suggests an assumption that women twine spinners would be available to do the work traditionally done by men in the dockyards, and as we have seen, a small number was taken on in the years of labour shortage during the wars with France, and probably kept on until the introduction of machine spinning in the late 1860s. Although the definite proof of the employment of women, in the shape of dockyard pay records, exists only for a couple of years, there is reference to them in passing in discussion about the likely advantages of employing women in the dockyard letter books during the first half of the century, and then mentions of them in the various sections of the *Report on Dockyard Economy* of 1861. They then also appear in the Plymouth local newspapers from the 1860s on as recipients of gratuities for long service.

36 *Rees's Manufacturing Industry 1819-1820* Vol. 24 ed. Neil Cossons, David and Charles Reprints

Rope making is one of the industries covered in *Married Women's Work*, which was a report, edited by Clementina Black, based on evidence collected in 1909 and 1910 about married women's life and labour, a subject of considerable concern from the nineteenth century onwards. The women described as ropemakers in this report, given the date, were extremely likely to be machine spinners. The book is arranged as a series of separate observations on particular cities or areas, and though extensive, the report does not cover the entire country. The rope workers appear in the section on Liverpool and in a part of the report headed "Married Women Employed in a Variety of Miscellaneous Trades", which opens with the comment that the wages for this group are lower than those trades already reviewed and "the wage-earner is of a rougher nature".³⁸ The women rope workers are described as "strong in build, rough in type, and inclined to disregard household cleanliness".³⁹ The husbands are generally low paid labourers, many unemployed and the children are not carefully looked after. The wages, at 7 shillings and sixpence to 10 shillings and sixpence a week, are typical for unskilled women workers at the time, providing a poor standard of living. However, some exceptions were found, for instance, "a young wife, recently married, employed as a spinner and getting an average of 10 shillings and sixpence a week, [who] said "her husband didn't want her to work, but she preferred to do so," and since he earned 24 shillings a week and they had no children, they could afford "a nicely furnished house".⁴⁰

At this point it will be helpful to consider the industry more generally and consider its progress towards mechanization in the 19th century. Ropemaking was an important industry nationwide. Ropes were an essential item in countless industrial processes as well, crucially in the age of sail, for marine use, and large numbers of people were involved in the production of rope. Ropes were made in urban and rural areas all over the country, though with concentrations in some country areas, where the connection was apparently with the availability of raw materials and in urban areas with a particular industrial or marine demand. The Census of Occupations following the 1841 general census shows ropemaking in virtually every county of England with large concentrations in Devon, Durham, Kent,

³⁸ C. Black ed, *Married Women's Work*, Virago, London, 1983, p188.

³⁹ C. Black, ed, *Married Women's Work*, p 191.

⁴⁰ C. Black, ed, *Married Women's Work*, p 191

and Middlesex, but with far and away the most in Lancashire.⁴¹ In 1851, the same pattern of distribution is seen. In 1841 all the districts with high numbers of ropemakers, apart from the naval dockyard areas, considerable numbers of women are shown, though Dorset is the exception where, with only 119 men ropemakers, there are 91 women, a much higher proportion than the general run.⁴² In 1851, women ropemakers in Dorset outnumber the men, but this occurs nowhere else.⁴³ It is clear that, in that part of the country, by long established tradition, women were associated with at least some aspects of the industry. However, histories of ropemaking, themselves very few in number, do not usually concern themselves with the workforce, so it is difficult to define their involvement exactly.⁴⁴

In *Rees's Manufacturing Industry 1819-20* Volume 4,⁴⁵ there is useful short description of 19th century ropemaking, that applies whether machinery is used or not. Rope is:

An assemblage of several twists or strings of hemp, twisted together by means of a wheel; of various uses, as in binding, flaying, draining, suspending and etc; or all cordage in general, above one inch in circumference, mostly made of hemp spun into yarns or threads of a certain length; and a number of these yarns or threads, according to the size of the rope, are twisted together, and called a strand. Three of these strands twisted or laid together, is called a hawser-laid rope, and nine of them a cable-laid rope.⁴⁶

The writer comments that the greatest consumption of rope is used for the purposes of navigation in rigging of ships,⁴⁷ and then describes one of the early inventions of a machine “for the improved method of making cords and ropes, twined and untwined, from the spinning of the yarn inclusive, to the finishing of the rope or cordage.....Rope yarns are at present spun by men at an expense of half a crown to five shillings per day, according to the situation of the place, whether in out-ports, or on the Thames. Or it is wholly spun by

⁴¹ See Table in Appendix

⁴² See Table in appendix.

⁴³ 1851 Census of Occupations. The most striking example is at Bridport, where 122 men are shown and 612 women. See Table in Appendix.

⁴⁴ For example, Frost Brothers Ltd. *The Old Industry of Ropemaking with Modern Plant*. (London, 1906).

⁴⁵ Rees, p330.

⁴⁶ Rees p330

⁴⁷ Rees p331

machinery”⁴⁸. More details of the process follow with the statement that the machinery “enables them to employ women, children and invalids”.⁴⁹ However, the patent for this machine had been granted in 1799 and as Rees himself is saying, by 1820, rope was still normally spun by men. Handspinning required the spinners to fix bundles of the prepared hemp round themselves, attach the other ends to revolving hooks on a wheelturned frame and then walk away backwards the length of the required rope, turning the different strands at the appropriate rate to produce the spun rope, a time-consuming operation, requiring skill and experience.

However, evidence from Dorset shows that, there at least, a different tradition was the norm. In the *Bridport News* of 9th February 1861,⁵⁰ under the heading, “Local Sketches” details are given of the method of twine spinning, opening with the words “We dare not, of course, do otherwise than begin a series of local sketches with some account of the manner in which the staple manufacture of the town is carried on.” The writer describes in rather elaborate detail, discovering ropewalks all over the town in which children, boys or girls, worked a piece of machinery consisting of a broad-rimmed wooden wheel fixed to an upright post and turned by a peculiar handle, which the child could turn at varying speeds and which was fixed to a framework of spindles. The spindles each had a thread of hemp attached, the other end of which was part of a girdle of hemp round the waist of a woman who would walk “backwards paying out with each hand just enough of the fibres to make twine of the required size” as the spindles twisted the hemp fixed to them. At the end of the walk, the woman would join the ends of the two threads she has spun and attach them to a freely revolving crook and then walk back, while the child still turned the wheel, resulting in the two threads being twisted together. The twine was then wound on to a frame ready to be used. In Bridport the twine was used as much for making nets of all descriptions as for building up in to thick rope, but the initial process was the same for all the varying uses. The process was, of course, exactly as described by Rees above, as the rope spinning done by men.

⁴⁸ Rees p348

⁴⁹ Rees p348

⁵⁰ *Bridport News* Saturday, February 9th, 1861.

The writer describes the scene of this manufacture as surprisingly noisy. First there was the whirring noise of the many spindles and the shouts of the women as they ordered the children to “turn up” to the speed they required, and apparently had to keep repeating their orders as they walked further and further away from the spindles, but also any one boy working the spindles would “enliven the monotony of his occupation with a song” and having to compete with the roaring of five or six other children, all executing different songs, “he is compelled to raise his voice to a very high pitch”. All this noise was accompanied by the ringing of many cracked bells, though their function is not explained.

Interestingly, the sketch writer goes on:

Such is the manner in which Bridport women and children have toiled for centuries. But it seems that a change is coming. A few short years more, and the wheel and spindles of the spinning-way will depart to the limbo to which stage coaches and road wagons have been already banished. And although the change, like all other changes will be attended with temporary inconvenience and distress, the result must be beneficial. The poor children will be among the greatest gainers. Now they are put to the wheel as soon as they have strength to turn it, and, from early in the morning till late in the evening are kept at their monotonous task, in a building which is not always a model of cleanliness and wholesomeness. In too many instances, they grow up utterly destitute of all instruction. The change which is coming will remedy much of this; and we hope that the operative classes of the town will not allow their attachment to any system of manufacture, however old, to prejudice them against changes which *will* come in spite of all efforts that may be made to prevent them, and which, while they are inevitable, are certain also to prove, in the long run, productive of an incalculable amount of good.

This suggests an awareness of the development of spinning machinery that would soon undermine the old hand craft.

It was a very old craft, and long associated with and recorded at Bridport. In *The Bridport Story A Record of 700 Years* the author notes that “In 1213 King John exhorted the people of Bridport to make “night and day as many ropes for ships both large and small and as many cables as you can”.⁵¹ The author speculates on the origins of the growing of hemp in

⁵¹ G. Beckles, *The Bridport Story: A Record of 700 Years 1253-1953*, (Bridport Bridport Industries Ltd, 1953). p.1.

the around the river Brit, which may have been introduced by the Romans or may have been grown from seeds brought by the Phoenicians, it is not certain. In any case, the local soil and climatic conditions were well suited for the crop and rope and net making flourished and the local people acquired a reputation for particular skill in the craft and their products were regarded as the best of their kind, even down to the supply of hangman's rope – the “Bridport Dagger”.⁵² However, this author describes twine spinning as done by men and the women, at least in medieval times, only occupied in net making, at that time, a cottage industry. There is no mention of the women twine spinners as described in the 1861 article, although women are shown in the photographs of the modern, fully mechanized industry, though by this time, the town has become mostly identified with making nets for all kinds of industry and many sports. However, the 19th century situation does seem to explain how Plymouth could find women twine spinners when needed.

There were various attempts to introduce machinery for different aspects of the work in the Dockyards, though it seems that one constraint on the use of machinery requiring steam power was the fear of fires in the huge wooden buildings of the roperies.⁵³ In 1799 equipment was introduced to ensure that when the yarns were being twisted into the required thickness of cord (this is the ropelaying part of the process), they were all at equal tension, which made them much stronger.⁵⁴ In February 1808, the Chatham Officers wrote to the Board, “Being directed by your letter of 30th ult. To examine a Model of a Machine submitted for Reeling Yarns and report our opinion whether it will be a saving of Labour to reel the Yarns....we beg leave to acquaint your Honourable Board, that we have examined the same and are of opinion it will not be a saving of Labour”.⁵⁵ But in April 1809, they write to say, “We beg leave to acquaint you that the Rope Machine is erected”⁵⁶ though whether this is the same machine is not clear.

In 1813 they had been directed to inspect the machine erected by Messrs Ditchburn (cordage contractors) and wrote to say:

⁵² G. Beckles, *The Bridport Story*, p15.

⁵³ J. Coad *Historic Architecture*, p77.

⁵⁴ J. Coad *Historic Architecture*, p73.

⁵⁵ NMM CHA B/13, 7.2.08..

⁵⁶ NMM CHA B/13, 20.4.09.

We beg leave to acquaint you we have visited the ground at Gravesend, and examined their Cordage Machine, which we find complete and of sufficient size to form Strands for Cables of 18ins on the Cold Register Principle; and that the closing of Strands, Hawsers and Cables, is conducted by the same process as is done in HM Yards.....Cordage made thereby..strength is so evidently superior to that manufactured by them by the Old Method.⁵⁷

But it seems unlikely that any significant changes were put into practice for some years after this, given the recommendations for change that were to come in the 1850s. Whether the slow pace of change owes more to the resistance of the ropemakers themselves or to a conservative attitude on the part of the Board and or the Yards' management or both is difficult to establish, though it would seem that the Yard workers and officers were in tune with their colleagues in the private ropeworks. In a 1966 history *Rope: A History of the Hard Fibre Cordage Industry in the UK*, after describing various inventions from the 1780 to the 1850s, its author, William Tyson, comments:

Hand spinning was the regular practice as late as 1860 in nearly all roperies. The length of hemp fibres, comparative smoothness and tractability of the fibre, the prejudice of the hand spinners and that of the masters explains why practice in machine spinning ropemaking yarns lagged so long behind that of corresponding cotton and woollen yarns; it was not until about 1900 that hand spinning was generally superseded.⁵⁸

When the whole process, apart from the initial wheelturning process, was done by hand, for the ropes to be consistent and equally strong throughout their length required significant skill and physical strength. The ropemakers were therefore an organised trade with recognised apprenticeships, and able, in the Dockyards, to negotiate their pay and terms of employment, including the ratio of workers in each category.⁵⁹

While twine spinning, a process at the beginning stage of rope making which as we have seen did not call for much physical strength, was evidently routinely carried out by women in some parts of the country, before 1805 there were no female twine spinners in the naval

⁵⁷ NMM CHA B/13, 29.7.13.

⁵⁸ W. Tyson *Rope: A History of the Cordage Industry of the UK*, (London, Wheatland Journals Ltd, 1966).

⁵⁹ References to such negotiations occur regularly in the letterbooks, e.g. NMM CHA B/5, 16 April.

dockyards. In that year, however, officers at Plymouth reported to the Navy Board that they could not recruit enough men, and sought permission to employ women. They were initially refused, but the situation worsened and eventually permission was given, though for one year only. A Warrant of 20th December to Plymouth Yard, noting that “no regular twine spinners can be procured” directed them to enter six women for that purpose.⁶⁰ Meanwhile, the Navy Board had written to Portsmouth suggesting that they also try to employ women, but Portsmouth had reported that “there are no Women in these parts who are accustomed to such work”⁶¹ and there seems not to have been a requirement even to look for them at Chatham. It seems therefore, that it was only at Plymouth that they were taken on.⁶² A record exists of the names of the twine spinners at Plymouth (see Appendix) in which the extremely interesting fact emerges that the women were on the same rate of pay as the corresponding men. Though no later record has been traced, it is fairly certain that women continued to be employed in this capacity, even if not continuously. As will be seen below, when the subject was returned to in the 1850s, Plymouth was still the only Yard employing women twine spinners. Even so, there is evidence that recruitment of women for this work at Chatham did receive some consideration. In 1810 at the request of the Navy Board all the Dockyard trades were being reviewed with the “tasks” and numbers of workers scrutinised and proposals sent – marked “secret” – to the Navy Board. For Chatham these included the following suggestion from the Chatham Ropery:

We beg leave to add that we consider it would be beneficial to the Service to employ Women in Spinning Twine; that the branch of the business being so very light that no Man can get a livelihood by it, without the Works being paid for at very high rates, and at the same time we think there would be no difficulty in procuring in the Neighbourhood of HM several Rope Yards a sufficient number of girls either the daughters of the Workmen, or others, as Apprentices to Twinespinners, provided at the expiration of their Apprenticeships, constant employment in that Department should be secured to them.⁶³

⁶⁰ TNA ADM 106 2516

⁶¹ TNA ADM/ 106 2516

⁶² TNA ADM /106 2516

⁶³ NMM CHA B/16, 22.8.10.

The recommendation about apprenticeships for girls is surprising because there were no other apprenticeships in the dockyards available to girls and, generally speaking, this occurred at a period when women were being excluded from skilled work.⁶⁴ However, the proposal was not taken up, or even commented on further at this time.

The point about men being unable to make a living at twinespinning is borne out by the of wages recommended in the discussions going on about proposed changes at this time, but later in reports of earnings of the various groups, the situation is less obvious. A letter marked “secret” of 13th September 1811 is replying to the Board’s directions to supply recommended alterations in Day Pay. The figures they suggest are:⁶⁵

Table 1: Daily Pay Rates for Line and Twinespinners in 1811

| | |
|----------------------------|-------|
| Yarnspinners | 4s 0d |
| Line and Twinespinners | 2s 0d |
| Hempdressers | 3s 4d |
| Wheelboys | 0s 9d |
| Superintendent of Knotters | 6s 0d |

(Two shillings a day was the rate for the women colour makers, it will be recalled.)

For comparison, at this time day rates for shipwrights ranged between 4/9d to 5/9d, plumbers and braziers, 4/9d, joiners and wheelwrights, 4/3d and labourers, 2/6d. These day rates were often, however, supplemented and many workers were actually paid on “piece rates”.

However, in the regular reports of actual earnings, which are sent for all categories of workers, the earnings of twinespinners compare better with their colleagues. For example, a letter of 11th January 1812, marked “Secret” gives the following:⁶⁶

⁶⁴ For example in bookbinding, as shown by Felicity Hunt in *Women in the London Printing and Bookbinding trades* in Angela John, ed. *Unequal Opportunities*, p71.

⁶⁵ NMM CHA B/17, 13.9.11.

⁶⁶ NMM CHA B/17, 11. 1.12.

Table 2: Actual Earnings for Line and Twinespinners in 1812

| | Highest | Lowest | Average |
|--------------------------------|---------|--------|---------|
| Yarn Spinners | 6/9 ½ | 5/3 | 5/8 ¼ |
| Labourers | 5/3 | 4/1 ½ | 4/5 ½ |
| Hemp Dressers & Twine Spinners | 6/1 ½ | 5/3 | 5/3 |

Another report of 13th July, 1813 gives these figures:⁶⁷

Table 3: Wages for Piecework, 1813

| | Highest | Lowest | Average |
|--------------------------------|---------|--------|---------|
| Spinners | 7/- | 6/1 ¾ | |
| Labourers | 5/6 | 4/8 ½ | 4/9 ¼ |
| Hemp Dressers & Twine Spinners | 6/1 ½ | 3/9 | 3/9 |

These figures suggest that the male twinespinners were holding their own, despite the recommendation of the Ropery Officers in 1810.

The notion that women should be employed for this work continued to appear whenever discussions of change and improvement went on, with, increasingly, references to practice in private firms.

As mentioned above, there is a lack of information about the workforce of the industry in this country, but a history of ropemaking in Plymouth, Massachusetts⁶⁸ states that the main firm in the district first took on women in 1838, as wheelturners, which was a boy's job in this country. From the points made about the likely advantages of taking on women as twinespinners it seems clear that it was mainly boys who were doing this job, at least by the 1840s.

⁶⁷ NMM CHA B/19, 13.7.13.

⁶⁸ Samuel Eliot Morison, *The Ropemakers of Plymouth 1824-1949*, (Boston MA, Houghton Mifflin, 1950).

Almost half a century later, in the *Report on Dockyard Economy 1859*,⁶⁹ a major enquiry into all aspects of work, management and training in all the Dockyards, which reported after visits to all the Yards and questioning of various levels of staff, there was finally a recommendation that women should be taken on in all the Roperies as they already were, it says, at Plymouth.⁷⁰ The authors of the Report were of the opinion:

...that the results obtained from the spinning machines which have been in operation for upwards of two years at Chatham, would justify their general adoption, and in so doing, that it would be advisable to take steps to establish a large spinning factory at one of the other yards, as soon as possible, in addition to increasing their number at Chatham.⁷¹

Yard Officers' comments on the Report were published as "Observations" in 1860. Charles Pope, Master Attendant at Chatham wrote in 1859:⁷²

It would, I have no doubt, be a great improvement to employ women instead of boys at the spinning machines, as they possess a more matured judgement, would be more attentive and steady at their work, more contented with their pay, and we should not have so many changes, which latter is most detrimental to the process of spinning yarns by machinery.

George Goldsmith, Captain Superintendent, agreed:

The less frequent changes and the increased attention that might be expected from them, would work the machines to greater advantage; and one woman could readily attend to the duties now performed by two boys.⁷³

In the event, despite the recommendation of the Report it appears that, apart from at Plymouth, women did not enter the Yards' Roperies until large-scale mechanisation in the mid 1860s and even then men initially worked the machines as will be discussed later.

⁶⁹ Report of Committee on Dockyard Economy, appointed by Admiralty, 1859(sess2)xviii

⁷⁰ Report of the Committee on Dockyard Economy, para 635.

⁷¹ Report of the Committee on Dockyard Economy, para 635.

⁷² Report of the Committee on Dockyard Economy, para 657.

⁷³ Report of the Committee on Dockyard Economy, Para 657

Why the suggestion of employing women kept recurring and what expectations the Yard officials had of women workers, are pertinent questions

Taking the colour women on in 1803 was undoubtedly a response to the serious delays and shortages caused by the demands of the war then in progress. The Warrant authorising the Yards to enter the women says they are to be employed “for the Remainder of the War”. Commissioner Hope, in proposing the plan to the Board says it was the Storekeeper who suggested it, so it was not a piece of central planning passed down but a practical solution to a problem experienced at ground level. Given what is known about the close family connections of many Dockyard employees, it is interesting to speculate that it might have been the Taylor himself, rather than the Storekeeper, a Dockyard Officer, who made the suggestion, knowing perhaps of half a dozen women who would be glad of the work. On the other hand, the Dockyard officials might have been aware that the private contractors employed women for this work and so had the idea of employing some directly.

Unfortunately, flag making as an industry does not seem to have been researched so it is impossible to say whether women were normally employed in it. On the other hand, there is the evidence referred to above, that women were employed at Woolwich Arsenal, sewing bags for shot, so it was perhaps not such an original idea to take them on for colour making. Once taken on, the women seem to have caused no problems and to have become an accepted part of the workforce, continuing into peacetime, though remaining in small numbers.⁷⁴ It seems likely that their unproblematic employment as well as the stereotypical expectations of “nimble- fingered” and docile girls, “more contented with their pay” contributed to the recurring call for women to be taken on in the Roperies. The fact that their pay would be lower than the men’s is not usually referred to at this stage, though as we shall see below, it became very clear when the decision to take them on in the 1860s was taken. Again in these early discussions, there is no reference to the likely family status of such workers, widows, orphans, daughters of Dockyardmen or other, apart from the

⁷⁴ NMM CHA F 30 refers to 1817. From mid-century references to them occur in census material and in local press reports of their receiving gratuities on retirement.

suggestion in the proposal of 1810 for apprenticeships for girls,⁷⁵ but this seems more concerned with the availability of girls than with their worthiness for the jobs.

However, there is also the experience the Board had had, and some officials, of employing women, if only briefly, as twinespinners in 1805-6, (and probably, in fact, ever since then). Once the wartime labour shortages were no longer an issue, the ropemakers must have been aware of the employment of women as twinespinners in the private sector and it seems likely that some sort of balance was being held between those officials who saw advantages in taking on women and forcing down the pay rates for twinespinning and other officials who were content with the *status quo* supported, no doubt, by the men whose jobs would have been lost.

From the point of view of the men twinespinners, apart from the obvious fact that no-one is content to be ousted from a secure job, it is likely that they would have found it difficult to get alternative employment, despite the pressure on the Yards in wartime. In peacetime the local employment situation was even more unpromising, as will be discussed below. At this point, however, it is worth noting that, in 1801 when the Yard employed about 2,000 men, the entire population of Chatham was only around 10,000. Gillingham, where many Dockyard workers lived later in the 19th century, was not much developed at this time. Another consideration must have been that, apart from in the Dockyards, rope spinning was normally an outdoor occupation (because of the space needed), which, comfort apart, must have meant much less regular employment throughout the year.

Despite the recommendations of 1810, from the point of view of the officials, an array of factors need to be considered, not least the fact that for local officials in a government establishment, day to day running costs are a less pressing matter than for owners of private works. Within reason, the officials could, once the number of workers in each category- the establishment- had been agreed, and the rate of pay, be confident that funds would be forthcoming- albeit often after substantial delays. There was no advantage to the local officials to get the work done for less money. Moreover, the ropemakers, like other Yard

⁷⁵ See above.

workers had shown themselves capable of industrial action to defend their living standards on a number of occasions and particularly when the new rates had been introduced in 1810. The officials could quite understandably have preferred to let matters lie.

Another factor is the undoubtedly paternalistic, if also authoritarian, atmosphere that characterized employment in the Yards. It will be more appropriate to discuss the connection between paternalism and patriarchy as it might have affected the later, larger numbers of women workers in the Dockyard below, but here what is to be noted is the marked, if rather paradoxical, paternalistic style of management and working practice in the yard. The paradox lies in the fact that the Yard was an extremely large organisation, part of a much larger organisation with a distant central direction, going through a period of administrative reform, while it is clear that on the ground locally, men worked in teams deliberately made up of workers of different ages and skill levels and that the Yard Officers knew the workers as individuals and showed a certain amount of sympathy with them. Various examples illustrating this crop up in the Letter Books of the early 1800s. A sad case of 1810 was connected with the new working rules being imposed. On the 31st of May, 1810 there appears a copy of a petition sent “To the Honorable Commissioners of HM Navy” by Ann Sharpe. It reads.⁷⁶

That your Honors’ Petitioner is constrained humbly to solicit your attention to her case being left a Widow with four small children her husband Steph’n Sharp Ropemaker being forward to express his willingness to obey his Officers in Spinning the Extra Quarter your Honors directed thereby incurred the displeasure of his Workmates who have since treated him so very ill as to drive him into a state of Insanity in which state on Saturday the 19th Inst he put an end to his existence she therefore humbly begs your Honors in consideration of her Distress will be so pleased to allow her the Benefit of his Apprentice during the remainder of his Apprenticeship.

The Rope Yard Officers supported the petitioner in her request to receive the wages of the apprentice, in accordance, perhaps with custom and practice though not her right. Business to do with apprentices generally gives rise to evidence that workers were known very much

⁷⁶ NMM CHA B/16, 31.5.10.

as individuals. It was still the practice at this time that apprentices' supervisors received the "benefit" of their earnings. The numbers of apprentices were regulated and it was a privilege to be awarded an apprentice. The ropemakers (as all other craftsmen in the Yard) were selected for this benefit and their names forwarded to the Board with details of their length of service and number of children, good conduct was of course also required.⁷⁷ It is clear that careful note was taken of each man's circumstances and the officials were always ready to report on a worker's worthiness or otherwise for any indulgence such as transfer to another Yard, being re-entered after working at a private yard, superannuation, sick leave and, naturally, promotion. These reports were overwhelmingly favourable supporting the worker's claim or request, but the officials also kept a "Black List" which they circulated among the Yards with descriptions of ringleaders in any disturbances. A letter of 1st of June 1810 refers to the Ropemakers who had been discharged the previous Saturday, among whom there a number who were instructors of apprentices and recommends suitable men to take on the apprentices for the remainder of their Servitude as the "best entitled to that Indulgence of those who were obedient to the orders of their Officers on that day." Again there were statements of the men's ages, length of service, number of children.⁷⁸

In the early part of the 19th century, it was the normal practice in the Yards to apprentice boys to their fathers or other relative if available which must also have contributed to the paternalistic style of management in the Yards. The yard officers certainly accepted that sons and orphans of craftsmen should be taken on for training as is illustrated in the various discussions about improving the education of apprentices. It is generally impossible to escape the sense of officious concern for employees alongside requirements of reasonable conduct, though there was tolerance of a certain amount of backsliding- no-one seems to have been punished for the regular few days' absence after the quarterly payday, for example. Other examples are found in discussions about suitable employment and pay for older shipwrights put to work on less skilled processes such as making oars and treenails. A letter of 28th March, 1811, discusses the problems:

⁷⁷ NMM CHA B/16, 1.6.10.

⁷⁸ NMM CHA B/16, 1.6.10.

We have given a greater advance to the old Shipwrights when so employed, because they are unaccustomed to such work, and cannot make exertions equal to young men brought up to it, and being taken from a superior class of People their earnings should be more than that of a Laborer.⁷⁹

This generally paternalistic attitude would surely have contributed to the slowness to take jobs away from men, indeed from families who were likely to have been doing the work for several generations. It also seems likely that these attitudes would have applied to the women workers too and is likely to have led to the practice of employing widows of Dockyardmen and their orphaned daughters although there appears to be no instruction to Yard Officers to do this.

Though so little is known about the women who were taken on as employees in the first half of the century, what is known about working practices in the Yard suggests that they were likely to have been members of Dockyardmen's families and they would have had to be women of good reputation. Practicality demands that with the hours worked, they must have lived close to the Yard, as did most of the men. This suggests Old Brompton or the central parts of Chatham where the Dockyard workers of this time mostly lived in quite densely packed streets.⁸⁰ What it was like for them to go into the Yard is not recorded, of course, but it was not that unusual for women to be about in the Yard. Women and children went in daily at dinnertime carrying meals for family members; there were, in fact, complaints about them hanging about unreasonably. Also, women went in on paydays, in the early years a quarterly event at best, because many of them were authorised to collect their husbands' pay. Sailors' wives also went to sign for and collect husbands' pay.⁸¹ It is also well known that when ships came in wives, friends and perhaps more commercially motivated women came in to be conveyed to the men on board. So women were not a rare sight in the Yard, even though the number actually employed there was tiny.

Despite the many suggestions and discussions of the likely advantages of employing more women, the handful of needlewomen assisting the tailor, perhaps never more than 10 at a

⁷⁹ NMM CHA B/17, 28.3.11.

⁸⁰ P. MacDougall, *Chatham Past*, p52.

⁸¹ TNA ADM 42/133 142

time and requiring no special provision for their working accommodation, remain the only ones on record for the first half of the century. So that, although it is tempting to see parallels with the situations in the two world wars of the twentieth century, when women's labour was needed to replace that of men called to fight, some caution is needed. There is some similarity in that the women were needed for work that had not been necessary in peacetime, when contractors could keep up with the supply called for, but they were not apparently replacing men. They do, of course, conform to established theories about women as a reserve army of labour. Interestingly, there appears to have been no discussion of taking on extra men to assist the one man already doing this work, so no way of knowing whether it was assumed they would be unavailable or too expensive or just not suitable for the work. Given that the tailor was already doing the work it seems that men could have been employed, but the labour shortages are well established.

Suggestions for taking on women for some stages of ropemaking in succeeding decades appear to be connected with developing technology, which was, however, taken up only very slowly, and a sense that women were more suitable for the lighter processes. It was to be the mid 1860s, however, before change came.

CHAPTER 4

FEMALE ROPESPINNERS IN ROYAL NAVAL DOCKYARDS IN THE 1860s

When change came, it was in the name of economy and efficiency. In British politics and the management of the economy in the nineteenth century, while the general trend was away from regulation and control, there was a recurring struggle between those who advocated more extreme forms of laissez-faire and those who supported, or tolerated, a greater degree of state intervention in economic and social affairs. Whenever the mood was for laissez faire and “small government” and particularly when there was a cry for reducing government expenditure, the naval dockyards came under scrutiny. As Roger Morriss argues in *Naval Power and British Culture, 1760-1850*,¹ the adoption of Benthamism in the shape of the need for personal as opposed to collective responsibility was for many the obvious way to reform dockyard management and reduce the notorious wastefulness and opportunities for corruption. But, coupled with the Whiggish enthusiasm for cost-cutting, the ideology tended to produce problematic results in the dockyards.² Rigorous cutting of the wage bill combined with highly centralized accounting and ordering systems could lead to an inflexible service, not well adapted to responding to unforeseen events.³ Nevertheless, in the decades following the end of the wars with France, recurring efforts were made to reduce the wage bill by changing the payment system, by trying to bring in cheap labour or by closing specialist departments and putting their work out to contract.⁴ Radical overhaul of the accounting systems and financial control, as part of the drive to centralized management was also going on in the 1820s and 30s. Costs and numbers of employees were lowered were reduced, but rose again by the late 1840s, only to be cut back again by 1853.⁵ The cycle of expansion and retrenchment reflected political outlook as much as exigencies of the service.

¹ R. Morriss, *Naval Power and British Culture*.

² R. Morriss, *Naval Power and British Culture*, p176.

³ R. Morriss, *Naval Power and British Culture*, p202.

⁴ R. Morriss, *Naval Power and British Culture*, p208.

⁵ R. Morriss, *Naval Power and British Culture*, p245.

For many, including, but not only, those with an interest in private shipyards, there was no justification at all for the government to own and operate dockyards, especially in peacetime. These people generally assumed or argued that privately owned yards were inevitably more efficient and cost-effective. An example is P. Barry, writing in 1863,⁶ whose book is a general attack on government yards. Undoubtedly, maintaining the naval yards was a major drain on government resources and while the arguments in their favour are equally obvious – that it was necessary to maintain the skills and resources in peacetime in readiness for any time of need – the Lords of the Admiralty were always susceptible to charges of inefficiency. Official enquiries of various sorts were set up from time to time, for example in 1849,⁷ and of particular importance, a Committee was appointed by the Admiralty in 1859 to report on Dockyard Economy.

The five-man committee was ordered to report to Portsmouth Dockyard to commence its inquiries on 20 April 1858,⁸ and given a list of twenty points to consider. Point number 11, was to consider whether there were opportunities for more mechanization in the yards, but in general, the remit of the committee was to look into the operation of the yards, the organization of the work, the payment systems, checks against pilfering, even the training and education of the staff in very broad terms. The committee produced its findings and then invited comment in a consultation exercise with the officials and workers in the dockyards. The comments were then published with the report and provide us with extremely valuable insights into the workings of the dockyard systems, the thinking about training, payment and many other aspects of the operation and management of the yards.

There was some controversy around the report. One of the members of the committee resigned, declining to be associated with the findings and recommendations of the report. The responses of those consulted in the yards show strong differences of opinion, noticeably about recommended changes in the selection and training of those destined for

⁶ Patrick Barry, *Dockyard Economy and Naval Power*, (London Sampson Low, 1863).

⁷ Report of the Inquiry into the Control and Management of H.M. Naval Yards, 1861, (2790), XXXIV, quoted in P. MacDougall, ed. *Chatham Dockyard 1815-1860: The Industrial Transformation*, (Farnham, Ashgate, for the Navy Records Society, 2009.)

senior positions. When the report was published in 1859, *The Mechanics' Magazine*, the journal of the Institute of Mechanical Engineers, was scathing about the make-up of the committee and various of its recommendations. The journal supported the committee member who resigned. He was Henry Chatfield, Master Shipwright, described by the journal as “the only member who is favourably known to the public, and who by education and authorship has a claim upon our confidence”. Chatfield disagreed on many items, varying from the importance of the “morning meetings” of the principal officers, to the supervision of the workmen, the superannuation scheme and the big question of whether the royal dockyards should be run like the private yards. The long editorial piece summed up the attack thus:

The utter unfitness of this Committee for the work, and the foolishness which prompted its appointment, are abundantly evinced in the result of its deliberations. Its sittings have been prolonged for a year, and the expense occasioned by it will be reckoned by thousands of pounds sterling. And what is the fruit of all this? A Report, which no government would, dare to act upon, except, perhaps, in some few minor matters.⁹

The Mechanics' Magazine returned to the attack on March 2nd 1860. The editorial began with “We are getting so weary of that strange Report on Dockyard Economy in which an engineer, an admiral, and a couple of other equally competent gentlemen embodied their astonishing views of shipbuilders and shipbuilding”¹⁰ but went on to comment on the “new volume of criticisms upon it which was last week issued by order of the House of Commons”.¹¹ This was the Observations of those consulted on the report, including the Memorandum of the First Lord of the Admiralty, and a Minute of the Board. According to the journal, the First Lord, The Duke of Somerset, goes carefully over the committee’s recommendations, but declines its advice on every important point, “aye, and on almost every unimportant one also”. The Board in its minute concurs with His Grace.

⁸ Report of the Committee on Dockyard Economy 1858. The members of the committee were: Admiral Smart, Chatfield, Andrew Murray, Chief Engineer at Portsmouth Dockyard, Robert Laws, Chief Storekeeper at Chatham and Robert Bowman,

⁹ *Mechanics' Magazine*, August 5, 1859, p 81, 82.

¹⁰ *Mechanics' Magazine*, March 2, 1860, p 133.

¹¹ *Mechanics' Magazine*, March 2, 1860, p133.

Nevertheless, at least some of the committee's recommendations were put into place, including their proposals on ropemaking.

As shown in the previous chapter, there had been discussion about using female labour in ropespinning at various times in the previous decades¹² with those proposing it suggesting that women would be more industrious and reliable than the boys they would have been replacing. This was at a time when machinery was coming into use for twinespinning, the first stage of manufacturing the rope, while subsequent stages still needed the physical strength and skill of the artisan ropespinner, all male. Twinespinning was, as we have seen, undertaken by women at Devonport. Although there are no paybook records for them after the early 1800s, the *Report of the Committee on Dockyard Economy* refers to them specifically in the "Remarks" section of the report when it mentions "the women line and twinespinners at Devonport".¹³

But by the 1850s machinery was being developed that would deal with the whole of the spinning. Rope-laying and closing, incidentally, the part of the process when the relatively fine cords are twisted up into thick ropes and cables, was also being mechanized but still needed artisan skill at this stage, as described in the previous chapter.¹⁴

A key figure in exploring the possibilities seems to have been Thomas P. Baker, who was Chief Engineer at Chatham from 1856 until his retirement in 1869. Baker knew that an experiment had been tried at Portsmouth in 1847¹⁵ and to his astonishment deemed a failure. In his own words:

In 1856 I joined this yard as chief engineer, and the first thing of any consequence I was consulted about by their Lordships, through the captain superintendent, had reference to the practicability of spinning yarns by

¹² See above

¹³ Report of the Committee on Dockyard Economy, para 657, "As these boys become discontented with their pay when they grow up and have become experienced in working the machines, the Committee are of opinion that it would be advantageous to the service to employ women in lieu of the boys to work the machines, as in private trade, proper arrangements being made for their privacy and accommodation, similar to those observed for the women line and twine spinners at Devonport".

¹⁴ See above.

¹⁵ Report of Committee on Dockyard Economy, para 914.

machines. The Government expressed great anxiety to make another trial, and selected Chatham Yard for that purpose, and, after visiting several roperies in Liverpool and other places, by their Lordships' orders, coupled with my own observations and impressions made relative to the working of those at Portsmouth, I unhesitatingly recommended the machines to be procured, which recommendation their Lordships were pleased to approve of. The machines have been at work upwards of two years..... and it is now unquestionably decided that yarns made by machinery are not only better made, but stronger.

He goes on to point out that to make 1259 tons of yarns, "the expenditure of yarns in one yard alone", costs £12.10s a ton by hand as against £3.16s by machine. Clearly, at a time when there was such emphasis on the need for cutting back on government expenditure, this was an area of concern.

The comments by Baker come from the consultation stage of the *Report on Dockyard Economy*, 1859. The final report of the Committee recommended the general adoption of the spinning machines and also that another large spinning factory should be established at one of the other yards as soon as possible and that the work should be performed by women.¹⁶ For the moment however, the machines were operated by men and boys, even though Charles Pope, Master Attendant at Chatham, had commented:¹⁷

It would, I have no doubt, be a great improvement to employ women instead of boys at the spinning machines, as they possess a more matured judgement, would be more attentive and steady at their work, more contented with their pay, and we should not have so many changes, which latter is most detrimental to the process of spinning yarns by machinery.

The Captain Superintendent at Chatham, George Goldsmith agreed and added that "one woman could readily attend to the duties now performed by two boys".¹⁸

In the letterbooks for 1859 there are references to the ordering of more spinning machines at Chatham.¹⁹ The machinery was to be made by Fairbairns of Leeds. In August, the Chief

¹⁶ Report of Committee on Dockyard Economy, para 635

¹⁷ Replies to Report on Dockyard Econ, para 657.

¹⁸ Replies to the Report on Dockyard Economy, para 657.

¹⁹ NMM CHA/H 99 20 July 1859.

Engineer was to be dispatched to Leeds to report on the efficiency of the machines proposed for making 30 and 40 thread yarns, or thread for making fine lines, the quantity of yarn of the different sizes that could be produced in a specified time, the horse power needed, space etc.²⁰

By 30 August, approval was given for the rates of pay proposed for the Men and Boys to be employed on the spinning machines. A millwright was already appointed as Leading Man in charge of Machinery, at 7/- a day. Two first class spinners were to be paid 4/4 a day, three labourers were to be paid 3/- a day and 26 boys, working on machines or carrying or removing yarn, were to be paid 1/3 a day.²¹

It is perhaps some indication of the thinking about the new machines that the man appointed as Leading Man in June of 1860, was Thomas Steel who had sent a memorial to their Lordships “relative to his invention of the Oar Sawing Machine”. Their Lordships saw fit to grant him the same pay as a Leading Man of Shipwrights in consideration of the services he had rendered, viz “8/- a day, under the same conditions he is at present serving, 10 hours a day wherever his attendance is required either as Leading Man or to effect any alteration or repairs to the machinery”.²² Clearly the substitution of a completely machine-based process for the traditional hand spinning called for fresh thinking about the supervision and first level of management of the new process. The requirement was for a man with experience of machines, and this one had also shown a degree of inventiveness. Shipwrights were always the highest paid craftsmen in the yard, so the pay here was a considerable advance on what the former highest grade of spinner was paid.

However they were still doing tests²³ comparing machine and hand spun yarns, and they still had to build or modify buildings to house the new machines. Additional accommodation for the spinning machinery figures in the 1861/2 Estimates.²⁴ Meanwhile,

²⁰ NMM CHA/H 99 5 August, 1859

²¹ NMM CHA/H 99 30 August, 1859

²² NMM CHA/H 102 20 June, 1860.

²³ NMM CHA/H 99 23 September, 1859 and 6 October, 1859.

²⁴ NMM CHA/H 104 3 October, 1860.

Chief Engineer Baker continued to collect information as is indicated by his expenses claims for a visit to Devonport about the Spinning Machines.²⁵

By the middle of 1861, the orders for the additional machinery had still not been placed. It was reported that the ordering, at a cost of £9,004, had been deferred until the autumn, “when their Lordships on their visit to that Yard will take the opportunity of considering the question”.²⁶ The visit duly took place and the Admiralty approved the plan. The *Chatham News* of 27 February, 1864, reported that Thomas Baker Esq. had proceeded to Leeds upon business connected with the addition to the machines in accordance with the “plan approved by the Lords Commissioners on the occasion of their official visit.”

In December 1864, another visit is reported in the *Chatham News*²⁷ in its weekly column, *Military and Naval Spectator*. The visitors inspected the newly installed machinery but there was still more still being manufactured in Leeds. The newspaper went on to say “It is still undecided whether to employ young women or lads to take charge of the new machinery but as a certain delicacy of touch as well as nimble fingers are required, it is probable the Admiralty will break through the rule hitherto observed, and introduce girls for employment in Chatham Dockyard.”

On March 18, 1865 the newspaper reported:

There will shortly be a complete change in this Dockyard in the ropespinning department; the first step having already been taken towards this end. It appears that about 27th of this month a number of females to the number of about 100, are to be engaged in the steam-spinning room.....this work having always hitherto been done by men. This alteration will cause the removal of a large number of ropemakers from the spinning- rooms, who will have the option of discharge or doing labouring work in the Yard at a reduced scale of wages – a number of men having already commenced working on labourer’s pay. It is stated that a number of females from spinning factories in Scotland and Wales will shortly arrive at the Yard for the purpose of acting as

²⁵ NMM CHA/H 104 30 November, 1860.

²⁶ NMM CHA/H 106 20 June 1861. Letter from the Department of the Comptroller of the Navy Steam Branch.

²⁷ *Chatham News*, 16 December, 1864.

instructors, and who will receive a higher rate of pay than the other women, the pay of the latter being as low as 9/- per week.²⁸

It was also announced in *The Times* in its *Army and Navy News* section that between 90 and 100 young women were to be employed at Chatham Dockyard to work on the newly installed ropespinning machines.²⁹

Despite the slow pace of the introduction of the new process, the final decision to replace the men with women was taken very quickly in the early days of March. On 27 February, the Captain Superintendent had written to the Secretary to the Admiralty to ask for instructions regarding the operation of the new machines which were being erected and were expected to be ready to be put into use by the end of the month. It would be of advantage for the Officers, he said, to know whether these machines were to be worked by men and boys, or women and girls, as in the latter case, special arrangements would have to be made at a cost of £63.³⁰ Rather surprisingly, perhaps, the Admiralty wrote back on 2 March, asking for a report on how many women and girls were employed and whether the work was such “as can properly be performed by them” as well as what rate of pay would be given to male and female workers.³¹ The Dockyard Officers reported that there were no women or girls employed at present but that the work of spreading, drawing, spinning, and tending can be best performed by women and girls and at a saving of £447 per year in wages.³²

At the Admiralty, they decided to ask for detailed comparisons of the annual costs of employing men or women, which the Officers supplied on 17 March.³³ They also gave their opinion that, since the spinning would not be under the direction of the Master Ropemaker or the Foreman of Ropemakers, one of these could be dispensed with. The

²⁸ While the newspaper was to prove correct about the level of wages, no confirmation has been found that women were brought from Scotland or Wales to be instructors.

²⁹ *The Times*, March 1865

³⁰ TNA ADM 1/5929

³¹ NMM CHA/H 121, p701.

³² TNA ADM 1/5929

³³ TNA ADM 1/5929

Accountant General then drew up the following table showing the projected saving on the estimates for 1865/6 of £2,960, and presented it on 31 March.³⁴

Table 4: Comparative Statement showing the cost of the Establishment as provided for in the Navy Estimates for 1865/66, and of this revised one, proposed by the Yard Officers.

| As provided for in Estimates | | | Proposed Establishment | | |
|------------------------------|------------|---------------|------------------------------|-----------|---------------|
| Category | Number | Amount | Category | Number | Amount |
| Leading Man @ 8/- | 1 | £135 | Foreman of Spinning Machines | 1 | £200 |
| Spinners @ 4/4 | 2 | £136 | Leading man @7/- | 2 | £219..2..0d |
| Labourers @ 3/- | 3 | £141 | Female Overseer @ 3/- | 1 | £46..19..0d |
| Hired Labourers | 24 | £863 | Girls @1/9 | 20 | £547..15..0d |
| Boys @1/- | 100 | £1,830 | Do @1/6 | 16 | £375..12..0d |
| | | | Do @1/3 | 55 | £1,154 |
| | | | Boys | 4 | |
| Total | 130 | £2,830 | Total | 99 | £2,544 |

Reduction on provision made for 1865/66, £286..0..0d. But a letter had already been sent to the Captain Superintendent on 9 March saying that the employment of women and girls at the rates reported was approved; the letter was passed to the relevant officers and the “necessary arrangements” were put in hand.³⁵ And, as we have seen, the plans were reported in the local press by the 18 March.

Although various people over a long period of time, had recommended employing women on account of their supposed or proven characteristics of working more steadily and contentedly, not to mention the nimble fingers, it is difficult to avoid the conclusion that by 1865, the decisive factor was that the women would form a cheaper workforce. It is also apparent that the officers concerned in the decision-making were well aware that women normally did this sort of work in the private trade. Although the press makes the

³⁴ TNA ADM 1/5929

³⁵ NMM CHA/H 121. The letter is signed on the back on 11th March, by the Captain Superintendent, noting “For Officers’ information” and “Mr Rivers to proceed with the necessary arrangements”, p806.

point that women working in the yard would be “a complete change”, this does not seem to have been an issue for the decision takers, possibly because they were aware that there were in fact small numbers of women working in all the yards as colourwomen and, in the case of Devonport, twinespinners. This was not a period of labour shortage, in fact, arrangements had to be put in hand for the dismissal of the existing men, not only the handspinners, but those working the old machines. This was a period, however, of cost consciousness and of the need for efficiency and change.

On March 25, The *Chatham News* reported that the first 20 or 30 women had been entered, but were not to start work for another two or three weeks. A further 20 or 30 were to be entered every day until the required number was filled up, “preference being given to those females who are relatives of the discharged rope makers.”³⁶

Then the discharge of the male ropespinner began. The newspaper of April 8, said that ninety-nine had their discharge the previous Friday, though only 25 had actually left. Some would take the offer of labouring work at lower pay, but others would be staying on for a few months to make up their 10 years “servitude”. On the Saturday and Tuesday following, the whole of the new machinery had been started up for testing and it was expected that the first group of women would begin work on the following Thursday. By April 22, almost all the women who had been entered were at work, some 80 or so.³⁷ By July 29, indeed, they were figuring in the accident records.³⁸

Although it must have been hard for skilled artisans, as the ropespinner were, to see their work taken over by machine minders, they were shown a certain amount of consideration. Railway passes were available to those going to other parts of the country.³⁹ This was often the case when the Yard was cutting back on numbers of hired men. On 5 April an instruction was sent that hired ropemakers who had been many years under the Naval Department were to report their service on Treasury forms in order to claim a gratuity.⁴⁰

³⁶ *Chatham News*, 25 March, 1865.

³⁷ *Chatham News*, 22 April, 1865.

³⁸ *Chatham News*, 29 July, 1865.

³⁹ For example, NMM CHA/H 125, 22.3.69, 1019.

⁴⁰ NMM CHA/H 122, 5.4.65.

As has already been noted, some of the established men were being allowed to work on for a few months to qualify for their gratuities. In September, the *Chatham News* reported that the Admiralty had at length admitted the claims for compensation and issued an order for payment of sums varying in amount according to length of service “and other considerations”.⁴¹ This could be seen a sort of redundancy scheme. The men were offered work as labourers elsewhere in the Yard, as already noted. The pay was lower, of course, but at least, offered some sort of livelihood. Two former ropemakers asked to buy some of the old machinery in June of 1865, and permission was given.⁴² Generally, while at the highest levels efficiency and economy were paramount – this is also apparent in the decision to streamline the management of the Ropery, doing away with the post of Master Ropemaker,⁴³ for example, the long established Dockyard tradition of paternalism was still apparent.

It seems likely that this was one of the elements in the apparently smooth changeover from skilled male workforce to unskilled female workforce in spinning. Another point could be that, since many comments are found in the correspondence between the dockyard officers and the Admiralty about the work being done by women in private trade,⁴⁴ that these men knew they were not likely to get spinning work elsewhere and so were willing to take a safe job, albeit with less pay and status.

The *Chatham News* is silent on the matter. It does not have a special section for letters, but frequently prints letters in between other items, so it is possible to miss them. But there seem not to have been any, nor any editorial comment.⁴⁵

⁴¹ *Chatham News*, 30 September, 1865.

⁴² NMM CHA/H 122, 22.6.65, p2099.

⁴³ In fact this was not done till some years later.

⁴⁴ For example in the decision to employ women in March 1865 and also in the discussion in the Report on Dockyard Economy and the replies to it.

⁴⁵ The *Chatham News* could be sanctimonious and patronizing towards the working class. For example, on the death of Richard Cobden in 1865, an editorial, commenting on his rise from lowly beginnings, thought this a lesson for the working class, “It would be a happy thing for England if our working classes would ponder these lessons” it said. On the other hand, it shows an appreciation of the realities of life in a government-dominated town. In a news item about an incident in the Dockyard Chapel, a stand-in preacher had taken the opportunity to attack the government’s proposed changes in the Divorce Law, whereupon the Captain Superintendent had walked out. The paper comments that since the Chapel serves virtually all government employees, it was an indiscreet act to choose such a place for an attack on the government.

The apparent lack of resistance to the plan by the men contrasts with the many examples given, for example, *Technologies and Toil in Nineteenth Century Britain*.⁴⁶ This collection of documents, edited by Maxine Berg, had as one of its aims, to show how the perception of the changes implicit in technological development, including the displacement of skill, influenced “the measures taken by workers to deal with their situation in the work place”.⁴⁷ In the Introduction, Berg makes the point that “continuing symbiotic relations between old and new techniques provided a cushion for the novelty, adaptation or death of production processes. Whatever the result, the context was always one of struggle”.⁴⁸ Processes being not only mechanized, but then taken over by women, were particularly problematic, although as Berg says,⁴⁹ such trades were generally already degraded. She also says “the pattern of resistance revealed an immense diversity in forms of workplace struggle. Each was dependent on the particular production situation and particular social and cultural context”.⁵⁰ Here perhaps, in the cultural context, lies the explanation of the apparently very different reactions in the dockyards, where the accommodations over pay and working conditions were generally negotiated between government and workers on a different basis from that in private industry.

In an article in *Mariners' Mirror*, 1983,⁵¹ Mavis Waters argues that the Admiralty, in negotiating changes in the work practice for shipwrights, laid the foundations for “a period of co-operation and goodwill between government workers and management very different from the state of relations in large-scale private industry and scarcely to be expected in a situation where production was so crucial and wages rather low” and that this lasted till about 1887. True, this was specifically to do with shipwrights, but they were the most numerous, highly paid and influential of the dockyard workers. It seems likely that their relations with the management would have set the tone for the whole yard.

⁴⁶ M. Berg, *Technology and Toil in nineteenth century Britain*, (London, CSE Books, 1979)

⁴⁷ M. Berg, *Technology and Toil*, p1.

⁴⁸ M. Berg, *Technology and Toil*, p6.

⁴⁹ M. Berg, *Technology and Toil*, p15.

⁵⁰ M. Berg, *Technology and Toil*, p9.

⁵¹ M. Waters, “Changes in the Chatham Dockyard Workforce 1860-90”, in *Mariners' Mirror* Vol 69, 1983.

It was, therefore, into this rather unusual work environment that the 80-100 young women of the ropery were initiated. Not that there was any intention of the women coming into contact with any of the men apart from their supervisors. They had their own separate entrances and facilities and starting and finishing times.

Although so much preparation had been done before the machines were started up, there were still queries and tests to be done. On 26th April, the Captain Superintendent was asked to report on the maximum quantity of yarn that could be spun when all the machines were in place. Details of the different thread counts were given, showing the machines could produce as much as the average for the previous ten years.⁵² Further correspondence shows how the old spinning floor was to be re-used for storage, freeing more space for more new machines, which had been installed by August. By the end of the year, permission was sought to take on more workwomen and to supply Portsmouth with yarn as well as Chatham.

Meanwhile at Devonport, preparations were being made for the start of steam spinning there. The decision had been taken, as shown, at the time of the *Report on Dockyard Economy*, to concentrate ropemaking at Chatham and Devonport and close down the other roperies.⁵³ The *Western Daily Mercury* of January 12, 1867⁵⁴ said, “a number of females are about to be entered in this establishment [Devonport Dockyard] to attend the machines in the “rope-house”. The paper correctly surmised that a large number of ropemakers would be dispensed with. Through the year, the number of ropemakers was steadily reduced. However, for a time, according to a report in March of 1867, because a large stock of yarn had accumulated, all the spinning was being done at Chatham, but on short time.

As at Chatham, the ropemakers discharged from Devonport had the option to work on as general labourers in the yard, or to be superannuated earlier than the normal time. The newspaper lists the names with the amounts of pensions, for the established men and

⁵² NMM CHA/H/122, 26.3.65.

⁵³ Report on Dockyard Economy, para 636, p62.

⁵⁴ WDM Jan 12, 1867, p8, column 2

gratuities for the hired spinners and labourers. By the time the Lords of the Admiralty visited the yard and inspected the new rope house in August, 60% of the workers employed in the department had been discharged. Again, as at Chatham, the changes seem to have happened smoothly, leaving no obvious signs of protest.

There was a stronger reaction when the ropery at Portsmouth was closed in 1868 at a time of broad ranging cutbacks at that yard, involving some 2,000 men. A report in the *Western Daily Mercury* of 20th May about a deputation to the Admiralty, led by the Mayor of Portsmouth refers to a petition that the ropemakers had presented asking for more favourable superannuation conditions, given that they had served apprenticeships and were at “a time of life when they were unable to acquire a new handicraft”. The ropemakers, it was said, were only fit to follow their trade or serve the government as labourers. Their Lordships regretted the necessity to cut back at Portsmouth, which was a result of the “reconstruction of the navy by the substitution of ironclad ships and hoped more work would be found to be forthcoming from the expansion of the private shipyards. However, the deputation was given to understand that the ropemakers’ petition would be looked at favourably.

Workmen were still being discharged at Devonport at this time, as was reported on June 8th, though in much smaller numbers, around 80, but including 3 hired spinners and 3 female twinespinners.

By June 13th, the newspaper reports that the Portsmouth rope house had been locked and the machinery therein was still, with the men all compulsorily superannuated. There were large numbers being stood off in all departments, around 2000 in all; there was “much distress”.

Large amounts were, of course, being spent on refitting the dockyard to build and maintain the new ironclad ships and investments such as steam spinning machines were in place, but against a background of apparent financial crisis. The newspapers report the need for cutting wages, as an order was received to reduce the wage bill by £6,000 over the next 3

months. Parliamentary Papers for this and the next year show consistent overspending on the budgets for the middle years of the 1860s. The newspaper criticizes the plan for cutting wages because it does not call for any sacrifice on the part of the officers, but much of the money is to be saved by short time working rather than outright dismissal.

Gathering together the limited information about the women ropespinner with the more detailed material about the men's working conditions in the yards, it is possible to argue that they all operated in an organization which was highly bureaucratic, hierarchical and, in theory anyway, subject to strict discipline, but was, nevertheless, for the times, relatively benign and progressive. No doubt the ropespinning jobs, low pay and long hours notwithstanding were highly sought after in districts already notorious for poverty and bad living conditions. While for the displaced men, theirs was the story of so many others who found new technology had made their skills redundant, and they went quietly.

The way the changes were managed within the yards is interesting. The earlier observation about the apparent lack of need among the yard officials to economise no longer applied. By mid-century, the Yards were frequently the object of attack by all those who believed in small government as well as those who saw the yards as nests of corruption. Much current thinking in the 1850s and 60s insisted that private contractors would always build and repair ships more efficiently and economically than the government yards, though navy men themselves were always suspicious of corner cutting and poor standards of work within the private yards.

On the question of taking on women at the height of the "separate spheres" ideology, the Board and officials seemed to operate the convenient double standards normal at the time. This allowed ladies to be sheltered from the harsh world of work outside the home (or imprisoned within it, according to one's point of view), while working class women were not only seen as the right people to be operating spinning machines but could be severely exploited in terms of hours and pay. Some reservations about this can perhaps be detected in the practice of giving preference to daughters, widows and orphans of dockyard workers when taking on the ropespinner, but, as we shall see, the rates of pay were abysmally low.

With fines and sometimes short time working, the ropespinnerers are found applying for Poor Relief even when supposedly full time employment.

Overall it appears the women and men in the yards worked in a relatively benign environment compared with many others of the time, but working conditions will be looked at in more detail below.

CHAPTER 5

WORKING AND LIVING CONDITIONS

Working in the Spinning Rooms

This chapter will evaluate the working experience of the women of the dockyard spinning rooms and, to a lesser extent, the colour lofts, using the records contained in the dockyard correspondence and newspaper archives as before, but also evidence of similar and allied industries, mostly derived from the *Royal Commission on Labour* of the 1890s and contemporary discussions of the Factory Acts. Reference will also be made to the copies of photographs of women at work in the dockyard shown in the Appendix.

Once rope was being spun by powered machines it is clear that the work that women were employed on in the dockyard roperies had much in common with the machine spinning of yarns for various materials other than rope, for example, wool, linen and cotton. It is possible, therefore, to gain more insight into the working conditions and general working experience of the dockyard women by also considering what is known about these other industries, some of which have been better recorded than the dockyard roperies. Like these other industries, the roperies were subject to the Factory Acts, the provisions of which were being extended in the 1870s; discussion of the requirements of the Acts gives some insight into working conditions. As in the other industries, many of the workers were not considered to be skilled, and were often very young. Tending the machines was learnt quite quickly. When the dockyard machines were first installed and women were taken on, only a few weeks were allowed before the whole process was operational, as shown in the previous chapter. The hours were long and the rate of pay very low, comparable with unskilled women's work generally. The initial rates of pay were shown in the correspondence between the dockyard officers and the Admiralty in March, 1865 referred to in the previous chapter, that is, roughly 9 shillings a week. In practice, as in factory work generally, there were often stoppages of pay or short time working, which sometimes

led women to apply to the Poor Law guardians for supplements to their wages in order to live.

Pay and hours notwithstanding, as was suggested in the previous chapter, employment in the new Spinning Rooms at Chatham Dockyard was likely to have been highly sought after. The range of employment possibilities in the area of the Medway Towns was not large, as discussed particularly in *The Chatham Scandal* by Brian Joyce.¹ This book, in undertaking to explain the extent and significance of prostitution and attempts to curb it through the use of the “Contagious Diseases Acts” the CD Acts, between 1864 and 1886, paints a useful picture of the various kinds of work available to women. As is generally found in areas where heavy industry predominated in the nineteenth century, paid employment opportunities for women tended to be more limited than in areas where the local economy was more diversified. However, here, as elsewhere, the largest categories of occupations recorded in the local census were concerned with various kinds of domestic service and the needle trades, which between them accounted for over 80% of those employed in 1851. Joyce is undoubtedly correct to point out that domestic work in the district, given the fairly small local middle class, was more likely to have been of the charwoman and public house staff variety, serving the largely working and lower middle classes, or as the single hard worked servant in a modest house, than that of having a comfortable position in a large, well-found household.

In needle trades, there was some reflection of the character of the towns in that there were government clothing factories, where service uniforms were made. The pay and conditions in these were notoriously bad.² There was also machining work available in a large private clothing company, Axe Brand, where as many 600 women were employed in the 1870s and in several smaller establishments. Throughout, the wages were very low.

The period following the 1851 census saw the dramatic expansion of the dockyard, beginning in the 1860s, and an accompanying rise in the population. New Brompton, which was built to house the new workers, quadrupled in numbers between 1861 and

¹ B. Joyce, *The Chatham Scandal*.

1901. This is also the period when housing in Chatham spread up the adjoining hillsides and out into the valley of Luton, previously an agricultural district. Outside the dockyard, there were not, however, many obvious new work possibilities for women apart from the expansion of the clothing factories. Respectability, an important dimension of people's lives that will be returned to in more detail later, was a factor in finding suitable work. The Axe Brand factory apparently had a reasonable reputation both in the working conditions provided and the demeanour of the employees, but some of the smaller concerns were believed to attract or lead to less respectable behaviour, with a prominent local citizen asserting that factory work was combined with streetwalking.³ Joyce quotes one of the local opponents of the CD Acts as saying in a speech in 1873:

It was considered that every girl who entered certain sewing factories had lost her character; and every right-minded mother would rather allow her child to be put to any employment than send her to any one of those establishments.⁴

Work in the dockyard would not have carried these associations. Respectability was a requirement constantly referred to and assumed as necessary for employment there, though there was a well-known social distinction made between the women of the spinning rooms and the "ladies" of the colour loft. When the new posts became available in 1865, the Admiralty expressed no concern about finding workers. On the contrary, as has been shown, it was stipulated that preference was to be given the families of the displaced men spinners. Local tradition has it that all the posts in the dockyard were primarily reserved for widows and there was undoubtedly a high number of widows in the workforce, though there were also girls and married women, as will be demonstrated. No earlier regulations

² B. Joyce, *The Chatham Scandal*, pp38, 39

³ B. Joyce, *The Chatham Scandal*, p43. For example, in evidence to the House of Commons Select Committee on the CD Acts, 1881, following exchange is reported:

Adam Stigant (Chairman of the Medway Board of Health and also of the Chatham Board of Health): Of late years there have sprung up in Chatham some cloth factories employing great numbers of girls, establishments that did not previously exist. Unfortunately many of the girls spend their evenings in dancing saloons and they appear to have gone astray. Many of the girls, even the respectable ones, after their daily occupation, walk the streets.

Osborne Morgan, MP: These clothing establishments have been comparatively recently started at Chatham?

Stigant: Yes, they have had a great development of late years.

Morgan: And you think they have tended to feed the class of prostitutes?

Stigant: I think so; I may say they have had a tendency that way.

⁴ Annie Young, opponent of CD Acts, quoted in Joyce, *op cit*, p44.

have come to light but Dockyard Regulations of 1904 state, in the section (Chapter XIV) headed Entry and Discharge of Workpeople:

In the entry of women for employment in the roperies, preference is to be given to poor widows whose husbands have died in the service, and respectable orphan girls.⁵

The regulations were even more specific about the entrants to the colour lofts:

The most efficient machinists are to be selected to fill vacancies among the women employed making signal or other flags. Equal numbers of the widows of petty officers of the Navy and of those of persons who have belonged to the Dockyards and civil Department are to be selected.⁶

These regulations also stipulated that married women who became pregnant were to be discharged about a month before confinement and other women entered in their place. The names of those discharged were to be placed on a list of candidates for re-entry, “if considered desirable.” There was clearly no certainty of returning after the birth.

In all, it is clear that the hundred or so jobs on offer in the Chatham ropery would have been highly valued, but life in the spinning rooms was not easy. The same is true for Devonport a few years later. There is some evidence of people writing to the dockyard there pleading special cases for women to be employed, although only 7 letters remain in the Dockyard Museum. These, where the names all begin with the letter “W” are clearly part of a bigger collection the rest of which no longer exists. Some ask for employment for the writer herself, others for a daughter or they write to recommend someone, usually an orphan. All suggest the worker will be diligent.

There were no “established” positions for the women who were all in the dockyard’s “hired” category, which meant that if demand for rope was reduced, they could be laid off, or put on to short time working, at short notice. This happened at fairly regular intervals, from 1867 onwards. Their rate of pay was always low and when they were put on reduced

⁵TNA ADM 186/873 Chapter XIV para 301. 2.

⁶ TNA ADM 186/73 Chapter XIV para 301 1

hours, the take home pay was so low that some women applied to the local Board of Guardians for supplements to their wages. Reports in the local newspapers reveal wages ranging from 6 shillings to 14 shillings and show that when wages fell below 10 shillings, widows with children might be successful in applying for supplements.⁷

The weekly meetings of the Medway Board of Guardians are reported in detail, particularly in the *Chatham Observer* where the exchanges between the Guardians are recorded word for word. There seems something of a knockabout atmosphere on some occasions when the different political positions of the board members are apparent, with some people losing their tempers, to the amusement, it is reported, of the other guardians and the reporters. On one such occasion in August, 1876, there was the culmination of a disagreement which had been rumbling through the discussions over several weeks about whether the Board was justified in paying out taxpayers' money to supplement the wages of women employed in the dockyard. Some members had wanted checks made on exactly how much the wages were and it was felt by some that this was the duty of the Relieving Officer. The Clerk and others argued that he could not be expected to get all these details and the women were asked to attend a meeting of the Board. At the meeting where they were waiting to be called, one member declared that he would walk out, thereby making the meeting inquorate, if they entered the room, on the grounds that it was improper for them to have been called. Another objected to their being called on the grounds that they were losing wages through their absence from work. It was agreed that after the meeting the Clerk should meet the women and ascertain exactly what their take-home pay had been, and the matter returned to the following week. It was on the basis of this information that the discussion proceeded on 5th August 1876.

Details, including names and ages, were given of the wages and rent of several widows and the number and ages of their children. With one exception they all earned 10 shillings a week or less, despite being employed full time. The one who had earned 14 shillings and twopence had since been moved to a task that would produce no more than 10 or 11 shillings a week. They all paid 2 shillings or more a week in rent. Despite their differences,

⁷ *Chatham Observer*, 5th August, 1876.

the Guardians finally agreed to do nothing about the situation. One of them, Mr Stigant (already encountered above), said “It was unmanly of them to be seen moving in such a matter as this, persecuting poor widows”. The Guardians were not always so sympathetic, but on this occasion they acknowledged the impossibility of keeping a family on the wages being paid at the ropery. Similar wages were also reported for a widow employed in the colour loft, but the Guardians insisted they were looking only at employees of the ropery and discussion of the colourwoman’s situation went no further.

A report in the Plymouth local newspaper, the *Western Daily Mercury* of Tuesday, March 26th, 1867, states that an order had been received countermanding an earlier one about the dismissal of women working at the spinning machines at Chatham. Instead the women were to work reduced hours until the large stocks of yarn in hand were exhausted. At that point all the handspinners left in the other dockyards were to be discharged and the “whole of the spinning [was to be] effected at Chatham, where, with the improved machinery in use, it [could] be effected considerably cheaper than at the other Royal Dockyards.”⁸ In fact, the women were to work for 5 days a week. Evidently at this stage sufficient rope was being produced, and this was before the opening of the new ropery at Devonport. But, of course, all departments of the dockyards were always subject to alternating cuts and expansion as levels of government spending on defence varied and the numbers of every type of worker in the “hired” category varied accordingly, the roperies being no exception.

By 1872, circumstances had changed and the yard officers were being directed to prepare new schemes for pay and for getting the best results from the machinery. A monthly return dated 13th March 1872 listed the then numbers employed in the ropery at Chatham and their rates of pay. In the spinning department, there was a Foreman of Spinning Machinery, a Matron on 3 shillings and 11 pence per day and 115 women and girls on pay varying from 1 shilling and 3 pence to 1 shilling and 9 pence per day and 4 boys on 1 shilling and 3 pence per day. However, on the 18th March, the dockyard officers received notification that the ropery was to be put on “task and job and on unlimited earnings”⁹ from the beginning of the following financial year instead of the fixed daily rate. Although

⁸ *W. D. M.*, Naval and Military, 26th March, 1867.

this might have sounded promising of higher earnings for hard workers, the instruction goes on to say:

It has been ascertained from the Private Trade that in the Spinning Department, the quantities turned out daily by the Machines are as much as the speeds of the various machines are capable of, excluding the time necessary for stoppages to repair threads, change bobbins, clean machines etc, which appear to be on the average from 10-20% and never higher than the latter.

In preparing the new scheme therefore, time to be allowed has been put down at from 25-30% in proportion to the particular nature of the work and to the necessity of keeping the machinery in the best possible condition.

The machinery in the Dockyard Roperies compares favourably with that in use in the private trade, particularly in regard to the manner in which it is fixed and to the space allotted to it; and it is considered that with these advantages, the Dockyards should turn out at least an equal quantity of work, but it is clear that the women in the private trade display far more activity in dispatch in shifting bobbins, repairing threads etc and so to keep the machinery going at full speed, and your special attention is drawn to this point in the working of the Dockyard Ropery, and my Lords trust that by bringing the new scheme of prices into operation and paying the workpeople according to what they can earn, a considerable improvement will take place in the quantity of work turned out.

The instruction goes on to say that in the private trade women attend to 8-12 spindles as opposed to the 4-8 in the dockyard and that “no time is to be lost” in putting the 4 spindle machines close together in twos and having one woman attend to both sets, thereby placing the dockyards on more equal terms with the private trade.

There was to be a general tightening of conditions; the number of hands on the hatchelling machines was to be reduced, the overseer was to devote himself entirely to overlooking to ensure the quality of the work and was therefore to have no Cabin on the floor, though a standing desk might be supplied if necessary. Checks on each machine’s output were to be made twice a day, the writer recording to be accompanied by the person in charge of the floor “to prevent as much as possible the falsification of Accounts”

⁹ NMM CHA/H 142, p1437

The point was that the Admiralty believed that the amount turned out at each of the roperies fell some 200 tons per annum short of what should be produced and that records were to be kept of any of the workpeople “who are unable to do the required quantity of work, with the view of their dismissal, and of obtaining other persons who are capable of properly performing their duties”. Clearly a demanding pace of work was required.

Although there is no need to doubt that the Admiralty was correct in claiming that higher output and faster rates of working could be found in the private trade, it is also clear that the faster pace was not universal. In reports to the *Royal Commission on Labour: the Employment of Women*, of 1893,¹⁰ visits to private rope works by the Lady Assistant Commissioners in various parts of the country are described. The size of the factories varied immensely. One mill in Port Glasgow employed 1400 women and 100 girls,¹¹ while one in Liverpool, which also had women handsp spinners working in it, had only 30 machines with 16 women to mind them.¹² However in none of the examples described were women working the number of machines called for by the Admiralty. It is noticeable that a much faster pace and greater skill, not to mention, higher wages, were found in the textile mills, especially some branches of the cotton industry, whereas the rope works throughout offered low pay and often poor working conditions. Even when the workshops themselves were spacious enough and well ventilated, which was by no means always the case, the sanitary arrangements were nearly always heavily criticised. In these respects, working in the dockyards was no doubt a better experience.

However, there are some relatively good reports of private employers. Frost Brothers, a large firm of rope makers, operating in East London, apparently tolerated the formation of a trade union in the 1890s to which almost all of its women employees belonged. This union which was described by the Women’s Trade Union Association in its First Report,

¹⁰ Royal Commission on Labour. *The Employment of Women*. Reports by Miss Eliza Orme, Miss Clara E. Collet, Miss May E. Abrahams, and Miss Margaret Irwin (lady assistant commissioners) on the conditions of work in various industries in England, Wales, Scotland and Ireland. 1893-4.[C.6894-xx111].

¹¹ RC on Labour, p193

¹² RC on Labour, p68

(for 1889/90) as “in many respects the most encouraging of all that we have founded”¹³ was able to negotiate on behalf of the workers for pay rises and later, in 1892-3, to help settle a possible strike over changed working practices. The union was even able to organise a first-ever day’s outing to Epping Forest with contributions from the employer.¹⁴ Comparing this with the reports for the Royal Commission, suggests that this firm was not typical of the industry as a whole.

The work carried dangers to health. Operating the machinery entailed dealing with the bobbins and joining threads. It was soon found that the women were prone to having their wrists cut by the hemp and leather gauntlets were devised for them to wear, as described by the Chatham Dockyard Staff Surgeon in 1869.¹⁵ Terrible accidents occurred when women were caught in the machinery. At Chatham according to the surgeon’s report a system of “speedy, instant” communication had been set up between the workshops and the engine room to prevent or mitigate accidents in the spinning rooms. Evidently the system had been specially installed in relation to the ropery, but the surgeon was recommending that it be extended to all the workshops using power from the engine room to prevent further accidents like one he described where the machinery had not been able to be stopped in time to save a man’s life. The Staff Surgeon at Devonport, in his report for 1869 describes a case where, on 28th May, one of “the machine-girls”, aged 18, had her right hand caught in the spinning machinery. All the fingers were more or less lacerated and there was a compound fracture of the forefinger. The girl was sent to the Royal Naval Hospital for treatment, but tetanus set in and she died on 6th June. Tetanus was fortunately

¹³ Quoted in E. Mappin, *Helping Women at Work: the Women’s Industrial Council 1889-1914*, (London, Hutchinson, 1985)

¹⁴ It has to be observed that this phase of organisation of women in trade unions was very much associated with leadership and encouragement by groups of liberal, philanthropic, educated women who were trying to improve the lives of working class women. As noted by Mappin, op cit, the Women’s Trade Union Association, (WTUA) an umbrella organisation formed following the 1889 Dock Strike, to found and promote trade unions among women primarily in the East End of London, was noticeably conciliatory in its attitude towards employers and aimed to work through intervention and negotiation rather than confrontation. In the WTUA report for 1891-2 for the Ropemakers’ Union, it says: In the factory where the Union began- that of Messrs Frost and Son- every woman belongs to the Union, and the employers are upon the friendliest terms with the Union officials and fully realise the value of organisation and cohesion among their employees.

¹⁵ *Statistical Report on the Health of the Navy for the year 1869*.

very rarely seen in the yard, this case being the only one he had seen in 3 years and 9841 accidents.¹⁶

In 1869 correspondence between the Admiralty and Chatham Dockyard shows that a spinner named Fanny Reed had had to have a leg amputated as a result of an accident at the spinning machines in 1867. The 1869 letters deal with arrangements for her to visit Messrs Weiss, artificial limb makers in central London, accompanied by her mother, to have an artificial leg fitted.¹⁷ The letters at least show a reasonable attitude to the unfortunate young woman, querying whether she is fit to travel. In 1875 the *Chatham News* reported the Poor Law Guardians refusing to admit a girl to the Workhouse who had 2 fingers missing as a result of an accident in the spinning rooms and who had had received a gratuity of £15 in compensation.

As well as accidents, there was the atmosphere of the spinning rooms to contend with. The Staff Surgeon at Chatham in his report for 1869 wrote about the atmosphere being full of minute particles “which are seen to settle on their heads and clothes and which they must continually inhale during their work” although he also said that they did “not appear to suffer at all from phthisis, pulmonalis, or indeed, any chest affection as the result of their employment”.¹⁸ Similar observations were made in the *Western Daily Mercury* in 1871 in a report of the annual inspection of the yard by the Lords of the Admiralty. The paper said;

Their Lordships passed through the whole length of the spinning room, with its dreadful din and clatter and its atmosphere of dust and small yarn. In it almost the whole of the machines are tended by women and girls, who dress in neat brown Holland gowns and protect their back hair with what looks like the poll of a night-cap. Notwithstanding that the atmosphere of all the departments of the ropery is either filled with yarn dust or is redolent of tar and carbolic acid, the employees are the healthiest in the Yard, and attain the greatest age after superannuation¹⁹

¹⁶ *Statistical Report on the Health of the Navy for the year 1869*, p108

¹⁷ NMM CHA/H/126, 28.5.69.

¹⁸ *Statistical Report on the Health of the Navy for the year 1869*, House of Commons Papers 384, 25 July, 1871.

¹⁹ *W D M*, Wednesday, October 4th, 1871, Naval and Military.

The remark about attaining the greatest age after superannuation is odd, considering that the rope machines had been working for no more than 2 years at that stage, but perhaps the writer was confusing the machinists with the female twinespinners who had previously worked in the dockyard and did indeed qualify for gratuities on retirement in some circumstances.

The dustiness of the atmosphere did cause concern among the visitors though and extra fans were fitted. This had also been recommended in the early days of the Chatham spinning rooms as reported in the *Chatham News*. The report said: “On the Lords of the Admiralty visiting the steam spinning-rooms, where the females are employed, they thought there was hardly sufficient ventilation to this building; they therefore ordered that three additional ventilators be placed at the end of the building near the muster-stations; workmen have already commenced erecting scaffolding with a view to execute the work at once.”²⁰ Dust in the air and settling on the workers was also commented on by the Lady Commissioners visiting the private factories. Miss Collet, writing about 2 rope works visited in London remarked on the dust in the carding rooms covering the hair of the girls. By the time of the investigation by the Lady Commissioners, the problem of dust in the air was less commented on in the rope factories except in the hatchelling departments and not remarked on at all in reports of cotton spinning mills which were, of course, by that time highly advanced technologically. It had not always been so as is seen in *North and South*, the novel written by Mrs Gaskell in the 1850s.²¹ The character, Bessy works in a cotton mill and describes the fluff in the air, saying it fills the air “till it looks all fine white dust” and that it causes lung problems. By 1860 a disease, later named card-room asthma, and subsequently, byssinosis was identified by observers in mills.²² Solutions lay in the provision of adequate ventilation and extractor fans and were mostly found only in the most up to date workplaces.

There is other evidence of the prevalence of the waste material lying about the spinning rooms from correspondence about what should be done with the sweepings, and waste

²⁰ *Chatham News*, August 5th, 1865.

²¹ E. Gaskell, *North and South*, (London, Penguin, 1970), p146

²² Noted in the 1970 Penguin edition of *North and South*, p533.

material can be clearly seen lying about the floor in the photographs of the Chatham spinning room. Letters between the Admiralty and Chatham refer to the necessity of sweeping up daily and removing the sweepings, not least because of the danger of fire. They mention that at Devonport they had been burning the sweepings, but eventually invitations to tender for private contractors to remove the sweepings were put out, with the proviso that the collection had to be done within the first week of every month, any material not taken to be destroyed.²³

Notwithstanding the clearing up and the optimism expressed about the harmlessness of the dust, the women themselves complained about its effects. Their voices are seldom heard, but in a petition of 1875, which is mainly about working hours, which will be returned to below, Chatham dockyard women write about “the extraordinary effect that the dust has upon our constitutions which prevents us looking like the same women after a few months confinement in the Ropery”.²⁴ The Captain Superintendent of the time was unable to express any sympathy about their complaint, saying that the conditions were inseparable from the employment they were engaged in.²⁵

The Staff Surgeon at Devonport, in his report for 1869, expressed concern about the incidence of cases of dyspepsia, 94 in the dockyard as a whole, but principally among the young women in the ropery. He considered that the cause of this “derangement of the digestive system” was the fact that they had only half an hour in which to eat their midday meal. Although they had the benefit of “a large refectory, in which they have every convenience” the fact that they had such a short time to digest their meal before returning to the machines meant that their digestive systems were interfered with. Matters were not helped by the fact that this meal, as with the English working classes generally, was frequently their principal and only full meal “during the 24 hours” and was likely to consist of meat puddings, suet pudding and pork, he said. The majority of the men had an hour and a half for their dinners and the Staff Surgeon thought that the women’s health

²³ NMM CHA/H/133, p3851 and p4445. Also, CHA/H/135, p1010

²⁴ TNA ADM 116/159 D1024.

²⁵ TNA ADM 116/159, D1116.

would improve if they had the same, making up the time lost by working later in the evenings.

The point about the shape of the working day, - that the women had only half an hour for dinner - is surprising given that in 1875 when the petition was sent from the Chatham ropery women to keep their longer midday break, the Captain Superintendent at Devonport reported that he had received a similarly worded one. It suggests that the Devonport ropery had been on a different regime from its beginning but which might have been later modified.

Problems with the hours of work arose in connection with the operation of the Factory Acts. Earlier problems identified by the yard officers in regard to the Factory Acts concerned the ages of some of the boys employed and the possibility of females working overtime and there is correspondence about addressing these matters, mostly by making it a firm policy not to employ boys under the age of 13.²⁶ This was over the requirements of the Acts as they stood in 1871. However, later developments in the legislation called for changes in the working hours of the women workers. In particular, the new act of 1874 gave rise to correspondence between the Admiralty and the dockyards about adjustments required to the working day and to serious concerns for the workers.

In manufacturing industry generally, the Factory Acts were, of course devised and enforced in the interests of the wellbeing of the factory operatives, but were not always appreciated as such by the operatives themselves. This was noted, sometimes to their bafflement it seemed, by the early women inspectors who found that workers sometimes colluded with their employers to deceive them over matters such as working overtime or at night or returning to work too soon after giving birth and in revoking complaints that they had signed to which were leading to prosecution of the employer.²⁷ The inspectors knew that sometimes this was because the women feared losing their jobs or even of being blacklisted, but they sometimes seemed to fail to understand the desperate need of the

²⁶ NMM CHA/H/136, p2423.

²⁷ Extracts from journals of the inspectors quoted in M. D. McFeely, *Lady Inspectors: The Campaign for a Better Workplace 1893-1921*, (London, Blackwell, 1988).

women for their earnings and that they, the inspectors, attracted a degree of antipathy towards their official status and ability to interfere. In the case of the revised hours regulations of the 1874 Act, however, the pressure for change had come from factory workers themselves, though not the dockyard women. According to R. W. Cooke-Taylor, writing in 1894,²⁸ on the face of it, the aim of the Act was simply a further limitation of the hours that women could work in textile factories. However, he believed that the drive was really for reduced hours for men and women alike and that “women were, in fact, the stalking-horse behind which this larger demand was but partially concealed”.²⁹ He considered that the successful implementation of this Act and the decision by the organised textile workers to use the path of factory legislation to achieve it of great significance in that it demonstrated modern trade society, like mediaeval guilds, relying on “State aid to accomplish its ends”. In particular, the new departure was the entrance of trade associations as agitators for factory reform instead of the earlier “mostly philanthropic persons”. However, despite these origins, this new legislation, as it was applied to them, caused the dockyard women great anxiety and led to a flurry of petitions in 1875.

Under the old regime starting and finishing times varied according to the season, but there was always a 75 minute break for the midday meal. Since most people lived near the yards, many of them went home for the meal. The new regime, though not increasing overall working time, gave only 30 minutes for dinner. This is what dismayed the ropery women and also the colour women who were put under the same scheme. Petitions were sent in from the Chatham and Devonport roperies and also by the colour women at Sheerness and Portsmouth.³⁰ In all cases they called attention to the fact that many or all of them were widows with families to care for and that the possibility of going home at midday to prepare a meal for their families was essential to the proper maintenance of their families. Their wages were too low, they said, for them to be able to pay for other people to help them, indeed, part of the petition from the Chatham ropery mentioned that many of them necessarily had evening jobs as well without which they would not be able to feed

²⁸ R. W. Cooke-Taylor, *The Factory System*, Methuen, 1894. Cooke-Taylor was at the time a serving Factory Inspector.

²⁹ R. W. Cooke-Taylor, *The Factory System*, p107.

³⁰ The texts of these are transcribed in Appendix.

their families. Noting this immediately dispels any suggestion that the dockyard women were, perhaps, rather fortunate to work in a regime spacious enough in timing to allow them to get home, prepare and serve a meal to children and then return to work.

The tone of the Chatham petition is particularly fraught, the writer raising the notion that the new regime would lead to starvation and the workhouse for them and their families, and also throwing in, as mentioned above, the effects on their health of working in the dusty atmosphere of the spinning rooms. The submissions of the colour women of Sheerness and Portsmouth, though making the same points about the ill effects on their families, have a more restrained style. The actual wording of the submission from the Devonport ropery is not available. The full texts of the Chatham, Sheerness and Portsmouth petitions can be compared in the Appendix.

The sending of the petition was noted in the *Chatham News*³¹ of July 10th, 1875. This described a “considerable amount of dissatisfaction” among the ropery hands, on account of the earlier start as well as the shorter meal break and referring to the problems of those with families. The newspaper said it was thought that the alterations would have been for the benefit of the women, but “when the Admiralty find that they are opposed to it, no doubt their Lordships will again direct some alteration to be made.” The newspaper was correct in assuming there would be some sympathy for the petitioners, as is shown in the covering letters sent from Devonport and Portsmouth. The petition from the colour women at Portsmouth was accompanied by a note from the Local Admiral Superintendent, headed “Submitted for the most favourable consideration.”³² The Admiral Superintendent at Devonport similarly wrote sympathetically about the ropery women. He said, “The work people in the two Roperies, are, as I apprehend, in most cases a different class from the Factory Operative as a general rule. Many of them are widows and children of respectable Petty Officers, Seamen and others, who have served their country well- and I am sure that the very small boon they now seek would be valued and I think they deserve it.” The Admiral Superintendent, in fact, sent with the petition, a copy of a letter he had sent in March of 1875, observing that the then daily regime was working “most satisfactorily both

³¹ *Chatham News*, 10th July, 1875. Military and Naval Spectator column.

for the people and the Crown” and suggesting that the Secretary of State be approached for an exception to be made, as he had believed was possible under the Act, and he urged that this course still be tried.

The Captain Superintendent at Chatham, however, was less supportive. He referred to correspondence of the previous year when the new hours were being worked out and said “keeping the provisions of the Factory Acts in view, it was not found practicable to modify or alter them to any useful extent.” He also said “the officers were not acquainted with the means resorted to by the Women for the care of their children during their own working hours. Neither do they see in what manner they could influence it.” His claim to lack of knowledge scarcely seems credible. This is the same officer who remarked, as noted above, that the women’s health concerns were inseparable from their work as if that was the end of the matter.

The less sympathetic response prevailed. Although some small concessions were made, the shorter dinner break remained. Dockyard regulations of 1904 gave the details of the working day as follows:

| | |
|------------------------|------------------------------------|
| Start | 6.45-7.42 a.m. according to season |
| Stop for breakfast at | 9 |
| Start again at | 9.30 |
| Stop for dinner | 12.30 |
| Start again | 1 p.m. |
| Stop to clean machines | 3.40- 5.10 according to season. |
| To change clothes | 10 minutes later |
| Leave building | 3.45-5.25. |

The working day varied according to season from 7 hours 18 minutes, to 9 hours 33 minutes and the week from 41 to 54 hours 48 minutes.³³

³²TNA ADM 116/159

³³ TNA ADM 186/873

The business of sending petitions as a normal part of negotiations with the management has already been noted as an element of the particular environment of the dockyards. It serves here to highlight the distinctive nature of work for the women of the ropery and the Colour Loft. Possibly another was that they might find themselves pictured in a national newspaper in a feature noting the importance of their work.

The photographs, as seen on the following pages, were taken for two journals. Photograph 1 was in a Naval Supplement for the *Pall Mall Budget* of February 7th 1895, accompanying an item called “A Visit to Chatham Dockyard” which is generally praising the efficient work of the yard in producing new and up to date ships. Among the 5,330 hands then employed, it says, are about 104 women “who are engaged in the process of yarn spinning, for which this yard has a famous factory”. Mistakenly, the journal believes this is the only yard where women are employed. The machine room is revealed as lofty, with large windows and clearly the machinery has been stopped for the photograph to be taken. A group of women, of various ages, though not extremely young, and their supervisor, a man of mature years, pose at the front while others, including another supervisor look on. The women wear uniform dresses, which could be overalls on top of their own clothes, and caps that do not entirely cover their hair. They do not appear to be wearing gauntlets, but the machines they are near are probably the hatchelling machines rather than the spinning machines. There are bundles of fluff on the floor. Photograph 2 was taken for a supplement to *The Navy and Army Supplement* published on April 2nd 1902. This is also part of a general description of developments at Chatham Dockyard and also refers to the “scope for the hands of women in the Naval service”. In Photograph 2 work has stopped as before and the woman in the foreground of this photo oddly resembles the earlier one in her pose, arms akimbo. There is the same range of ages, two supervisors, the same uniform dresses and caps and even more fluff on the floor. In both cases, the workers do not look particularly cheerful but they seem poised, one even relaxed over a piece of equipment, and it has to be kept in mind that photography, at this time, required keeping still for a period of time, precluding lively expressions. The similar pose might have been suggested by the photographer as one quite easy for the woman to maintain in the foreground of the picture.

Photograph 1: Workers in Chatham Spinning Rooms, 1895



Photograph 2: Workers in Chatham Spinning Rooms, 1902



Photograph 3: Working in the Chatham Colour Loft, about 1895



Photograph 4: Workers in Chatham Colour Loft, 1902



Nevertheless, there does appear to be a difference between this set of workers and those in Photograph 4, entitled “Workers in the Colour Loft”. The women here are seated at sewing machines, powered by overhead belts. The room is lofty and quite spacious. The women wear aprons but otherwise a variety of clothes and their heads are not covered. This was clearly much cleaner work in a less polluted atmosphere. Other late 19th century photographs for example Photograph 3, collected by the Chatham Dockyard Historical Society, show colourwomen cutting out the material and displaying their work. In these photos, the elaborate lace and other decoration of their clothes is in striking contrast with the drab outfits of the rope spinners. However, this is not so apparent in the 1902 photos and suggests that the colourwomen may have dressed especially carefully for their photos on the earlier occasion. They certainly do give the impression that they were a set of respectable women working in relatively congenial conditions. An item in the local newspaper in 1876 draws attention to the bright and airy workrooms of the colour loft.

Overall, work for women in the dockyard in the 19th century was demanding and not well paid and possibly injurious to health, but probably compared relatively well to most other available employment at a time when women were mostly excluded from artisan and professional work and were typically paid between one third to one half as much as men in manual work, and when, outside those places covered by the Factory Acts, there were no regulations about pay, hours or physical working conditions.

Living in Chatham and Plymouth

The material on Chatham for this section has been based on finding names of some of the employees and attaching them to their addresses in the local area. The names have come from three sources. One is the petition of 1875 described above. Another set of names is in a record book held at the library of the Chatham Dockyard Historical Society. The third set has been taken from a publication of the Society, Research Paper 18, Workers in the Sail and Colour Lofts. Other names, which have been included in the second list, have been found in the family groupings drawn up at the Medway Archives from the Enumerators’

Census material from 1861, 1871, 1881 and 1891. This, together with similar material at Gillingham Library, is the source of information about addresses, age (unless it was given in the dockyard record), place of birth, marital status, position in family and sometimes, number of children for all of the women. Not all of the names can be traced, especially of those handwritten on the petition. A few recur in the petition and the list from the record book, which is not dated but appears to be for the year 1878-79, given the starting dates shown. A very few have also been cross-referenced with entries in the Parish Registers of Marriages.

Of the 86 women who signed the petition in 1875, 31 were fairly definitely identified in the Medway Archives records. Their ages range from 14 to 44. Of these 6 were widows, 4 were married women and 21 appear to be unmarried, mostly living at home with their parents. Of the 30 on the list headed "Women at Spinning Machines" 18 were found. Their ages range from 15 to 43. Of them, 4 were widows, 3 were married women, 3 were the daughters of widows, one of whom signed the 1875 petition. From the list compiled by the Chatham Dockyard Historical Society, names were taken of women who were working in the sail and colour loft before 1900. There were 23 of these. It is not possible to say whether they were widows or not, but 12 were described as "Mrs".

Given the early morning start and long hours of work, it is not surprising to find that very many of the women who can be traced from the two earlier records, lived close to the dockyard. Many lived in the old areas around the Brook in Chatham, and a significant number of others lived in New Brompton, now in Gillingham, which as has already been noted grew up as the dockyard expanded in the 1860s. Names and addresses of those on the pay records of the sail and colour loft³⁴, so including the colourwomen, around the turn of the 19th/20th centuries show that workers by then were coming from further afield, many from Luton. There was not, however, a tram service in the towns until 1902, so long walks to work were evidently commonplace.

³⁴ Chatham Dockyard Historical Society Research Paper 18

As described in Chapter 2, Chatham had stretched out over its surrounding hillsides and south along the valley to Luton as the dockyard grew, particularly with the expansion of the 1860s. Apart from some large terraced houses along the main road, Luton Road, and a few groups of old agricultural workers' cottages, by the beginning of the 20th century the whole area of Luton with its steep hillsides was covered with rows of small terraced houses, mostly with no front gardens, giving the area a distinctly urban character. This area was generally built to "by-law housing" standards, so streets are a reasonable width, however, as in most industrial towns of the time, there were no parks or open spaces. It was, however, quite different in character from the inner parts of the town, particularly near the river and the Brook. Here, as has been noted in Chapter 2, the earlier site of houses for the well-to-do had declined into a jumble of tightly packed courts and alleys, which were among the earliest to be cleared as powers were given to local authorities to enforce minimum standards. Away from the river and beyond the New Road, the eighteenth century bypass of the old town centre, was the location of large late eighteenth and early nineteenth houses, classically Georgian in style, inhabited by the most prosperous of the townsfolk. Near here was where the railway station was opened in 1858. There was another very limited area of substantial middle-class houses near to the station, but close up to them, there was another mass of small houses in narrow streets, but at that time, this was not a very extensive area. As discussed earlier, the expansion of Chatham was limited by the presence of not just the dockyard but also a significant military establishment, brought in to man the extensive dockyard defences. The military acquired large stretches of land, not just on the hillsides bordering the dockyard but also in the area between Rochester and Chatham along the length of the New Road, preventing housing developing there. Throughout the nineteenth century then, the town then, was fairly compact.

Notwithstanding its modest size as a residential area, which has to be looked at together with New Brompton, there was a marked division between the "respectable" and the "rough" districts of the towns. The centre of the town, around the High Street and the Brook, although residential, contained a large number of public houses catering to the sailors, marines and soldiers based in the towns. The local press routinely reports fights

and general disorderliness in connection with these and letters to the papers complain about them and the high number of prostitutes associated with them. However, unruly behaviour was clearly not confined to the soldiers and sailors, as reports of crowds numbering in the hundreds rioting in the streets can be seen in the press on various occasions.

Despite the criticism of the New Brompton development by the Naval Surgeons in the 1860s, (quoted in Chapter 2) this district soon reflected its population, mainly consisting of dockyard artisans and labourers. Mavis Waters, writing about family life in New Brompton,³⁵ describes the growth of the consumer co-operative society, originally based on a self-help group formed in 1867 to combat the high prices of bread and meat. Around 1872 a new society was formed which soon expanded to cover all basic necessities and was able to pay substantial dividends to its members. The Society was also a significant focus of social activity, providing many activities ranging from teas, bazaars and outings to lectures, adult evening classes and a lending library. The society also put up candidates in local council elections. New Brompton then, was, by and large, occupied by the respectable working class. Luton's population, some areas of poorer streets notwithstanding, was roughly similar. There were plenty of public houses, particularly on the main through road, but also flourishing churches and chapels, organisations like the Oddfellows and by 1890 a Co-operative Society with eventually a grocery, bakery, dairy and furniture shop, sure signs of a thrifty and prudent working class.

Organizations such as the retail co-operative societies, Friendly Societies and particularly the special societies like the Oddfellows and the Foresters, are among the elements closely analysed and discussed by Geoffrey Crossick in *An Artisan Elite in Victorian Society*,³⁶ published in 1978, a little after Mavis Waters' thesis had been completed. There was considerable interest at that time in the characteristics of a so-called labour aristocracy,³⁷ particularly following publication of *Before the Socialists. Studies in Labour and Politics*,

³⁵ M. Waters, *A Social History*.

³⁶ G. Crossick, *An Artisan Elite in Victorian Society*.

³⁷ Crossick refers to work published by eight historians between 1960 and 1976 either confirming the existence of or dealing with various aspects of a labour aristocracy,

by Royden Harrison in 1965,³⁸ Crossick makes some justifiable criticisms of the theory put forward with regard to the values apparent in the habits and demeanour of that layer of the working class whose earnings gave them security and respectability. Crossick argues that the labour aristocrats had not simply imbibed the values of the middle classes and so become tractable and conformist, but that the characteristics which marked out the respectable stratum of the working class derived from long standing values internal to this section of the population. He is careful always to make the point that local conditions are very significant in the evolution of these characteristics and the formation of the group identified with them and presents a detailed analysis of the economic and social structure of the area of his study, the three towns of Woolwich, Deptford and Greenwich, making up Kentish London in the Victorian era. This explains the emergence locally of an elite stratum of skilled workers who set up and managed a range of organisations such as friendly societies and co-operatives and led local opinion. There were numerous firms employing skilled workers, but the large government organisations in Deptford and Woolwich, especially Woolwich Arsenal, were of particular significance. Kentish London was a larger and more economically diverse area than the Medway towns but there were striking similarities in the dominance of government employment and in the lack of either aristocratic influence or large-scale private manufacturing enterprises. Of the three towns in south east London, Crossick says, “Astride the whole area, stood the government establishments where neither capital nor profit seemed relevant and where there were no visible employers.”³⁹ This is even more marked in the Medway area. He goes on, “If social success depended upon prestige, talent and respectability rather than on capital and the work of the community’s labour force, an ideological framework among aspirant workers that made apparent sense of that situation is more readily explicable,” making the point that this situation was what produced the value system in which prosperous local tradespeople, the owners of small firms and a modest number of professional and military men were the leading citizens in the absence of a strong employing class. There was no vast social gap between these and the prosperous section of the working class and in some situations the interests of all of them coincided.

³⁸ R. Harrison, *Before the Socialists. Studies in Labour and Politics 1861-1881* (London, Routledge, 1965).

An interesting element of Crossick's project is to explain the transmission of the values of the artisan elite so that these values become the norm in the area, defining standards for the whole of the working class. This dominance of the respectable working class is also apparent in the Medway area, as shown by Mavis Waters' discussion of New Brompton. However, although the widows of dockyard artisans and navy petty officers would be likely to fit into this layer of society, the wages that they earned in the ropery and colour loft put them far from the comfort and economic security of the labour aristocracy. Moreover, a significant number of the very young women workers who can be traced in local records were the daughters of labourers, sometimes members of large families as can be seen in Appendix 3, Information on Workers. There is a noticeable difference in the geographical backgrounds of the young ropespinner and those who worked in the sail and colour loft, the ropespinner being more likely to live in the area round The Brook and the colourwomen often in New Brompton. Keeping up the standards expected in the immediate local area was likely to have been more difficult for the widows of New Brompton than for those who kept house in the less respectable old areas of central Chatham. On the other hand, bringing up large families on labourers' wages would have meant that lives were lived out with very little material comfort. All had, of course, to remain "respectable" to obtain and keep their employment in the dockyard. As has been shown already, however, one of the tenets of the respectable, to stay clear of the workhouse and the Poor Law, was not always manageable by some of the widows working there, although it may have been the case that receiving outrelief was seen as altogether different in terms of respectability than the ultimate humiliation of having to go into the workhouse.

As demonstrated in Chapter 2, Plymouth and Devonport also contained contrasting districts and were also the location of a particularly large and active Co-operative society, of which many details are used in Mary Hilson's thesis about local working-class politics. She, although not in complete agreement with Waters on some aspects of the significance of the co-operative movement, quotes Waters and also refers to Crossick's work quoted above to re-inforce her points about the nature of the community dominated by the

³⁹G. Crossick, *An Artisan Elite*, p 91.

dockyard workforce. It seems clear that the standards required of the respectable working class would have prevailed as strongly in Plymouth and Devonport as in the Medway towns. With the exceptionally high rents in the Plymouth area mentioned in Chapter 2, it would have been even harder for the women dockyard workers to maintain these standards. There is, however, less information available about individual women who worked in the yard, making it more difficult to work out how they fitted into that community and where they lived. At least 200 names of women and girls entered as colourwomen or as machinists in the rope spinning factory are recorded in Pay Books held in the Devonport Dockyard Museum. For nearly all of them date and place of birth are given together with their entry and leaving dates and the reason for their leaving. The earliest records relate to colourwomen who entered in the 1850s and machinists entered in 1868 which was when machine rope spinning began there, and the latest are for the last years of the century. What can be derived from them is the age range of the workforce and a sense of the area from which they were drawn. The great majority had been born in and around Devonport and Plymouth, a few in various parts of Cornwall, a few in other dockyard towns – Sheerness, Portsmouth- and 4 in Ireland. However no current addresses were given. Noticeably but perhaps coincidentally, all those entering in the 1890s as opposed to the 1860s, were born locally. The age at entry varied from 17 to 44, but more significantly, of the 66 names shown as entering in 1868 69 when the new mechanized rope spinning began the ages were as follows:

Table 5: Ages at Entrance to Devonport Spinning Rooms, 1868-69

| | | | | |
|--------|----|--|--------|---|
| Age 17 | 4 | | Age 26 | 1 |
| Age 18 | 17 | | Age 27 | 1 |
| Age 19 | 8 | | Age 28 | 5 |
| Age 20 | 6 | | Age 29 | 3 |
| Age 21 | 3 | | Age 30 | 2 |
| Age 22 | 6 | | Age 31 | 0 |
| Age 23 | 7 | | Age 32 | 0 |
| Age 24 | 1 | | Age 33 | 0 |
| Age 25 | 1 | | Age 34 | 1 |

Taken from Pay Books at Devonport Dockyard Museum

This age distribution does not suggest that the majority of the women were widows. Of course, with these initial appointments to the ropery, there had been the instruction to give priority to the families of the dismissed men rope spinners, as in Chatham a few years earlier. The colourwomen were an older group, mostly over 40, none under 20, however there is the complication that a few women moved from the one job to the other. Without more information, particularly addresses, it is not possible to trace these names in the local census records, particularly as, as noted above, the Enumerators' Census material in Plymouth Record Office has not been collected into family name groups as at Medway.

Gathering family details together about the women employed in Chatham dockyard gives a clear picture of the workforce as a community. Fathers, brothers and sisters can be seen with dockyard and or military connections. Several fathers are navy, dockyard or army pensioners; many more are labourers. Of course, in the 1870s, some of these fathers may be discharged ropemakers whose families, as has been shown, were to be given preference in the allocation of the new jobs for women, and who had the option of working as labourers when they were paid off. The other striking aspect of the women seen as a group, is, that though the majority were born in Medway, where they were not, they and their parents very often are shown as born in other dockyard towns. A strong impression is gained of interconnected families moving between the dockyard towns, Chatham, Plymouth, Portsmouth, Sheerness especially, keeping up their dockyard connections across the generations. Another noticeable feature of the information is the number of parents and some of the women themselves, who were born in Ireland and Scotland. This illustrates the diverse population of the Medway towns in the years when the dockyard was being developed and drawing in labour over a wide area.

Without more evidence, it is, of course, impossible to be categorical about the life experience of the women dockyard employees, but some things are clear. The ropery women felt themselves to be poor. In the words of their petition of 1875, "the money received for our day's work is not sufficient for the maintenance of our Families, and we are compelled to work at night". They were not petitioning for an increase in wages, but to

keep their existing working hours, suggesting that they were resigned to their low rates of pay. In fact, it is unlikely that other better paid work would have been available, women's employment generally paying only about the same as they were receiving. They worked long hours and often had long walks to and from their workplaces. They lived in communities where employment in the dockyard was respected and sought after, but where the better paid working people, including very many dockyardmen, set standards in, for instance, membership of Friendly Societies or leisure activities, that it would have been difficult for them to aspire to. Many, by contrast, lived in those parts of the various towns where much rougher and even chaotic lifestyles prevailed and where the standard of housing was often appalling by the standards of the day. They did not have easy lives.

CHAPTER 6

CONCLUSION

Studying the detail of the entry of women into employment in the royal dockyards allows some light to be thrown on the questions raised at the beginning of the study and enlarged upon at various points throughout. In trying to arrive at some conclusions, it soon becomes apparent that, at least in some instances, different considerations apply to the colourworkers and the ropery women. Not surprisingly, given the 60 year gap between the taking on of the two groups, the reasons for their entry were quite different and the overall environment in the dockyards had seen considerable change between the early years of the century and the 1860s. That said, it is equally clear that many things were the same for both groups and also, that by the end of the century, some earlier differences had disappeared.

It is arguable that both groups were taken on when the dockyards were under particular pressure. As has been shown in Chapter 3, the colourwomen were entered at a time of extreme wartime labour shortages and when demand for the work they were taken on to do was at an unusually high level. It is clear that there was no intention on the part of the Board to keep them on once demand returned to normal levels, although that is what happened. In contrast, the entry of the ropespinner had been proposed some years before it took place, although the final decision to implement it seems to have been taken hastily. It was part of a very large-scale overhaul of the working methods and systems as the dockyards were extended, modernised and challenged to prove their worth.

However, it is also the case that taking on women to operate the new rope-spinning machines appears to be a clear example of the widespread trend for technological developments to provide new opportunities for employment for women, often, as in this case, at the expense of a former male, more skilled workforce. It was therefore not a move particularly related to the special conditions of the naval dockyards except in that at the time of the innovation, the need to cut costs in the dockyards was particularly pressing.

The question arises, would the men have been kept on if costs had not been an issue. But there is no evidence other than the exchange of letters in March of 1865, quoted in Chapter 4, when the Board seemed not clear that no women were already employed. What appears more significant is the comment written on the back of the recommendation that women be employed, "It is their work". The suggestion is therefore, that employing women on rope spinning followed on naturally from the decision to install machines for that stage of rope making. Although the move was noted both in *The Times* and in the local press as a break with tradition, as was commented in Chapter 4, the Board appeared to find no difficulty in the idea of taking on women to work in the yards. There is also no record of the men protesting at the loss of their jobs to women. The conclusion here must be that by the later 1860s there was widespread acceptance that this type of employment was naturally suitable for women.

Reference was made in the Introduction to Jane Humphries' conclusions about the availability of employment opportunities for women in the 19th century, and also the importance of appreciating the changes during the long period from the early years of industrialisation to the latter half of the 20th century, rather than concentrating on the 19th century. Humphries argues that while the assumption that the early years of the 19th century provided many new opportunities to work outside the home may be open to question, what can be demonstrated from census material is that "women's activity rates moved down in two stages from the peaks experienced during industrialization, first towards the middle of the nineteenth century, and then again from 1871."¹ Clearly the evidence from the naval dockyards does not reinforce this pattern, since the work in the ropery represented new opportunities for women, although the small numbers involved could hardly contradict a more widely based finding. The dockyard rope spinners do fit a pattern of women increasingly being found in gender-defined and very low paid work and it is arguable that it seemed logical to contemporaries that they should do the work because machine spinning of rope seemed analogous with other varieties of industrial spinning of textiles, by then long associated with female labour. It was also the case, as demonstrated by the evidence of the women factory inspectors of the 1880s and 90s detailed in Chapter

¹ In J. Purvis, ed *Women's History* p98.

4, that women were to be found in commercial rope spinning factories in all the major centres of rope making. There were also a few references to practice in private trade in the dockyard papers, as shown above.

The pay of the rope spinners was low from the outset, commented on even in the local press as noted above. However, the pay status of the colourwomen changed during the period studied. When they were first employed, their pay compared well with that of the male labourers, but by the end of the century their pay rates were similar to the ropespinner and considerably lower than those of male labourers. This may have been justified by the introduction of sewing machines, but no record has been found to indicate this.

The rates of pay for both groups and the understood restrictions on who were considered eligible for employment in the dockyards, i.e. widows and orphans of dockyard and navy men, illustrate both the strength of the notion of “the family wage” and the essential contradiction within it. Hilson, writing about Devonport yard, argues that “Dockyardmen based their requests for higher pay on a specific representation of masculinity which placed them as the sole breadwinners within their families”² and she goes on to link this with the position of the women who were employed in the yard. She argues very strongly that their employment “should not be taken at face value” because it was “explicitly intended as a form of pension” and “represented a key plank of the paternalist strategy”. Although there is evidence of paternalist attitudes and practice as discussed in earlier chapters, this claim that the jobs provided money to the women only in lieu of payment to earlier dockyard workers is overstating the case. Hilson is accepting too unquestioningly the notion that all the workers were widows or orphans. However, linking the existence of the low paid work with the concept of the family wage neatly illustrates the irony of paying a rate not designed to be sufficient to live on i.e. a typical manual female wage, as discussed in the last chapter, to a group selected as actually being family breadwinners. In its illogical way, however, the pattern of low pay for females and preference given to widows and orphans does fit the family wage idea in which the main breadwinner in a

² Hilson, *Working Class Politics* p73.

family is always a male. It would have made more sense if the widows and orphans had been in receipt of pensions with their wages acting as a top-up, but dockyardmen's pensions died with them at this time.

In so far as the established dockyardmen might be perceived as belonging to the primary sector in their occupation, since they enjoyed a high level of job security, pension rights, sick leave and some medical care, the women employees were part of the secondary sector. They were not eligible for "established" status and so had no security of employment and no pension rights. The lack of security and pension rights was also true of the majority of male dockyard workers too, of course, since they were not established, but they were not ineligible and could, in theory attain this status over time. It can be said therefore, that the women dockyard workers do conform to the concept of a dual labour market, one in which it is not possible for the secondary group to enter the primary sector. It is difficult to argue, however, that the rope workers of the 1860s onwards fit the theory of women as a reserve army of labour. Women were not being taken on to do the increasing number of simplified tasks associated with mechanisation in many industries, like bottling, biscuit making, tea packing for example, because of a shortage of male labour. Quite the opposite was the case, as many commentators would argue that there was generally an over-supply of labour in Britain at this time leading to a lack of investment and a steady supply of emigrants, including assisted schemes for dockyardmen to go to Canada.³ It is much more likely that the lower wages paid to women and girls were the attraction, as well as a belief that emerged that women were more tolerant of the boredom associated with repetitive work that required little thought.

These considerations do not, of course, apply to the colourwomen taken on in the early years of the century. During the war years there was a shortage of labour, and the work the women were doing had become a problem because of the war itself, in that the essential signal flags were being destroyed or damaged at a much faster rate than in peacetime. The work might have been quite repetitive, but it required skill, as was demonstrated in Chapter 2. However, it is not really clear that the women, who were taken on in all the

³ NMM CHA/H

yards, were doing work that would have been done by men in peacetime. In normal times, colours were supplied by a contractor, with a tailor employed in the yards to do a certain amount of repair. It is not known who worked for the contractor, men or women. It is evident, however, that the colourwomen became a valued part of the workforce and they were kept on regardless of the original intentions of the Navy Board after the decision taken in 1816, i.e. in peacetime. From having been placed in the Storehouse originally, they were moved quite early on to work in the Sail Loft in the various yards. This was because there was a problem in locating them in the Storehouse in that, at the time when the colourwomen were introduced, normally workers in the storehouse had to provide money as a form of security. It was recognised that it was unreasonable to expect this of these low paid workers and the solution was to move them out of the Storehouse altogether, as is shown in correspondence between the Board and the Yards.⁴ From whatever angle the introduction of the colourwomen is viewed, it would be difficult to argue that they were replacing men who would otherwise have been employed.

The twinespinners taken on at Plymouth in 1803 because of the wartime labour shortage, fall more definitely into the “reserve army” category. The yard officers sought permission to take them on because they could not get men for the work. At first the Navy Board refused the permission and instructed the officers at Plymouth to search again. On accepting that men were not to be found, the Navy Board gave permission for women to be employed, but for one year only. Although the exact details of how the women twinespinners became a permanent part of the Plymouth/Devonport workforce are not known, it is clear that this happened. It was shown in Chapter 3 that there was a general problem with employing men in this category because of the low wages related to twinespinning but it is clear that at the other yards men or boys continued to do the work. This leads to the question, was there more better- paid work in the West Country than at Portsmouth or in or near London, or far fewer men available? Neither seems very likely, and the employment of the women twinespinners at Plymouth remains unexplained after the extreme wartime shortages.

⁴ TNA/ADM/174/41. 4. 5. 05.

One point that does emerge is that the Admiralty did seem to be opposed to the idea of having women employed in the yards at the beginning of the nineteenth century, though fairly soon won over to them as a solution to the then pressing problems. However, by the middle of the century, asked to consider women as suitable to work the new spinning machines, the Admiralty agreed readily, pausing only to check out the cost. It could be argued that this contradicts most thinking about the development of ideas about “women’s place” but as has been shown above, by the time rope spinning became fully mechanised, women had become identified with this work.

This study contributes to existing knowledge about women’s employment in the nineteenth century in several ways. As was illustrated in earlier chapters, the dockyards provided a highly unusual, not to say, unique working environment on account of their size and the scale of operations, the style of management, the discipline, involving police searches at the gates, for example, the traditions alongside rapid growth and change, but also paternalism, education, medical care and superannuation. Not all of these aspects of the yards affected the women, since they were not eligible for apprenticeships or entry to the Dockyard Schools for example. For them a distinctive aspect of their employment was being in such a minority, the hundred or so of them, or far less before the ropespinner arrived, among 2000 or more men. They are recorded in overall numbers in the yards as “Hired men” or “Spinning operatives”, which is probably why their existence has sometimes been overlooked, but it is clear that special arrangements were made for their safety and particular needs. From the outset, the colourwomen worked a slightly different daily timetable to ensure that they entered and left the yard at different times from the men, and this continued with the ropery women. For their benefit, a new entrance to the spinning room at Chatham was constructed so that they entered and left the ropery without encountering the male ropemakers. This all suggests an experience different from the hurly burly of a big cotton mill or clothing factory as well as different from working in a small dressmaking establishment. Although it is true that in the nineteenth century, they all worked for long hours and low pay.

Women working for the government is, in itself not an area much investigated before women began to work for the post office in significant numbers towards the end of the century. The dockyard women experienced national setting of pay, hours, levels of responsibility and seniority where most people would have had an employer to deal with face to face. As has been shown, the dockyard women took to the tradition of petitioning in time of need. One feature of government employment was the slow take up of trade union activity and although there was a ropemakers' union as discussed in Chapter 5, there is no trace of trade union activity among the dockyard women at this stage. The usual reasons for the lower level of activity among women – low pay, a mainly very young workforce with the older ones with family responsibilities, would apply, but there would also have been the reluctance of the Admiralty to negotiate with unions to contend with.

So this study has followed the development of a female workforce operating in a very particular environment and while showing that it shared and experienced the general characteristics of manual work, also reveals some more individual features. Possibly, on balance, these workers benefited from working for the government, though not in financial terms, unless they were able to work long and consistently enough to qualify for a gratuity; some did.

They have also been considered in their home environments and shown to occupy a possibly ambivalent position if they were indeed, the respectable widows they were reputed to be, in that their working hours and levels of pay would have made it difficult for them to live in the style of their peers. For the young ropery workers, life was probably much as it was for other young working class women in their home towns, though with the additional unwelcome dimension during the years of the operation of the C.D.Acts, of needing to be very careful about the company they kept.

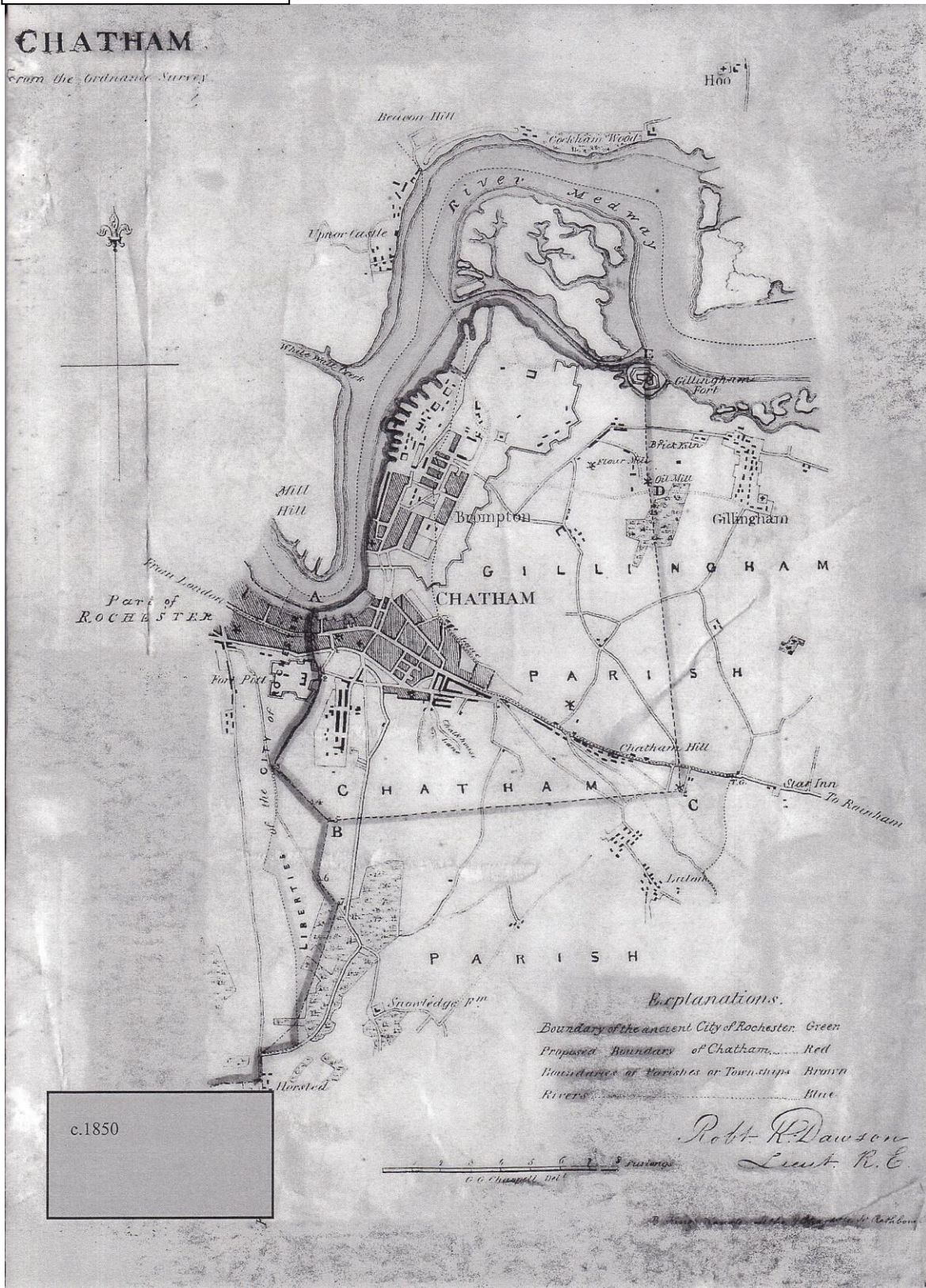
Their home environments as well as their employment made these women part of the maritime community. Both Chatham and Devonport were Naval Bases as well as dockyard towns and daily life in them was suffused with references to the sea and the importance of the Navy. The local newspapers reflect this consciousness and also the familiarity, not

always agreeable, of living at close quarters with the ships and their men. Alongside this, the importance of the dockyards was unquestionable and the confidence and pride generated by the knowledge of the essential nature of their work among generations of dockyard workers an unmistakable aspect of local life, expressed in many civic events. The extent to which the colourwomen and the ropery workers shared in this is not recorded.

Adding to the limited stock of information about the respectable working class is useful in itself and serves to emphasise the fine gradations and hierarchies within the working class. An appreciation of these is essential to any analysis or understanding of this, the most substantial part of the population. Since, as has been argued, studying history is all work in progress, there is more to be done on this.

APPENDIX 1

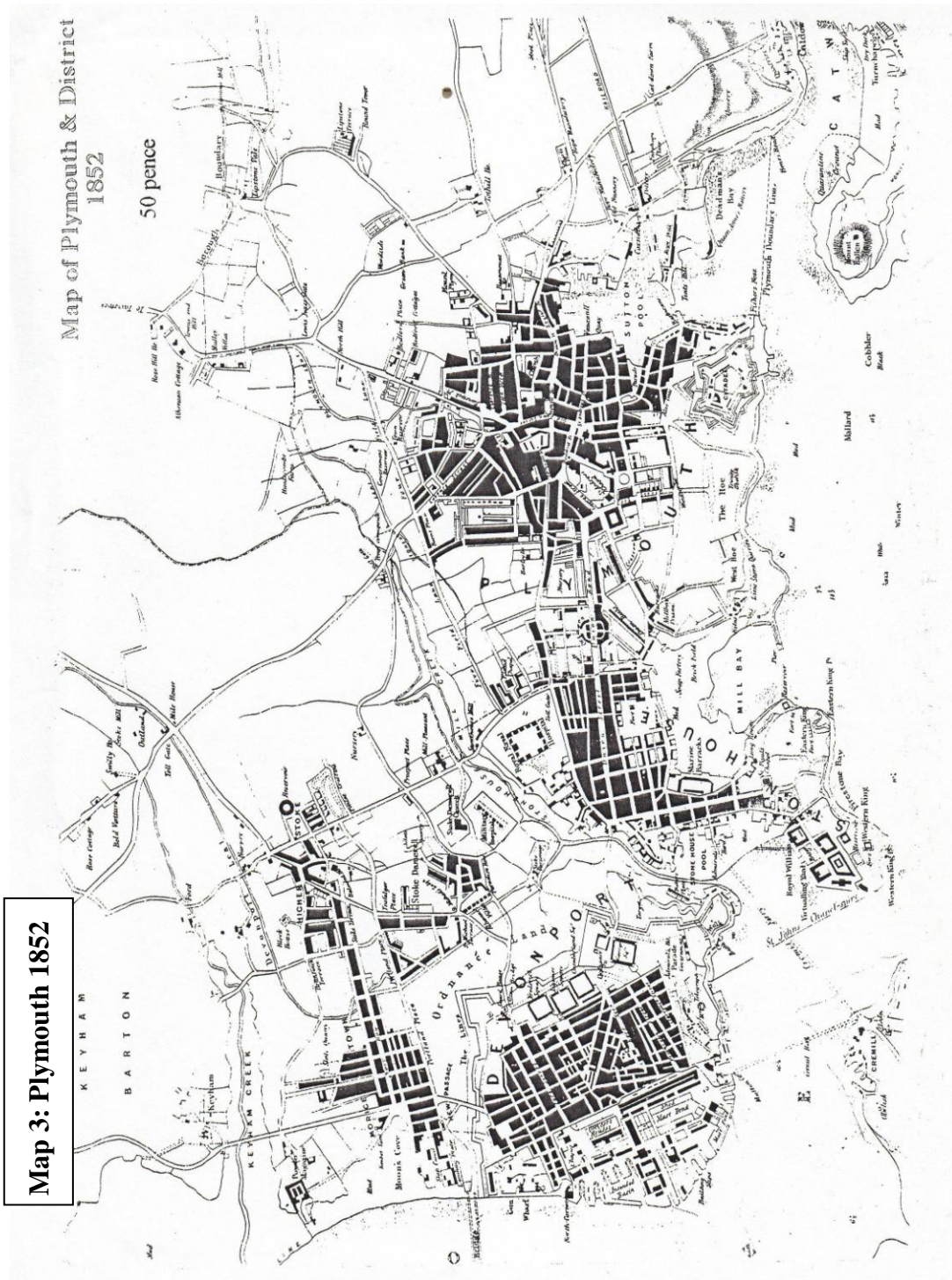
Map 1: Chatham 1850



APPENDIX 2



APPENDIX 3



Map 3: Plymouth 1852

APPENDIX 4



Map 4: Plymouth 1881

APPENDIX 5

Statistics from the 1841 Census relating to Ropemakers

| Year | Occupation | Gender and Age Range | Number of Workers |
|------|-----------------------------|--------------------------|-------------------|
| 1831 | Ropemakers in England | Male 20 years and over | 5664 |
| 1841 | Ropemakers and Cordspinners | Male 20 years and over | 8335 |
| | | Male under 20 years | 2391 |
| | | Female 20 years and over | 479 |
| | | Female under 20 years | 111 |
| | | Total | 11,319 |

For 1841 the workers are shown in counties and some towns, as follows:

| County | Males 20+ | Males 20- | Females 20+ | Females 20- | Total |
|----------------|-----------|-----------|-------------|-------------|-------|
| Bedford | 13 | 4 | 1 | 2 | 20 |
| Berkshire | 19 | 0 | 4 | 1 | 24 |
| Bucks | 18 | 4 | 0 | 1 | 23 |
| Cambs | 38 | 3 | 1 | 0 | 42 |
| Chester | 148 | 33 | 5 | 2 | 188 |
| Cornwall | 197 | 55 | 22 | 1 | 275 |
| Cumberland | 102 | 32 | 5 | 0 | 139 |
| Derby | 85 | 20 | 3 | 1 | 109 |
| Devon | 511 | 100 | 29 | 8 | 648 |
| Dorset | 100 | 19 | 73 | 18 | 212 |
| Durham | 303 | 121 | 2 | 1 | 427 |
| Essex | 38 | 7 | 2 | 0 | 47 |
| Wilts | 50 | 8 | 1 | 0 | 59 |
| Worcs | 71 | 8 | 6 | 0 | 85 |
| York E. Riding | 147 | 18 | 2 | 0 | 167 |
| York City | 25 | 2 | 0 | 1 | 28 |
| York N. Riding | 114 | 21 | 16 | 3 | 154 |
| Work W. Riding | 399 | 66 | 7 | 9 | 481 |
| <u>Devon</u> | 190 | 12 | 10 | 0 | |
| Devonport | 19 | 2 | 0 | 0 | |
| Exeter City | 68 | 27 | 4 | 2 | |
| Plymouth | 6 | 1 | 1 | 0 | |
| Tiverton | | | | | |

| | | | | | |
|-------------------------------|------|-----|----|----|------|
| <u>Kent</u> | 2 | 0 | 0 | 0 | |
| Canterbury | 153 | 4 | 0 | 0 | |
| Chatham & Roch | 23 | 5 | 0 | 0 | |
| Deptford | 34 | 13 | 2 | 2 | |
| Greenwich | 8 | 1 | 1 | 0 | |
| Maidstone | 18 | 1 | 0 | 0 | |
| M'gate & R'gate | 10 | 1 | 0 | 0 | |
| Woolwich | | | | | |
| <u>Lancs</u> | | | | | |
| Manchester & Salford only [?] | | | | | |
| <u>Mid'x</u> | 521 | 112 | 41 | 3 | |
| Tower Div | | | | | |
| <u>Norfolk</u> | 155 | 53 | 0 | 0 | |
| Gt. Yarmouth | | | | | |
| Gloucester | 122 | 24 | 9 | 4 | 159 |
| Hereford | 18 | 4 | 2 | 0 | 24 |
| Hertford | 35 | 2 | 4 | 0 | 41 |
| Hunts | 11 | 1 | 1 | 0 | 13 |
| Kent | 411 | 40 | 8 | 3 | 502 |
| Lancs | 1174 | 493 | 36 | 14 | 1717 |
| Leics | 62 | 16 | 2 | 2 | 82 |
| Lincs | 239 | 39 | 3 | 0 | 281 |
| Midx | 614 | 132 | 60 | 5 | 811 |
| Mon | 20 | 5 | 0 | 0 | 25 |
| Norf | 289 | 74 | 1 | 0 | 364 |
| Northampt | 58 | 5 | 3 | 0 | 66 |
| Northumb | 187 | 71 | 4 | 0 | 262 |
| Notts | 96 | 18 | 6 | 0 | 120 |
| Oxf | 32 | 3 | 2 | 0 | 37 |
| Rutland | 5 | 0 | 0 | 0 | 5 |
| Salop | 57 | 10 | 0 | 0 | 67 |
| Somerset | 151 | 37 | 23 | 5 | 216 |
| Southampton | 241 | 18 | 2 | 2 | 263 |
| Staff | 172 | 37 | 8 | 0 | 217 |
| Suffolk | 125 | 27 | 2 | 1 | 155 |
| Surrey | 284 | 57 | 32 | 0 | 373 |
| Sussex | 57 | 10 | 0 | 0 | 67 |
| Warwick | 127 | 28 | 11 | 0 | 166 |
| Westmoreland | 37 | 9 | 1 | 1 | 48 |

Statistics from the Census of Occupations

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APPENDIX 6

Statistics from the 1851 Census relating to Ropemakers

| Year | Occupation | Gender and Age Range | Number of Workers |
|------|----------------------------|--------------------------|----------------------|
| 1851 | Total Number of Ropemakers | Male 20 years and over | 9,290 |
| | | Male under 20 years | 1,487 |
| | | Female 20 years and over | 1,261 |
| | | Female under 20 years | 456 |
| | | | <u>15,936</u> |

Places in England where there were more than 100 ropemakers shown

| County | Males 20+ | Males 20- | Females 20+ | Females 20- | Total |
|------------------------|-----------|-----------|-------------|-------------|-------|
| Medway | 158 | | | | 158 |
| Bristol City | 126 | 62 | 12 | 3 | 203 |
| Plymouth and Devonport | 171 | 59 | 17 | 3 | 250 |
| Bridport | 122 | | 612 | | 734 |
| Liverpool District | 162 | | 1 | | 163 |
| Liverpool Borough | 436 | 247 | 8 | 2 | 693 |
| Manchester Districts | 134 | | | | 134 |
| Manchester City | 297 | 279 | 13 | 6 | 595 |
| Salford District | 141 | | 2 | | 143 |
| West Derby | 411 | | 12 | | 423 |
| South Shields | 139 | | 14 | | 153 |
| Sunderland | 130 | 80 | 14 | 4 | 228 |
| Glasgow City | 290 | 261 | 10 | 14 | 575 |
| Edinburgh City | 132 | 95 | 4 | 1 | 232 |
| Dundee Burgh | 1 | 150 | 4 | 137 | 292 |
| Aberdeen City | 120 | 111 | 3 | 3 | 237 |

Statistics from the Census of Occupations

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APPENDIX 7

Twine Spinners at Plymouth Ropery 1806

Wages of 20d. per day

| Name | Age |
|------------------|-----|
| Mary Jewel | 40 |
| Eliz. Charter | 18 |
| Ann Blight | 35 |
| Eliz. Richards | 24 |
| Ann Charter | 19 |
| Ann Cross | 20 |
| Ann Pascoe | 30 |
| Eliz. Willoughby | 30 |
| Sarah Hodder | 29 |
| Lucy Stanton | 28 |

Men working with Ed Lane, Foreman, 54
Wages of 20d. per day

| Name | Age | |
|----------------|-----|---------|
| Thos Rawlins | 19 | Servant |
| Rob't Blaxlane | 19 | Servant |
| John Harris | 24 | |
| Chas Hill | 26 | |

Men are on the same daily rate as the women, but men work more 'days' and so get higher wages

Women's wages are £6.10s a quarter.

Men's wages are £9.15s a quarter or more.

(TNA: ADM 42/102)

APPENDIX 8

Text of Petition from Chatham Ropery Workers 1875

Stamped "Received Jul2 Admiralty"

To the Captain Superintendant of HM Dockyard Chatham

Sir,

We the undersigned beg Most Respectfully to state, that we have heard with regret and Alarm the alteration of working time that is about to take place in the Spinning Room, And we beg of You most seriously And Earnestly to use Your powerful influence in preventing the same from being carried out, for the following reasons. A great portion of us are Widows, with Families and would be injured in a pecuniary point by a longer Absence from our families than at present, for we shall be compelled to pay more for the Care of our Children, Many of us take them to nurseries for the Day, but then we should be prevented, for they would not be open early enough in the Morning and they are closed before six at night, besides the Money received for our Day's work is not sufficient for the maintenance of our Families, and we are compelled to work at night and if retained in the Yard until a quarter to six instead of a quarter[~~crossed out and a different hand has written "20 minutes"~~] past five o'Clock it will deprive us of the money we should earn in the time, hence starvation would exist and the workhouse would follow, and taking into consideration the extraordinary effect that the dust has upon our Constitutions which prevents us looking like the same Women after a few months confinement in the Ropery we do beg of You, for the sake of our children, for the sake of ourselves both physically and pecuniary, that you will comply with this very humble request, We beg to Remain Honored Sir
Your Very Humble Servents

| | |
|-------------------|--------------------|
| Louisa Good | Eliza Drago |
| Mary Lynch X | Emma Strand |
| Susan Weaver X | Mary Breaman |
| Sarah Foreman | Ellen Gibbons |
| Mary Ann Munden | Sarah Wren |
| Mary Stanton X | Louise Hall |
| Sarah Fulligan | Margaret Wells |
| Hannah O'Connor | Margaret Quinn |
| Agnes Ledger X | Prescila Bush |
| Jane Tucker | Margaret OBrien |
| Amelia Maloney X | Eliz'th Dingle |
| Sarah Leahey | Mary Morris |
| Agnes Mitchell | Margrata Blaney |
| Elizabeth Daley | Emily Foster |
| Eliza Medhurst X | Mary Ann Gibson |
| Priscilla Newey | Charlotte Broads X |
| Harriet Carter | Maria Brown |
| Rosanna Frederick | Rachel Buck |

| | |
|-------------------|--------------------|
| Sarah Moon | Charity Reakes |
| Mary Ann Corfield | Charlotte Grey |
| Margaret Collins | Ann Thorscroft |
| Mary Thomas | Jane Weekess |
| Emma Miller X | Eliza Newman |
| Sarah Fryer | Mary Constable |
| Sarah Akhurst | Lydia Seward |
| Elizabeth Frisby | Mary ???Oyul |
| Anne Ball | Mary Woolur |
| Ellen Greenstead | Emily Hutton |
| Mary Ann Grubb | Elizabeth Luxford |
| Margaret Carling | Mary Hillayson |
| Hannah Dowdell | Elisia Loudell |
| Fany Greenstead | Margaret McDonough |
| Henetray Sedgwick | Carrie Gallavan |
| Bessie Wren | Caroline Tapsell |

Eliza Marshall
Eliza Quarrington X
Eliza Crust X
Emma CoggerX
Mary Jane Quinn
Ellen O Connor
Mary McCarthy
Ellen Taylor X
Annie Long
Agnes Mills
Sarah Thorndycroft
Sarah Desyoton
Mary Ann Ellard
Elizabeth Brooker
Louisa Knight
Elizabeth Baker
Kate ???Eisenmaker

National Archives ref: ADM 116/159 D1024

APPENDIX 9

Text of Petition from Portsmouth Colourwomen 1875

Stamped "Received 15 July 1875 Admiralty"

Stamped "Received Admiral Portsmouth 14th July 1875"

To Sir L F McLintock
Admiral Superintendant
Petition of the Colour Women

13th July 1875

Sir,

Having received an order for the alteration of our time for Working, which came into operation last Monday, Viz to come in the Yard at 6.45 AM, and not leave the yard until 5.45PM.

We beg most respectfully to call your attention to the inconvenience and extra expense we are put to thereby; firstly in coming into the yard after the men instead of before, gave us a quarter of an hour more at home to clothe and feed the children and prepare them for our absence in the forenoon, and secondly in being allowed to go home to dinner with the family, we beg to call your attention to the fact that we are all Widows with families more or less and our absence all day must in a measure be detrimental to their Wellbeing and entail more expense, Viz, Dinner for ourselves, and dinner at home for the family, which in the absence of the Mother is we must admit, more waste. We therefore Sir most humbly but earnestly beg you will use your powerful influence in getting the order rescinded and permit us to work as we had been doing previous to the order of last Monday, and you will confer a great, substantial, and generous blessing on your most obedient and humble servants the Colour Women.

With accompanying letter

Forwarded for the favourable consideration
Admiral Superintendant
July 14th /75

Submitted for the most favourable consideration.

The times of commencing work, for meals, according to the Factory Act differs from those of the Dockyard, and are therefore most inconvenient.

Dockyard allows 75 minutes for one meal, therefore the people go to their homes for it; the Factory Act allows 30 minutes each for 2 meals, therefore they are compelled to remain in the Dockyard.

In order that the women may escape the rush of the workmen, Dockyard regulations allow them to leave the yard 10 minutes before, and enter it 5 minutes after them.

Dockyard working hours for women averages throughout the year 8 hours, their longest days work being 9 hours. Whereas by [rest not copied]

Sent accompanied by:

Memorandum and Minute from Portsmouth.

Memorial of the Color Women to be allowed to work the old hours instead of those recently arranged in accordance with the Factory Act

It is probable that this class in all the yards would prefer to continue working the same hours as they have hitherto done but as these women come under the Factory Act the Ropery Scheme has been extended to them –The former working hours were not in accordance with the Factory Act and an alteration was necessary.

It may however be possible to modify this scheme so far as the Colour Women are concerned and I would submit the Officers be -directed to- [crossed out] informed that the Factory Act must be conformed to and in [rest not copied]

National Archive ref: ADM 116/159 D1112

APPENDIX 10

Text of Petition from Sheerness Colourwomen 1875 (extract)

Correspondence re Factory Acts

The humble petition of the Colour Women employed in Sheerness Dockyard.

Most humbly sheweth???

That Your petitioners are Widows of deceased Dockyard Workmen having families to support and by the new Regulations allowing only ½ hour for Dinner it entails a very great hardship upon them in not allowing a sufficient time to go home to get their dinners with their children and attend to their wants, as under the old Regulations which allowed 1 ½ hours for dinner.

Your petitioners beg most humbly to observe that the work they have to perform is entirely different to that performed by the Spinners in the Ropery being of a much more sedentary nature.

Your petitioners humbly beg that your Lordships will take their...

National Archives ref D1133 in ADM116/159

APPENDIX 11

Information About Workers

In the first section the information has been gathered from census material organised at Medway Archives and Gillingham Library into family groups by surname and household. The women of working age who are shown were described in various ways as the “Spinner in Dockyard”, “Ropery” for example. Those shown as children, match workers listed by name, age in 1875 (for those who signed the petition in 1875), feasible address, often connected to dockyard through father or other family member. Some of the other names on the petition appear in the census material, but it is less certain that they refer to the worker listed. Some names do not appear in the census material at all.

86 women signed, 31 are shown here. 6 are widows. 4 are married women. 21 appear to be unmarried, mostly living with their parents.

Abbreviations throughout: **W** widow
 D daughter
 S single

Women who signed the Chatham petition in 1875

| Name | Census | Age | Status | Address | Family |
|----------------------------|--------|-----|--------|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| Elizabeth Baker | 1881 | 48 | W | 1 Alma Place, High Street, Chatham | |
| Charlotte Broad | 1871 | 29 | W | 6 Jenkins Place, New Rd, Chatham | Daughter of Alfred Duncan |
| Emma Cogger | 1871 | 14 | D | 3 Fullager’s Yard, High Street, Chatham | Daughter of Alfred, employed at Dockyard |
| Elizabeth Collins | 1891 | 19 | S | 18 King Street, Brook, Chatham | |
| Elizabeth Dingle | 1871 | 44 | W | 4 Rope Walk | Born Devonport. 7 children, 3 at work in dockyard. Widow of Richard, Policeman, HM Dockyard in 1851, messenger in 1861, also born Devonport. |
| Eliza Drago | 1871 | 19 | D | Brook, Chatham | Daughter of Francis, dockyard labourer, who had 4 other children |
| Mary Ann Ellard | 1871 | 16 | D | 62 John Street, Chatham | Daughter of James, retired labourer who had 2 other children. |
| Elizabeth Frisby | 1891 | 44 | W | 51 Bush Street, Chatham | 3 children |
| Carrie Gallavan (probably) | 1861 | 14 | D | 39 River Row | Daughter of Mary, Widow, 39. Laundress with 3 other children. |

| | | | | | |
|--------------------|------|----|---|-------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Caroline) | | | | | |
| Ellen Gibbons | 1861 | 9 | D | Brook, Chatham | Daughter of John, dockyard labourer. |
| Mary Ann Gibson | 1871 | 32 | W | 9 Broughton Place | 4 children under 10. Probably widow of George, 25 in 1861, shipwright. |
| Ellen Greenstead | 1861 | 9 | D | 16 Best Street, Chatham | Daughter of William, sawyer. |
| Fanny Greenstead | 1861 | 2 | D | | Daughter of William, sawyer with 5 other children. |
| Mary Ann Grubb | 1871 | 17 | D | | Daughter of John, pensioned Ropemaker. |
| Elizabeth Luxford | 1881 | 32 | D | 24 Cross Street, Chatham | Daughter of Henry, Army Pensioner. |
| Mary Lynch | 1871 | 27 | M | Dingle Cottage, Cage Lane, Chatham | Married to William, tailor. |
| Margaret McDonough | 1881 | 52 | W | 4 Shanbrook Buildings, Hardstown, Chatham | 3 children |
| Eliza Marshall | 1861 | 5 | D | 62 Front Row, Chatham | Daughter of Walter, Rigger in Dockyard. |
| Mary Morris | 1871 | 36 | M | 2 Rope Walk, Chatham | Husband at sea. |
| Eliza Newman | 1881 | 21 | D | 73 Brook, Chatham | Daughter of John, gasworks stoker with 8 other children. |
| Ellen O'Connor | 1851 | 9 | | DanmAlley, Chatham | Grandchild of Ann Lewis. |
| Hannah O'Connor | 1851 | 6 | | DanmAlley, Chatham | Grandchild of Ann Lewis. |
| Kate O'Connor | 1891 | 25 | D | 44 Chatham Hill, Chatham | Daughter of John, Naval pensioner. |
| Eliza Quarrington | 1871 | 17 | D | 8 Adelaide Place, Luton Road, Chatham | Daughter of Eliza, widow, charwoman. |
| Amelia Quarrington | 1871 | | M | | Married, living with father. In 1891 she is shown as a widow, still working in Ropery with 2 children. |
| Charity Reakes | 1861 | 39 | M | 110 King Street | Married to Thomas, Ropemaker, 5 children. In 1881 she is shown as a widow. |
| Henrietta Sedgwick | 1871 | 23 | D | 15 Westcourt Street, Chatham | Daughter of Charlotte, widow of Edwin, carpenter with 6 other children. |
| Lydia Servard | 1871 | 17 | D | | Daughter of Orlando, Greenwich pensioner with 3 other children. |
| Caroline Tapsell | 1861 | 5 | D | Cross Street, Chatham | Daughter of William, dockyard labourer. 5 other children, 1 older working in Rope House, Dockyard. In 1881 Caroline shown as working in Dockyard Ropery. |
| Amelia Taylor | 1871 | 17 | D | Constitution Hill, Chatham | Daughter of Ann, widow, Annuitant. Older brother, engine driver in Dockyard. |
| Jane Tucker | 1851 | 9 | D | Church Lane, Chatham | Daughter of Elizabeth, widow of soldier, with 3 other children. |

Women at Spinning Machines

The information in this section comes from the list found in the Chatham Dockyard Historical Society's library, checked against the census material as above, mostly using the 1871 census.

Date of entry refers to starting in the Ropery, but this may not give an accurate picture of the length of time the women were employed, because their "hired" status meant they were probably "entered" more than once. The age given was the age at the start date shown.

| Name | Date of Entry | Age | Status | Address | Family |
|--------------------------------------|---------------|-----|--------|-------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| Alice Broad | 1879 | 20 | D | Rambles Buildings, High Street, Chatham | Daughter of Samuel, Blacksmith |
| Margaret Connor | 1872 | 17 | D | 2b Millers Court, Brook, Chatham | Daughter of Jeremiah, Labourer |
| Rebecca Cann | 1879 | 27 | M | 14 Farm Britton Street | Married to Benjamin, boilermaker, 4 children |
| Margaret Cooling | 1879 | 27 | D | 5 Cross Street, Chatham | Daughter of Ellen, widow |
| Mary Ann Dale | 1878 | 29 | W | Otway Street, Chatham | 4 children. Shown in 1881 as dressmaker |
| Ellen Emery | 1879 | 34 | W | 36 Charlton Street | 5 children |
| Maria Fowler | 1878 | 17 | D | 47 Canterbury Street, Gillingham | Daughter of Gabriel, dockyard writer. Shown as pupil teacher in 1881, so perhaps unlikely, but both parents born Devonport, strong dockyard connection. |
| Mary Finlayson | 1878 | 20 | D | | Daughter of Joseph, earlier rigger, by 1871, Greenwich pensioner. |
| Elizabeth Landen | 1878 | 18 | D | 5 Wenman's Cottages, Chatham | Daughter of Edward, sawyer |
| Alice McDonough | 1878 | 15 | D | 4 Shrubsole Buildings, Hardstown, Chatham | Daughter of Margaret, widow |
| Mary Ann McDermott | 1878 | 18 | D | 3 Broad Alley, Chatham | Daughter of William, general labourer. 1 of 4 children, other labourer, messenger |
| Mary Morris | 1878 | 43 | M | 19 John Street, Chatham | Husband at sea. Shown in 1891 with husband, Able Seaman, 42 John Street, not employed but taking in lodgers. |
| Amelia Jane Quarrington, nee Ogilvie | 1878 | 26 | M | Jermons Place, Brook, Chatham | Married but living with parents. Andrew Ogilvie, rigger. |
| Kate O'Brien | 1879 | 28 | D | 8 King Street, Chatham | Daughter of Sarah Flynn. |
| Charlotte Phillips | 1879 | 32 | W | 15 James Street | 3 children, born at Sheerness and Pembroke Dock. Herself born London |
| Emma | 1878 | 32 | W | Brook, passage off | 5 children |

| | | | | | |
|-------------------|------|----|---|----------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| Robinson | | | | Fair Row | |
| Elizabeth Saxton | 1878 | 16 | D | | Daughter of Elizabeth, widow of Joseph, police constable, previously living in Police Quarters by 1881 at 166 Front Row. 4 other children. |
| Mary Ann Sullivan | 1878 | 17 | D | Brook, Chatham | Daughter of John, tailor. Youngest of 5 children. |

Women Workers in the Sail and Colour Lofts

This material is taken from Research Paper 18 of the Chatham Dockyard Historical Society. Names have been selected of those who had entered by 1900. Only a few were found in the census cards which only go up to the 1891 census, making it impossible to count the number of widows. However, their addresses, which are those given when they entered, are of interest.

| Name | Date Entered | Date of Birth | Miss/ Mrs | Address | Notes |
|-----------------|--------------|---------------|-----------|-----------------------------------|-------------------------------------------|
| Harriet Banks | 1900 | 16.08.68 | Miss | 66 York Ave, New Brompton | |
| E.L.Bosley | 1889 | 18.10.58 | Miss | 8 Alfred Street Chatham | |
| Cath Colley | 1891 | 01.09.59 | Mrs | 30 York Ave, new Brompton | |
| Rebecca Collins | 1891 | 04.03.56 | Mrs | 25 Trafalgar Road, New Brompton | |
| H.S.Daly | 1898 | 09.11.57 | Mrs | 11 May Terrace, Chatham | |
| Amy Reb. Field | 1898 | 09.02.68 | Mrs | 31 Mills Terrace, Chatham | |
| Ellen Geeleher | 1898 | 16.04.74 | Mrs | 7 King Street, New Brompton | |
| Margaret Gill | 1891 | 03.11.53 | Mrs | 98 Thorold Road, Chatham | |
| Elizabeth Lewis | 1898 | 26.02.51 | Mrs | 24 York Terrace, Luton | Moved from Ropery to making "Dresses" |
| Mary McDonough | 1885 | 21.02.57 | Miss | 47 Britton Street, New Brompton | |
| Louisa May | 1891 | 10.10.59 | Mrs | 31 Waterloo Road, New Brompton | |
| Emma Munden | 1898 | 04.01.54 | Mrs | 12 Seaview Road, New Brompton | Moved from Ropery to Sail and Colour Loft |
| Martha Munden | 1899 | 04.01.79 | Miss | 30 Seaview Road, New Brompton | Moved from Ropery |
| Emily Patchett | 1899 | 24.03.76 | Miss | 25 Trafalgar Street, New Brompton | Moved from Ropery |
| Eliza Richards | 1891 | 14.08.67 | Miss | 63 Pier Road, Gillingham | |
| Ada Rice | 1891 | 30.08.63 | Miss | 31 High Street, Old Brompton | |
| Agnes Scott | 1898 | 19.12.59 | Miss | 48 College Avenue, New Brompton | Moved from Ropery |
| Minnie | 1898 | 01.11.59 | Mrs | 37 Britton Street, New | Moved from Ropery |

| | | | | | |
|-----------------|------|----------|------|---------------------------------------|-------------------|
| Sutton | | | | Brompton | to make "Dresses" |
| Henryta Swift | 1898 | 24.08.83 | Mrs | 96 Medway Road, New Brompton | |
| Helen Weaver | 1899 | 24.05.77 | Miss | 93 New Road, Chatham | |
| Sarah Wells | 1898 | 03.07.59 | Mrs | 75 Duncan Road, New Brompton | Moved from Ropery |
| Nellie Williams | 1890 | 18.09.80 | Miss | Livingstone House, Cage Lane, Chatham | Moved from Ropery |
| Agnes Scott | 1898 | 19.12.59 | | | |

BIBLIOGRAPHY

PRIMARY SOURCES

Unpublished Primary Sources: Manuscript Sources

National Archives

ADM 42/ 133, Muster Book for Chatham Yard craft crew.
ADM 106/ 282-302, Commission for Widows and Orphans
ADM 106/294, Women picking oakum at Chatham
ADM 106/ 304-310, 313, Letters re Chatham, stores, oakum etc
ADM 106/1884, Letters re Employment of women at Portsmouth for twinespinning
ADM 106/ 2231, Letters re employment of colour women
ADM 106/ 2516, Warrant re employment of colour women etc
ADM 106/ 2534, Index of Standing Orders
ADM 1/5929, Letter from Captain Superintendent, Chatham re operation of machines, 27.2.1865.
ADM 116/205, Rates of pay for Workmen
ADM 116//159, D1024, Petition of Chatham Ropery workers, 12.7.1875, D1112, Petition and accompanying letter from Portsmouth, 15.7.1875, D1133, Petition from Sheerness Colourwomen
ADM 116/158, D1116, Letter of 16.7.1875 from Chatham Yard re Women's Memorial.
ADM 174/36, War Establishment of Ropeyard
ADM 174/35 and 37, 38, 40, 41, 42, 43, 44,45, Letters to Plymouth from Navy Board
ADM 174/89, Letters to Plymouth from Admiralty.
ADM 174/312, 313, 314 and 319, Letters from Devonport to Admiralty
ADM 1/5697, Letters to Admiralty from Chatham.
ADM 3, Internal Admiralty letters re roperies
ADM 12/559, Letters re incidents

National Maritime Museum

CHA/A/4, 1766-1815 Abstract of Admiralty Orders
CHA/ B/ 5, 6, 7, 8, 10, 1802-3 Out-Letter books, Chatham Officers to the Navy Board
CHA/C/5, 1864-5 Subject Index
CHA/ E/73, 74, 1802 In-Letters from the Navy Board
CHA/E/75, 76, 77, 78, 79, 1802/3 In-Letters from the Navy Board
CHA/E/80, 1804 In-Letters from the Navy Board
CHA/E/83, 1805 In-Letters from the Navy Board.
CHA/E/115, 116, 1815 In-letters from the Navy Board
CHA/F/29, 1816 In-Letters from the Navy Board
CHA/H/85, 99- 145, 1832- 1872 Admiralty letters to the Captain Superintendent.
CHA L/36, 37, Commissioner's Letters to Navy Board

Royal Dockyard Library. The Historic Dockyard, Chatham.

Volume 14B Service Registers of Established Officers and Workmen's Seniority (containing list of "Women at Spinning Machines") for 1870s and 80s.

Devonport Dockyard Museum

H1 1-454 Dockyard Pay Books

Letters requesting employment.

Medway Archives

Transcribed Enumerators' Census material, 1841, 51, 61, 71, 81, 91.

Poor law Records

Plymouth and West Devon Record Office

Parish Registers

Published Primary Sources: Contemporary Newspapers and Magazines

Chatham News

Chatham Observer

Western Daily Mercury

The Times

Pall Mall Budget

Navy and Army Illustrated

Mechanics' Magazine

Bridport News

Published Primary Sources: Parliamentary Papers

Census of Occupations 1841 1851

Navy, Accountant the General, Storekeeper General, and Director of Works. Admiralty, 14 June 1859. Session 2 (139) (139-1) (139-11) Navy (dockyard economy).

Royal Commission on Labour. The Employment of Women. Reports by Miss Eliza Orme, Miss Clara E. Collett, Miss May Abrahams, and Miss Margaret Irwin (lady assistant commissioners) on the conditions of work in various industries in England, Wales, Scotland and Ireland. 1893-4. [C.6894-xxlll].

Statistical Report on the Health of the Navy for the year 1867, House of Commons Papers 160, 22 April, 1869.

Statistical Report on the Health of the Navy for the year 1869, House of Commons Papers 384, 25 July, 1871.

Statistical Report on the Health of the Navy for the year 1870, House of Commons Papers 358, 1 August, 1872.

Statistical Report on the Health of the Navy for the year 1871, House of Commons Papers 333, 22 July, 1873.

Statistical Report on the Health of the Navy for the year 1872, House of Commons Papers 154, 11 May, 1874.

Statistical Report on the Health of the Navy for the year 1873, House of Commons Papers 303, 16 July, 1874.

Statistical Report on the Health of the Navy for the year 1874, House of Commons Papers 380, 2 August, 1875.

Statistical Report on the Health of the Navy for the year 1875, House of Commons Papers, 376, 24 July, 1876.

Statistical Report on the Health of the Navy for the year 1876, House of Commons Papers 407, 10 August, 1877.

Published Primary Sources: Contemporary Books and Articles

Barry, Patrick. *Dockyard economy and Naval Power*, London, Sampson Low, 1863

Chapman, Robert. *A Treatise on Ropemaking*, London Waterlow, 1857.

Cooke-Taylor, R.W. *The Factory System*, London, Methuen, 1894.

Defoe, Daniel, *A Tour Through the Whole Island of Great Britain, 1724-26*, Abridged Penguin edition, 1971, ed Pat Rogers.

Hasted, Edward. *The History and Topographical Survey of the County of Kent*, Vol 1V, 1798.

Jefferys, W. *An Account of the Fire which happened at Chatham on the 30th June, 1800*, Chatham, Ambrose Etherington, 1801.

Jefferys, W. *An account of the dreadful fire at Chatham on the 3rd of March, 1820*, Chatham, C. and W. Townson, 1821.

Nicholl, Mary Anne H. *Augusta: or the refuted slanders of 30 years ago*. London, 1878.

Sellon, John Scudamore. *Memorandum relating to the Society of the Holy Trinity (the Devonport Sisters of Mercy)*. London, Terry and Co, 1907.

Whitfield, H.F. *Plymouth and Devonport in times of war and peace*. Plymouth, 1900

SECONDARY SOURCES

Unpublished Secondary Sources: Theses and Dissertations

Clayton, J.M. "Urban Development of Gillingham in the late 19th century". M.A. University of Kent, 1980

Hilson, Mary. "Working Class Politics in Plymouth ,c.1890-1920". Ph.D, University of Exeter, 1998.

Preece, Haydn C. "New Brompton 1851-1903: The Theory of Labour Aristocracy". M.A. University of Kent. 1988.

Thom, Deborah. "The Ideology of Women's Work 1914-24 with special reference to the National Federation of Women Workers and other Trades Unions". Ph.D, Thames Polytechnic. 1982.

Waters, Mavis, "A Social History of the Chatham Dockyard Workforce." Ph.D. University of Essex, 1979.

Published Secondary Sources: Books

Armstrong, A. *The Economy of Kent, 1640-1914*, London: Boyd and Brewer, 1996.

- Baldwin, Ronald A. *The Gillingham Chronicles*, Rochester: Baggins Book Bazaar/Bruce Aubry, 1998.
- Banks, Olive. *Faces of Feminism*, Oxford: Martin Robertson, 1981.
- Barker, D. L and Sheila Allen, eds *Dependence and Exploitation in Work and Marriage*, London: Longman, 1976.
- Beckles, G. *The Bridport Story: A Record of 700 Years 1253-1953*, Bridport: Bridport Industries Ltd, 1953.
- Benson, J. *The Working Class in Britain 1859-1939*, London: Longman, 1989.
- Berg, M. *Technology and Toil in nineteenth century Britain*, London: CSE Books, 1979.
- Black, Clementina. ed. *Married Women's Work*, London, G.Bell and Sons, 1915, reprinted by Virago, London, 1983.
- Braybon, Gail and Summerfield, P. *Out of the Cage*, London: Pandora, 1987.
- Burns, K.V. *The Devonport Dockyard Story*, Liskeard: Maritime Books, 1984.
- Carter, Herbert R. *Modern Flax, Hemp and Jute Spinning and Twisting*, London, 1925.
- Clarke, J., Critcher C, and Johnson, R. eds, *Working Class Culture*, London, Hutchinson, 1979.
- Coad, Jonathan. *Historic Architecture of the Royal Navy*, London: Gollancz, 1983.
- Cookson, J.E. *The British Armed Nation, 1793-1815*, Oxford, Clarendon, 1997.
- Corfield, Penelope J. *Time and the Shape of History*, New Haven and London: Yale University Press, 2007.
- Cowman, Krista. *Women of the Right Spirit: Paid Organisers of the Women's Social and Political Union, 1904-18*, Manchester: Manchester University Press, 2007.
- Crossick, Geoffrey. *An Artisan Elite in Victorian London: Kentish London 1840-1880*, London: Croom Helm, 1978.
- _____, ed. *The Lower Middle Class in Britain 1870-1914*, London: Croom Helm, 1977.
- Crawshaw, J.D. *The History of Chatham Dockyard*, Newcastle, Isabel Garford, 1999.
- Drake, Barbara. *Women in Trade Unions*, London, Labour Research Department, 1920, reprinted by Virago, London, 1984.

- Duffy, Michael, Fisher Stephen, Greenhill Basil, Starkey David J. and Joyce Youngs, eds. *The New Maritime History of Devon, Vol II: From the Late Eighteenth Century to the Present Day*, London: Conway Maritime Press, 1994.
- _____, *Vol I From Earliest Times to the late Eighteenth Century*.
- Emsley, Clive. *British Society and the French Wars*, London: MacMillan, 1979.
- Engels, Friedrich. *The Condition of the Working Class in England*, 1845, reprinted London: Penguin, 1987.
- Floud, R and D.McCloskey, eds, *The Economic History of Britain Since 1700*, Cambridge: Cambridge University Press, 1994.
- Freedgood, Elaine. *Factory Production in Nineteenth- Century Britain*. Oxford, Oxford University Press, 2003.
- Frost Brothers Ltd. *The Old Industry of Ropemaking with Modern Plant*. 1906.
- Gill, Crispin. *Plymouth: A New History*, Vermont: David and Charles, 1979.
- Harrison, R. *Before the Socialists. Studies in Labour and Politics*, London: Routledge, 1965.
- Honeyman, Katrina. *Women, Gender and Industrialisation in England, 1700-1870*, London: MacMillan, 2000.
- Hopkins, Eric. *Working Class Self-Help in Nineteenth Century England*, London: UCL, 1995.
- Hughes, David T. *Chatham Naval Dockyard and Barracks*. Stroud, Tempus, 2004.
- John, Angela, ed. *Unequal Opportunities, Women's Employment in England 1800-1918*, Oxford: Blackwell, 1986.
- Joyce, B. *The Chatham Scandal: a history of Medway's prostitution in the late nineteenth century*, Rochester: Baggins Book Bazaar/Bruce Aubry, 1999.
- Joyce, Patrick, *Work, Society and Politics*, London: Methuen, 1982.
- Kenyon, G.H. and Kenyon, C.G. *William Kenyon and Sons: a century's work*, Dukinfield, 1966.
- Lewis, Jane, *Women in England 1870-1950*, Brighton: Wheatsheaf, 1984.
- Lunn, Kenneth and Ann Day. eds *History of Work and Labour Relations in the Royal Dockyards*, London: Mansell, 1999.

- MacDougall, Philip. *The Chatham Dockyard Story*, Rochester: Rochester Press, 1981.
- _____, *Chatham Past*, Chichester: Phillimore, 1999.
- _____. Ed. *Chatham Dockyard, 1815-1865: The Industrial Transformation*, Farnham: Ashgate, 2009.
- MacMillan, D.S. *Archibald Forsyth and Co: One Hundred Years of Ropemaking, 1865-1965*, Sydney: A. Forsyth and Co. Pty Ltd, 1965.
- McFeely, M.D. *Lady Inspectors: The Campaign for a Better Workplace 1893-1921*, London: Blackwell, 1988.
- McHugh, Paul, *Prostitution and Victorian Social Reform*, London: Croom Helm, 1980.
- McIntosh, Marjorie K. *Working Women in English Society, 1300-1620*, Cambridge: Cambridge University Press, 2005.
- Mappen, Ellen. *Helping Women at Work: The Women's Industrial Council, 1889-1914*, London: Hutchinson, 1985.
- Morison, Samuel. Eliot. *The Ropemakers of Plymouth 1824-1949*, Boston MA: Houghton Mifflin, 1950.
- Morriss, Roger. *The Royal Dockyards during the Revolutionary and Napoleonic Wars*, Leicester: Leicester University Press, 1983.
- _____, *Naval Power and British Culture, 1760-1850. Public Trust and Government Ideology*, Aldershot: Ashgate, 2004.
- Page, W. ed. *Victoria History of the Counties of England: Devonshire*. Vol 1. London, James Street Haymarket, 1906.
- Pember Reeves, Maud. *Round About a Pound a Week*. London, G.Bell and Sons Ltd, 1913, reprinted by Virago, 1979.
- Pinchbeck, Ivy, *Women Workers and the Industrial Revolution, 1750-1850*, London, Routledge, 1930, reprinted 1969.]#1
- Presnail, James. *Chatham, The Story of a Dockyard Town*, Chatham: Medway Borough Council, 1976.
- Preston, J.M. *Industrial Medway: An historical survey*, Rochester: J.M. Preston, 1977.
- Purvis, June. ed *Women's History: Britain, 1850-1945*, London: UCL, 1995.

- Rees, A. *Manufacturing Industry, 1819-1820*, Reprinted by David and Charles, Newton Abbott, 1970.
- Roberts, Elizabeth. *Women's Work 1840-1940*, London: MacMillan, 1988.
- Rowbotham, Sheila. *Hidden from History*, London: Pluto, 1973.
- _____, *A Century of Women*, London: Penguin, 1999.
- Stark, Suzanne J. *Female Tars: women aboard ship in the age of sail*, London: Pimlico, 1998.
- Tilly, Louise and Scott, Joan, *Women, Work and Family*, New York: Holt Rinehart, 1978.
- Tyson, W. *Rope: History of the Hard Fibre Cordage Industry of the UK*, London: Wheatland Journals, 1966.
- Van Der Kiste, J. *Plymouth: History and Guide*, Stroud: History Press, 2009.
- Walkowitz, Judith. *Prostitution and Victorian Society: Women, class and the state*, Cambridge: Cambridge University Press, 1980.
- Williams, Thos Jay. *P.L.Sellon*, Bungay Suffolk, S.P.C.K., 1948, revised 1965.
- Woolf, Virginia. *Collected Essays, Vol 2*, London: Hogarth Press, 1966.
- Wosk, Julie. *Women and the Machine: Representations from the Spinning Wheel to the Electronic Age*. Baltimore, John Hopkins University Press, 2001.

Published Secondary Sources: Articles

- Barrett, M and Mary McIntosh. "The Family Wage" in Whitelegg, ed, *The Changing Experience of Women*, Oxford, Blackwell, 1982.
- Barron, R.D. and G.M. Norris. "Sexual Divisions and the labour market" in D.Leonard and S.Allen, eds, *Dependence and exploitation in Work and Marriage*, London, Longman, 1976.
- Breugel, Irene. "Women as a reserve army of labour" in *Feminist Review*, 1979, 3.
- Casey, Neil, "Class Rule: The Hegemonic Role of the Royal Dockyard Schools, 1840-1914" in Kenneth Lunn and Ann Day, eds, *History of Work and Labour Relations in the Royal Dockyards*. London: Mansell, 1999.
- Creighton, C. "The rise and fall of the "male breadwinner family" in Britain", in *Cambridge Journal of Economics*, 23, 1999.

- Day, Ann. "The forgotten "mateys": women workers in Portsmouth Dockyard, England, 1939-45" in *Women's History Review*, Vol7, Issue 3, September 1998.
- Davidoff, Leonora and Catherine Hall, "The Architecture of Public and Private Life: English Middle Class Society in a Provincial Town" in A.Sutcliffe, ed, *The Pursuit of Urban Life*, London, Edward Arnold, 1983.
- Doe, Helen, "Challenging Images: Mrs Mary Ross of Rochester, nineteenth century Businesswoman and Warship Builder" in *Journal for Maritime Research*, May, 2000.
- Dulley, A.J.F. "People and Homes in the Medway Towns 1687-1783" in Margaret Roake and John Whyman, eds, *Essays in Kentish History*, London, Cass, 1973.
- Finn, Margot. "Working Class women and the contest for consumer control in Victorian County Courts" in *Past and Present*, November 1998, No161.
- Hartley, C.W.S. "Sir Charles Hartley and the Improvement of Sutton Harbour" in *Proceedings of the Devonshire Association for the Advancement Science, Literature and Art*, Vol 115, 1983.
- Hilditch, P. "The Dockyard in the Local Economy" in M. Duffy, S. Fisher, B. Greenhill, D.J.Starkey and J.Youings, eds, *The New Maritime History of Devon, Vol II: From the Late Eighteenth Century to the Present Day* London: Conway Maritime Press, 1994.
- Hilson, Mary. "Labour Politics in a Naval Dockyard: The Case of KarlsKrona, Sweden c. 1880-1925", in *IRSH* 46, 2001.
- Hoff, J. "Gender as a postmodern category of paralysis" in *Women's History Review*, 3 (2) 1994.
- Humphries, Jane. "Women and Paid Work" in June Purvis, ed, *Women's History, Britain 1850-1945*, London, UCL Press, 1995.
- Hunt, Felicity. "Women in the London Printing and Bookbinding Trades" in A. John, ed, *Unequal Opportunities*, Oxford, Basil Blackwell, 1986.
- Janssens, A. "The rise and decline of the male breadwinner family? An overview of the debate" in *International Review of Social History*, 42, supplement 5, 1997.
- McDermid, J. "Women and Education" in J. Purvis, ed, *Women's History, Britain 1850-1945*, London, UCL Press, 1995.
- Oswald, Neville. C. "Epidemics in Devon" in *Proceedings of the Devonshire Association for the Advancement of Science, Literature and Art*, Vol 109, 1977.

- Palmer, Sarah. "Ports 1840-1970" in M. Daunton, ed, *Cambridge Urban History of Britain, 111, 1840-1940*, Cambridge, Cambridge University Press, 2000.
- Scott, Joan W. "Gender: a Useful Category of Analysis" in *American History Review*, 91, 1986.
- Sigsworth, E.M. and T.J. Wyke. "A Study of Victorian Prostitution and Venereal Disease" in M. Vicinus, ed, *Suffer and Be Still: Women in the Victorian Age*, London, Methuen, 1980.
- Sunderland, Ruth, "The real victims of this credit crunch? Women" in *The Observer*, 18.01.2009.
- Van Popel, Van Dalen and Walhout. "Diffusion of a social norm: tracing the emergence of the housewife in the Netherlands, 1822-1922" in *Economic History Review*, Vol 62, no.1, February 2009.
- Vickery, Amanda. "Golden Age to Separate Spheres? A Review of the Categories and Chronology of English Women's History" in *Historical Journal* xxxvi, 1993.
- Vries, Jan de, "The Industrial Revolution and the Industrious Revolution" in *Journal of Economic History*, liv (1994).
- Walkowitz, Judith. "The Making of an outcast group: Prostitutes and Working Women in Nineteenth Century Plymouth and Southampton" in M. Vicinus, ed, *A Widening Sphere: Changing Roles of Victorian Women*, London, Methuen, 1980.
- Waters, Mavis. "The Dockyard Workforce: A picture of Chatham Dockyard c.1860" in *Archaeologia Cantiana*, Vol 97, 1981.
- _____, "The Dockyardmen Speak Out: Petition and Tradition in Chatham Dockyard, 1860-1906 in Kenneth Lunn and Ann Day, eds *History of Work and Labour Relations in the Royal Dockyards*. London, Mansell, 1999.
- _____, "Changes in the Chatham Dockyard workforce, 1860-1867", in *Mariners' Mirror*, Vol 69, 1983.
- _____, "Dockyard and parliament: a study of the unskilled workers in Chatham Yard, 1860-1900" in *Southern History*, 6, 1984.

Published Research Paper

Chatham Dockyard Historical Society Research Paper No 18: *Workers of the Sail and Colour Lofts 1800-1946*. 2001

Internet Sources

A History of the Chatham Memorial Synagogue, internet site,
<http://www.chathamshul.org.uk/>, accessed 16/3/2009.

Plymouth website, <http://www.plymouth.gov.uk>, accessed 27/11/2010

Medway Council Archives service online catalogue: Medway City Ark,
cityark.medway.gov.uk/about Medway.