PROCEEDINGS OF
SIRC’S SECOND SYMPOSIUM

Cardiff University

29 June 2001

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The arguments and views expressed in these papers are the authors’ and not necessarily those of either the Seafarers International Research Centre or Cardiff University.
INTRODUCTION

The research conducted at the Seafarers International Research Centre (SIRC) is focused on occupational health and safety and on seafarers’ well-being aboard ship, among their families, and in the labour market. Our ultimate concern is with the development of a thoroughly professional and highly motivated labour force of seafarers of all ranks and nationalities. Policy recommendations are only made when they are consistent with scientific research findings and the advancement of seafarers’ welfare.

Not all research is conducted in-house. Wherever appropriate SIRC researchers work with partners in other universities in other world regions. It is the Centre’s policy to establish global partnerships and, in so doing, create a worldwide network of researchers familiar with the shipping industry and its labour force. In all of our research we seek to build genuine co-operation with every branch of the shipping industry.

Our researchers approach a wide range of topics in the shipping industry toward the common goal of fulfilling the Centre’s mission. The research presented at SIRC’s Second Symposium reflects this diversity.
STAFF BIOGRAPHIES

TONY ALDERTON

Title: Dr
Age: 50

Degrees and awarding institutions:
After completing a certificate in Industrial Relations and Trade Union studies at Middlesex University in 1991, he obtained a first class honours degree in Social Policy with Trade Union Studies, at the same institution in 1993.

Subject/title of PhD:
Trade Unions and Japanisation (1999)

Previous occupation(s):
Twenty years in the Inland Revenue, four of them as a full-time trade union lay activist within the NUCPS.

Current and Future Research:
Flag state maritime practice and industrial relations within the maritime sector.

JO BEALE

Title: Research Associate
Age: 23

Degrees and awarding institutions:
MSc Occupational Psychology, Cardiff University;
BSc Psychology, Cardiff University.

Previous occupation(s):
Research Assistant at Centre for Occupational and Health Psychology.

Current and Future Research:
Investigating fatigue among offshore workers.
PHIL BELCHER

Title: Mr
Age: 30

Degrees and awarding institutions:
Maritime Studies, Cardiff and Master Mariner’s Certificate of Competency, MCA.

Subject/title of PhD:
Rule Following Behaviour In Collision Avoidance.

Previous occupation(s):
Merchant Navy Deck Officer.

Current and Future Research:
Rule following behaviour in collision avoidance.

MICHAEL BLOOR

Title: Professor
Age: 53

Degrees and awarding institutions:
BA Cambridge 1969
MLITT Aberdeen 1971
PhD Aberdeen 1976

Previous occupation(s):
1970-92: Research Scientist The Medical Research Council;
1992-99: Successively Senior Lecturer, Reader and Professor at Cardiff University
School Of Social Sciences;
1999 onwards: Secondment To SIRC.

Current And Future Research:
Development of SIRC's Programme On Seafarers' Health & Safety.
GEOFF BOERNE

Title: Mr
Age: 41

Degrees and awarding institutions:
BSocSc, University of Cape Town
MSc, Cardiff University

Subject/title of MSc:
Transport intermodal changing points.

Previous occupations:
Transport management; Seafaring (sail) and Skipper of sailing cargo boat;
Administrator; Research Associate.

Current and Future Research:
Fatigue, health and injury of seafarers.

NEIL ELLIS

Title: Research Associate
Age: 26

Degrees and awarding institutions:
BSc (Hons) Psychology and Communication, University of Wales Institute Cardiff;
MPhil (submitted, awaiting viva), University of Wales Institute Cardiff.

Current and Future Research:
Stress and fatigue in offshore workers.
EROL KAHVECI

Title: Dr
Age: 37

Degrees and awarding institutions:
PhD in Sociology (University of Bristol);
MPhil in Sociology (University of Bristol); MSc in Sociology (University of Aegean); BA in Sociology (University of Aegean); Diploma in Sociology of Education (University of Aegean)

Subject/title of PhD:
Political Economy of the Zonguldak Coal Mines and its Labour Force: 1848-995

Previous occupations:
Research Fellow, Department of Sociology, University of Bristol; Lecturer in Sociology, University of Bath.

Current and Future Research:
Transnational Seafarer Communities; Outreach Seafarers’ Welfare Schemes; Abandoned Seafarers.

TONY LANE

Title: Prof
Age: 63

Degrees and awarding institutions:
BA (Hons) Social Science, University of Liverpool;
Diploma in Economics and Political Science, University of Oxford.

Previous occupations:
Eight years as merchant seaman;
Thirty years as Lecturer, Senior Lecturer, Reader in Sociology, University of Liverpool;
Director of SIRC since September 1997.
WILLIAM A O’NEIL  
*Secretary-General*  
International Maritime Organization

Mr William A O’Neil is Secretary-General of the International Maritime Organization, the United Nations agency concerned with maritime safety and the prevention of pollution from ships.

Mr O’Neil was elected Secretary-General of the IMO for a first term beginning in 1990, a second term of office beginning in 1994 and began his third term of office in 1998. He graduated in civil engineering from the University of Toronto in his native Canada in 1949 and served in various positions with the Federal Department of Transport and was particularly closely associated with the St Lawrence Seaway Authority.

He was Commissioner of the Canadian Coast Guard from 1975-80 and then became President and Chief Executive Officer of the St. Lawrence Seaway Authority, a position he held until joining IMO. However, his links with the Organization go back to 1972 when he represented Canada at the IMO Council. He became Chairman of the IMO Council in 1980 and was re-elected four times.

*In 1991 he became Chancellor of the World Maritime University, Malmö, Sweden and Chairman of the Governing Board of the International Maritime Law Institute in Malta.*

BERNARDO OBANDO-ROJAS

**Title:** Mr  
**Age:** 34

**Degrees:**  
BSc Maritime Transport - Escuela Nautica (Panama);  
MSc International Transport - Cardiff University (Wales).

**Other professional qualifications:**  
Chief Mate – UK

**Subject/title of PhD:**  
Systems analysis of the UK labour market for seafarers (completion September 2001).

**Previous Occupations:**  
Ship's officer (container, bulker, general cargo, ro-ro);  
Container terminal co-ordinator;  
Psychiatric nurse.

**Current and future research:**  
Global Labour Market - Seafarers Database (current);  
Fraudulent certificates - (current + future);  
Central America Regional Study (to commence Oct 2001).
HELEN ANNE SAMPSON

Title: Dr
Age: 35

Degrees and awarding institutions
PhD University of Salford
BA (Hons) Sociology University of Durham

Subject/title of PhD:
Sociology/social policy.

Previous occupation(s):
Director - commercial research company;
Researcher;
Lecturer in Sociology, Women’s Studies and Criminology.

Current and future research:
TNC project.

ANDY SMITH

Title: Prof
Age: 48

Degrees and awarding institutions:
BSc Hons, University College London;
PhD University of London, University College London.

Previous occupations:
Post doctoral research fellow, University of Oxford;
Scientist, Medical Research Council, University of Sussex;
Charles Hunnisett Research Fellow, University of Sussex;
Director of the Health Psychology Research Unit, University of Wales College of Cardiff;
Professor, Director of Health Psychology Research Unit, University of Bristol.

Current and future research:
Combined effects of occupational health hazards; fatigue offshore: a comparison of short sea shipping and the offshore oil industry; psychological markers for adjustment to shiftwork offshore.
MICHELLE THOMAS

Title: Dr
Age: 29

Degrees and awarding institutions:
BSc (Hons) University of Surrey, PhD Cardiff University

Subject/title of PhD:
Sexual risk behaviour of female international tourists.

Previous occupation(s):
Researcher at Centre for Research in Social Policy (CRSP), Loughborough University; Cardiff School of Social Sciences, Cardiff University and the Health Promotion Division of the Welsh Assembly (formerly Health Promotion Wales).

Current and Future Research:
Works with Professor Bloor on SIRC’s programme of occupational health and safety with particular responsibility for the Seafaring and Family Life study. Future research includes: interest in exploring seafaring, food and diet and seafarers’ sexual risk behaviour and further research (with Zhao) on women seafarers.

JAIME VEIGA

Title: Dr
Age: 38

Degrees and awarding institutions:
PhD - Cardiff University, MSc - WMU, BSc - ENIDH

Subject/title of PhD:
A Study of the implementation of STCW 95 in the context of a safety culture in shipping.

Previous occupation(s):
Research & Development Manager - FRESTI, Lda; Lecturer Technical University of Lisbon; Researcher ENIDH; Deck officer - Portline, SA and CTM, SARL.

Current and Future Research:
Supply and Training of Ratings.
NIK WINCHESTER

Title: Dr
Age: 29

Degrees and awarding institutions:
PhD Sociology, Bristol University;
MSc Sociology, Bristol University;
BSc (Econ) Sociology & Economics, London School of Economics.

Subject/title of PhD:
The Idea of Progress in Contemporary Social Theory.

Previous occupation(s):
Academic Tutor Bristol University, Revenue Assistant HMIT.

Current and Future Research:
Flag state maritime practice and international regulation within the maritime sector.

BIN WU

Title: Dr
Age: 43

Degrees and awarding institutions:
BSc Hanzhong University (China);
MA Xian Jiaotong University (China);
PhD University of Hull.

Subject/title of PhD:
Human Geography – Rural Sustainability and Farmer Innovation in China’s Marginal Areas.

Previous occupation(s):
Academic Researcher.

Current and Future Research:
SIRC’s Global labour market project; managing a global seafarers database and co-ordinating a regional study network; ‘social isolation of seafarers’.
MINGHUA ZHAO

Title: Dr
Age: 45

Degrees and awarding institutions:
PhD, Industrial Sociology, Bristol University, UK, 1996
MSc, Sociology, Connecticut State University, US, 1992
MA, English Literature, Henan University, PRC, 1985
BA, English Language & Literature, Henan University, PRC, 1983

Subject/title of PhD:

Previous occupations:
Assistant professor, Women's Studies Program, University of Hawaii.

Current and Future Research:
Chinese seafarers; women seafarers; seafarers' families.
The shipping industry is different. There is no other major industry where ninety per cent of the labour force is permanently resident in the workplace. For people like us here in SIRC this creates special problems. It is not necessary to live in a car factory to study the society of car workers … but it is extremely difficult to study many questions concerned with seafarers without the possibility of sailing aboard ships. Two of the projects being reported today by my colleagues and five of those about to be summarised by me would simply be impossible without the co-operation of shipowners, shipmanagers and crewing agencies in allowing SIRC research staff and our associates to do voyages aboard their ships. So I begin by acknowledging the help given us by:

- ACL
- Aleuropa
- Barber International
- B&H Centennial
- Boston Putford
- BP-Amoco
- Carisbrooke Shipping
- Egon Oldendorff
- Farstadt Shipping
- Kuwait Oil Tankers
- The Maritime Academy, Salzburg
- Norasia
- Northern Marine Management
- P&O Ferries
- Sea Partner
- Smit Singapore
- Stena Ferries
- Teekay Tankers

In mentioning these companies I have not forgotten all those others in the world of shipowning and shipmanagement, UN agencies, underwriting and P&I, classification societies, trade unionism, welfare provision and training and education, who have
helped us in all those ways which are essential to the conduct of serious research. And then I must also offer very special thanks to those officers of maritime administrations who have given us access to data enabling our labour market and flag state audit projects. I have been doing university-based industrial research for thirty-three years and I am delighted to be able to say that the industry I joined on leaving school is more approachable and more open to professional researchers than any of the other industries I have been associated with.

My colleagues are all at work on projects which are more or less close to completion:

*Minghua Zhao* is now close to completing her fieldwork for a study of seafarers working aboard cruise ships. Women seafarers, mainly working in the hotel and catering departments of cruise ships, are the principal focus of her study but not to the exclusion of other crew members. Cruise ship societies and especially where crews are concerned, are surely examples *par excellence* of both cosmopolitanism and the world-turned-upside-down. I still wonder over Minghua’s discovery of a Bulgarian professor of philosophy who works as a cleaner by day and as a leader of discussions with shipmates on John Steinbeck’s novels in the evening! The sheer variety of nationalities, skills and experience to be found among cruise ship seafarers is astonishing and it can only be a matter of time before cruise shipowners see marketing benefits to be gained from highlighting their crews.

The study of seafarers’ families is a good example of the ways in which a number of our projects draw strength from overlapping with each other. While *Michelle Thomas’s* study of UK seafarers and their families is at the core of research on families, the work of *Helen Sampson, Erol Kahveci and Minghua Zhao*, respectively on Indian, Filipino and Chinese seafarers’ wives and children, provide an invaluable comparative perspective. Thus far the findings converge in the sense that the main issues are universal even if the managing strategies adopted by wives show some cultural variation. There is no escaping the fact that whether separation is several months or many months long, both the returning husband and the permanently resident wife commonly find it as difficult to adjust to living together as they do to adjusting to living apart. If this is hardly a new phenomenon, it might be that a
meticulous examination of its various dimensions could inform policies designed to retain the well-trained and experienced seafarers the industry needs.

The family study is one element of our health and safety portfolio. We use an inclusive definition of ‘health and safety’ which means that just about anything affecting physical and mental health and safe practice is a legitimate object of study. Mick Bloor is responsible for SIRC’s health and safety research programme and in addition to his membership of the fatigue study team, he is involved in the UK strand of the Danish global study of health screening procedures for seafarers. Mick has also organised a feasibility study for a global cohort study of seafarers health and is currently piloting a project aimed at evaluating the formal and informal practices and procedures of enforcing ILO conventions. In view of the growing regulatory role of Port State Control and the likely consolidation of ILO conventions, our view is that if enforcement is to be beneficial and effective we need to develop a sophisticated understanding of how it actually works on an everyday basis. We have high hopes of this research making a significant contribution to policies aimed at driving sub-standard ships out of the industry.

Despite the best intentions of navigation bridge designers and rulemakers, collisions and near misses between ships operating at close quarters in traffic separation schemes or, indeed, in open water are still common. The collision between the Norwegian Dream and the Ever Decent in the English Channel some 18 months ago may now be something of a cliché but no less than any other collision that happened yesterday or will happen somewhere tomorrow, it will be obvious to all skilled readers of casualty investigations that some or all of the parties failed to observe the rules for collision avoidance. Why did they do this? What factors affected their calculations when they did what they shouldn’t? Phillip Belcher’s new study aims to address these questions by focusing on the contingent and contextual factors affecting risk behaviour. There is a large and growing literature on this subject and a largish body of research in other transport modes, but none that we know of in shipping.

For reasons associated with earlier periods of social and political development welfare services have mainly been provided by organisations attached to the various Christian churches. Although this is still true and despite their realistic adaptation to global
trends of secularisation, the missions of all denominations have found it hard to adjust to the endemic fast turnaround of contemporary shipping. Mainly for local reasons, the Finnish and German missions have imaginatively responded by developing sailing chaplain schemes where trained laymen go to sea, not as evangelists or preachers but as sympathetic listeners and advisors on request. For the last two years and under the management of Erol Kahveci, we have been involved in evaluating the Finnish and German experience and helping to set up and then evaluate a new Apostleship of the Sea scheme where two UK-based Filipino deacons sail aboard ships with large numbers of Filipino crew members. The Finnish and German schemes are being studied by Mike McDaid of Turku University. We are also looking in parallel at the post-1945 experiences of French seagoing worker priests (Catherine Berger of the University of Paris) and the welfare role of political commissars aboard ships of the PRC (Professor’s Shi and Feng, respectively of the Beijing-based National Academy of the Social Sciences and the National Labour Studies Institute and in association with Minghua Zhao). So far the overall study has proved fascinating and we are hopeful that it may lead to practical developments of benefit to everyone.

Jaime Veiga is working on a study concerned with investigating how far there is a labour market surplus of suitably trained ratings. We have been somewhat surprised to find that this study seems to be the first to closely examine the global situation for ratings. Many of you will recall that when ISF-BIMCO published its year 2000 update on the supply and demand for seafarers a note of caution was sounded as to the reality of the reported surplus of ratings. I suppose you might say that we are researching the justification for the note of caution! This has involved us in looking at ratings’ training in the Americas, W and E Europe, Africa and Asia. Our final report will include a model of best practice.

Finally on this overview of projects, some brief remarks on future developments. We have had extensive internal discussions on setting up an internationally comparative study of recruitment and retention of new entrants. Our current thinking is to identify a small number of large companies who are committed to training and then ask for co-operation and some financial support for a study which follows a cohort of new entrants for a five-year period. We will be looking for a total cohort of not less than
500 cadets of different nationalities and hope to pick up, with a partner, a similar sized cohort of a land-based occupation. This is ambitious but like our other projects is capable of delivering a policy-useful pay-off.

*Bin Wu*, who is responsible for our global labour market annual survey, has been reviewing the literature on social isolation as a general phenomenon with a view to investigating how far it can be seen as a particular problem for seafarers. *Michelle Thomas* is considering what would be involved in a study of diet and nutrition. During our shipboard studies we have not always been impressed by seafarers’ eating habits and food cultures even though the raw materials supplied to ships are normally of good quality. We think that perhaps social well-being and good health could be improved by some well considered research on food and its uses and abuses. For my part, together with *Mick Bloor*, I have been having exploratory talks with an economist from Stockholm University on the possibilities of an analysis of the final costs to end consumers of making significant changes to the training and education of seafarers, the length of their tours of duty and other questions of welfare which in sum might contribute to developing and then stabilising a highly skilled and professional seagoing workforce. *Tony Alderton and Nik Winchester* are currently preparing a funding application for a study of the involvement of shipping industry organisations in the development of global regulatory practices. The list could be longer because the doing of research constantly throws up questions that might be addressed in a useful way. Of course this is bound to be especially true of an industry that has not previously attracted much attention from social scientists and which is exceptionally dynamic in terms of its institutional and organisational structures.

I have hoped that in this summary of our current and proposed future research I have said enough to give you a dependable account of what we do and why we do it. The shipping industry emerged transformed in the 1990s after a grim period of depression. The term ‘globalisation’ may be too much used and too little explained but it is hard to find another which so usefully describes what has been happening in this industry over the last decade or so. The world may still be divided up into nation states and it is unquestionably true that nation states and especially regional alliances among them, have the ability to bite and be effective regulators but this does not detract from the fact that in world shipping the national location of its operational
centres and sources of capital is often of little consequence. Those in this industry ready to conscientiously observe the basic ground rules of professionalism can and do confidently act as if nation states are of incidental significance. Here, perhaps, lies a good working definition of globalisation - it exists for those organisations who are able to effectively operate as if the world was one place.

At some levels it is a simple matter to act as if the world is unified. We may still need passports to legally prove our existence as citizens of somewhere and we may often need visas to travel but in this industry it is not hard to assemble a multi-national crew - and, once aboard and after relatively little practice, most seafarers seem to find it easy to stop seeing peoples of other places as strangers. Earlier this year I spent 12 days aboard a coastal bulk carrier and I found an extremely well run ship where the Quatari captain, Croatian mate, Romanian cook and a Cape Verdean AB could sit in a pub, swap stories and jokes and collectively order kebabs from a Bangla Deshi takeaway and walk noisily back to the ship as sociably - and maybe even more sociably than a group of fellow nationals. At this level of everyday life nationality dissolves and for months at a time in these communities the world really does live as one. The truth and the reality of these moments cannot be disputed - and neither should their significance be overlooked or diminished. These shipboard manifestations of globalisation are paralleled by the attempts of international organisations like the IMO and the ILO and the various international associations of shipowners, trade unions, maritime administrations and so on to develop effective means of achieving and then sustaining global standards of good practice. This is still a search, this quest for universally applicable standards. And like all searches for workable consensus’s it inevitably has its peaks, troughs and plateaux. However, a lot of progress has been made.

The new IMO convention, STCW95 and its accompanying ‘white list’ are significant developments and so, too, is the ISM code. Last year we saw the ISF and the ITF setting up international collective bargaining machinery and this year the Joint Maritime Commission at the ILO unanimously agreed to consolidate existing conventions in the interests of greater effectiveness. Wherever you look there is a lot of movement toward stabilising the labour market by setting global standards through networked global institutions. But one of the problems faced by everyone involved
in this process is the scarcity of reliable data relevant to the policy-making process. Of course in SIRC we are pleased to have produced the book-length background paper for this years Joint Maritime Commission. We are also pleased to have produced an even longer report for the IMO on fraudulent certification practices and contributed to the formal safety assessment of bulk carriers being carried out by the UK’s Maritime and Coastguard Agency. We have built up a lot of expertise and we’ll keep pushing that forward but all shipping industry constituencies will benefit from a more organised approach to the systematic generation of policy-relevant knowledge. Research of the sort we do is not especially expensive and better funding arrangements to encourage the development of perhaps three or four networked but independent Centres located in different world regions, could prove critical to furthering the development of coherent policies aimed at ensuring that the world’s ships are crewed by highly motivated and highly skilled seafarers in all ranks.
OFFSHORE FATIGUE: A STUDY OF SHIPS IN THE OFFSHORE OIL INDUSTRY

Andy Smith
Director, Centre for Occupational and Health Psychology

SUMMARY

The present paper reviews findings from a project on fatigue in ships working in the offshore oil industry. The results show that long working hours, varying shift patterns, reduced manning and problems with motion and noise are often present. These factors are often associated with perceptions of reduced safety. A review of the literature and analyses of accident data show that we have little knowledge of the extent to which the potential for fatigue leads to reduced safety. Initial analyses of onboard measures of performance, alertness and sleep suggest that fatigue offshore is not a general problem present at all times in all personnel. However, certain job characteristics, such as working at night, are associated with reduced alertness and impaired performance. Further research is now required to determine whether this view holds up across a range of ship types. In addition, it is essential to examine situations where combinations of potentially harmful factors are present for at the moment we may have information about “best practice” rather than the “worse case” scenario.

BACKGROUND

Global concern with the extent of seafarer fatigue is widely evident everywhere in the shipping industry. Maritime regulators, ship owners, trade unions and P&I clubs are all alert to the fact that in some ship types, a combination of minimal manning, sequences of rapid turnarounds and short sea passages, adverse weather and traffic conditions, may find seafarers working long hours and with insufficient recuperative rest. A long history of research into working hours and conditions and their performance effects in manufacturing and process industries as well as in road transport and civil aviation has
no parallel in commercial shipping. Given the absence of research on seafarer fatigue we are carrying out a research programme which generally aims to:

- Predict worst case scenarios for fatigue, health and injury
- Develop best practice recommendations appropriate to ship type and trade
- Produce advice packages for seafarers, regulators and policy makers

Specifically, the programme aims to provide advice on:

- Incidence and effect of fatigue in terms of specific ship types and voyage cycles
- Optimal shift patterns and duty tours to minimise fatigue
- Identification of at risk individuals and factors which affect fatigue/quality of rest
- Significance of patterns of work and rest, and patterns of health and injury, in terms of seeking to improve health and safety of seafarers on board ship
- Suggested ameliorative/preventative procedures for minimising the effects of fatigue
- Appropriate guidance for seafarers on fatigue avoidance

The research involves field studies using a battery of techniques to explore variations in fatigue and health as a function of the voyage cycle, crew composition, watchkeeping patterns and the working environment. The methods used include:

- A review of the literature
- A questionnaire survey of working and rest hours, physical and mental health
- Physiological assays assessing fatigue, rhythm adjustment and cardiovascular risk
- Instrument recordings of sleep quality, ship motion, and noise
- Self-report diaries recording sleep quality and work patterns
- Objective assessments and subjective ratings of mental functioning
- Analysis of accident and injury data

The present project

The present project has operationalised the central themes of the programme so that they can be applied to specific issues of current concern (see Smith & Lane, 2001). This involves studies of shipping engaged in offshore oil support and exploration (shuttle tankers, offshore supply vessels, anchor handlers, daughter craft and diving support vessels). Our interest in this sector comes in part from recent research by SIRC which has analysed mortality data and found supply vessels’ masters at risk
from cardio-vascular diseases. Fatigue on oil platforms is currently being investigated in a parallel project supported by the Health & Safety Executive, and this allows comparison between the ships and the offshore installations.

The next section considers whether fatigue-related factors are present in our study population.

The NUMAST survey
The current survey was designed to provide information on aspects of the offshore working environment that may influence fatigue, performance efficiency and health. Details of the survey are given in Cole-Davies (2001) and McNamara (2001). The questionnaire was sent to 1600 members of NUMAST working in offshore oil and 563 questionnaires were returned. The mean age of the sample was 43.8 years (s.d. 9.6) and 79% were marine officers.

Working hours and shifts
Over 50% reported that they worked in excess of 85 hours per week. 66.9% worked for a tour of 4 weeks and most worked fixed shifts (84.4%) both during and between tours of duty. The three most common shifts were 12 hours on/12 off (41.4%). 6 hours on/6 off (22.4%) and 4 hours on/8 off (18.1%).

These results confirm that these seafarers work long hours and have shift patterns which may lead to fatigue.

Sleep
Nearly a quarter of the sample (24%) reported that they had difficulty falling asleep and 44.6% reported that they often woke during sleep. Noise often disturbed sleep (36.6%) as did motion (44.9%). Split sleep periods were also common (45.6%).

Overall, these confirm that problems with sleep are common in this sample.

Reduced manning and other problems
One of the questions asked about measures to reduce fatigue. 66.1% reported that extra manning was necessary; 32.8% stated that more leave was desirable; and 53.5% suggested that there should be less paperwork.
The next section considers the extent to which the above working practices are related to perceptions of reduced safety and to time to adjust to onshore leave (a major concern of the respondents).

Perceptions of safety, working hours and sleep

1. Working hours
   Long working hours were significantly associated with increases in perceived job stress, reduced safety, poor concentration, fatigue and number of fatigue-related incidents experienced. In addition, those working the longest hours experienced more problems adjusting to onshore leave.

2. Shifts
   Those working 12 hour shifts were more likely to report problems adjusting to leave. Those working 6 hour shifts reported more problems sleeping.

3. Sleep
   Poor sleep was significantly associated with perceptions of compromised safety and increases in physical and mental fatigue.

Measures of health

Despite the presence of many factors which lead to fatigue the seafarers generally reported good physical and mental health. Sick leave was very low (91% reported no sick leave in the last 12 months compared to only 39% of an onshore sample) and scores from well established measures of mental and physical health (e.g. the GHQ, SF-36) showed little indication of impaired health. Similarly, use of medication was very low (29.6% of seafarers use OTC medication compared to 73.1% of onshore workers who report regular use of analgesics alone). Use of medication offshore was associated with more fatigue related incidents and problems adjusting to leave.

ACCIDENTS AND ERRORS

The incidence of accidents requiring medical attention was higher than that observed in onshore groups (3% of the seafarers reported an accident in the last 3 months). This higher incidence may reflect the general working environment. Indeed, standard measures of the frequency of human error (e.g. the cognitive failures questionnaire) show no differences between offshore and onshore groups.
A COMPARISON WITH THE EXISTING LITERATURE AND OTHER DATABASES

Fatigue, health and injury among seafarers: an overview of the literature

Collins, Matthews and McNama ra (2000) have reviewed the existing literature on fatigue, health and injury among seafarers. This review shows that while there is substantial documentation on the potentially disastrous consequences of fatigue at sea, there is little hard evidence of such effects, especially in offshore oil support-sea shipping. Brown (1989) reviewed the literature on hours of work, fatigue and safety at sea and while he found little objective evidence of the effects of fatigue, he did find substantial reporting of personal experiences of fatigue. These reflected long periods of continuous duty, limited opportunities for sleep and rest and poor organisation of duty, rest and sleep periods within the 24-hour cycle. Changes in the working practices of seafarers may also contribute to health and safety problems (Parker et al., 1995; Pollard et al., 1990).

Research on fatigue and accidents at sea is limited. This largely reflects accident reporting systems which provide little information on the presence or absence of fatigue-related factors. A few recent studies have attempted to resolve such problems and provide the strongest evidence for a link between accidents at sea and fatigue. Raby and McCallum (1997) found that hours on duty and hours worked in the last 3 days were associated with accidents that could be attributed to fatigue. Phillips (1998) found fatigue to be a contributory factor in only 8% of collisions and groundings. However, this may reflect the lack of usage of the term fatigue in the incident reports. A more detailed analysis found that behaviours consistent with fatigue were more frequently described in the reports (e.g. attentional failures, perceptual limitations, and failures to act appropriately). Research on performance efficiency and human error at sea is almost non-existent. What research there has been suggests that factors known to influence performance onshore (e.g. time of day) also have effects offshore. Motion may also influence performance although less is known about motion and cognition than about the peripheral fatigue produced in moving environments (Smith, 2001). Although the literature on fatigue and accidents at sea is inconclusive, it is clearly the case that excessive hours are worked on ships (Wigmore, 1989; NUMAST, 1990; and Sanquist et al., 1996). Reduced sleep at sea is also frequently reported (Sanquist et al.,
1996), although the quality of sleep need not be reduced (Parker et al., 1997; Reyner & Baulk, 1998). Indeed, the major factors influencing sleep at sea appear to be shift type, noise (especially alarms) and bad weather. There is little evidence of cumulative effects of fatigue, with several studies showing no decline in alertness with length of tour of duty (Torsvall et al., 1987; Donderi et al., 1995).

Other research has investigated the associations between fatigue and health in seafarers. These results suggest that different findings emerge depending on whether one considers physical or mental health. For example, Parker et al. (1997) found that seafarers reported more physical health problems but appeared to be more psychologically robust than the onshore groups studied. Indeed, mental health problems in seafarers were restricted to those who were working the longest hours. Other research by Parker et al. (1998a,b) has shown that Great Barrier Reef pilots reported good health and little fatigue but that their health-related behaviours and physiological state indicated potential problems (e.g. 30% were smokers; 56% categorised as obese).

Overall, the existing literature confirms our finding that hours of work are a problem offshore. There is little evidence of associations between fatigue and accidents offshore and the next section considers an analysis of two accident databases.

**Fatigue and accidents in short-sea shipping**

We have analysed two datasets containing accident-related information (see McNamara, Collins & Cole-Davies, 2001). Dataset 1 consisted of records obtained from a multinational oil company, and dataset 2 was provided by the MCA and covered incidents reported to the MAIB. Both datasets included incidents occurring between 1989-1999. Both datasets gave details of injuries incurred by personnel working on offshore oil support vessels. Unfortunately however, the datasets did not include identical information; dataset 1 was primarily concerned with relatively minor injuries, whereas dataset 2 dealt mainly with major injuries.

Some modifications were made to each dataset in order that only personnel working on merchant vessels were included in the analyses. Dataset 1 was modified to exclude
all personnel working on installations, and in dataset 2, incidents occurring aboard fishing and passenger vessels were excluded.

There were however, a number of problems inherent within both datasets. Largely as a result of inadequacies in original incident reporting systems, it was not possible to gain estimates of exposure rates, and large amounts of potentially useful data about temporal and injury severity variables were defined as missing (see Table 1).

### Table 1: Percentage of Missing Data

<table>
<thead>
<tr>
<th>Variable</th>
<th>Dataset 1 (n=7169)</th>
<th>Dataset 2 (n=4145)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Injury severity</td>
<td>84.0%</td>
<td>43.5%</td>
</tr>
<tr>
<td>Hours into shift</td>
<td>87.9%</td>
<td>70.5%</td>
</tr>
<tr>
<td>Hour of accident</td>
<td>28.4%</td>
<td>49.9%</td>
</tr>
<tr>
<td>Days into tour</td>
<td>86.6%</td>
<td>99.5%</td>
</tr>
<tr>
<td>Sea state</td>
<td>44.9%</td>
<td>73.3%</td>
</tr>
<tr>
<td>Accident type</td>
<td>n/a</td>
<td>47.7%</td>
</tr>
<tr>
<td>Injury type</td>
<td>84.1%</td>
<td>63.4%</td>
</tr>
</tbody>
</table>

**Dataset 1**

Age of crewmembers in dataset 1 ranged from 18 to 67 years, with the highest incident rate occurring in those aged 34-44 years (50%). Recorded injuries extended over 108 different occupations. Contractors accounted for the greatest number of injured workers (27.7%) followed by marine personnel (23%).

The most common incident area was the open deck (accounting for 53.8% of total accidents). With regards to body part, arms were the most frequently injured (34.6% of incidents) followed by legs (20% of total incidents).

**Dataset 2**

Accidents were most frequent in the 30-50 age group (56.8% of the total). 56.6% of the sample consisted of ratings, 35.3% of masters/cadets/officers, and just 8.2% of catering staff/stewards. One-third (33.4%) of the accidents reported in dataset 2 were classified as collisions/contacts, 25.5% as strandings/groundings and 22.9% as machinery faults. 29.3% of incidents were classified as slips/trips or falls.
**Accident Distribution as a Function of Time of Day and Hours into Shift**
The majority of incidents were found to occur between the hours of 09:00-16:00, an effect found to be independent of whether personnel were on or off duty. Incident frequency was significantly greater during the first four hours of a shift. Although time of day effects were evident from these analyses, they do not correspond to natural troughs in circadian rhythms.

**Accident Distribution as a Function of Days into Tour**
Accident frequency was found to be greatest at the beginning of a tour, specifically during the first tour week, and then declined steadily over the course of a tour. Again, when examined in terms of on and off-duty incidents, the same pattern was evident for both groups.

**Accident Distribution as a Function of Sea State**
Accident distribution was found to differ significantly as a function of sea state. More specifically, a greater proportion of incidents occur in calm conditions (i.e. low – moderate wind force, and calm seas). This finding may simply be a reflection of work patterns: in other words, it is more than likely that a greater proportion of personnel are exposed to potential incidents in calm conditions, as they are more likely to be working in situations offering risk.

**Injury Severity and Accident and Injury Type**
Re-analysis of temporal and environmental variables in terms of injury severity and incident type provided no further information on the possible role of fatigue in accident causation.

In summary, these results have replicated some previous findings: for example, Jeong (1999) found the greatest number of accidents to occur in the first 2 hours of the day shift and Forbes (1997) demonstrated that there are significantly more injuries during the first seven days of a tour. Other findings, such as accidents being more likely to occur at night (Williamson & Feyer: 1995) have not been replicated. Other issues, such as variation in injury severity as a function of time into shift, could not be examined due to inadequacies inherent within reporting systems.
It is important to acknowledge that the absence of a link between accidents and fatigue indicated by these results does not mean that fatigue has no impact: rather that it is not possible to determine any relationship from data of this type. Information regarding days into tour and hour into shift was often missing, and no exposure rate information was available. Therefore, if the role of fatigue in accident causation is to be accurately estimated, it is vital that reporting systems are standardised across the industry and information relating to days into tour, hours into shift, injury severity and exposure levels is recorded. This view agrees with the recommendation put forward by Brown (1989).

The next section covers some onboard data collection.

**ASSESSMENT OF FATIGUE ONBOARD SHIP**

In this part of the research we have assessed fatigue onboard ship using a variety of objective indicators and subjective reports. The objective measures have included:

- Sleep recording using actimeters
- Measurement of salivary cortisol (a good indicator of stress and fatigue)
- Reaction times, errors and lapses of attention (before and after work).

Subjective reports of alertness, hedonic tone (happiness, sociability) and anxiety have been recorded before starting and after completing work. Logs have been completed providing information on sleep patterns, workload and alertness.

Data has been collected from over 150 volunteers from 7 different ships. Analysis of this data is still in progress but a number of conclusions can be drawn from the initial findings. The first analyses compared the offshore group with 113 onshore workers (performance/subjective mood). Similarly, sleep from 94 onshore volunteers was compared with the offshore group. Cortisol levels before and after work are also presented.

**A comparison between offshore and onshore samples**

**Sleep**

Actimeters were used to record one night’s sleep in both the onshore and offshore groups. Table 2 shows that the duration of sleep offshore is slightly shorter for the
seafarers. Other aspects of sleep show no differences between the groups. This suggests that global statements about the sleep of seafarers may be inappropriate – one needs to consider factors such as the nature of the shift worked.

Table 2: Comparison of offshore and onshore samples
(Scores are the means, s.d.s in parentheses)

<table>
<thead>
<tr>
<th></th>
<th>Onshore (N = 94)</th>
<th>Offshore (N = 90)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duration (hours)</td>
<td>7.14 (1.3)</td>
<td>6.50 (1.3)</td>
</tr>
<tr>
<td>% Actual sleep</td>
<td>91.1 (5.3)</td>
<td>90.3 (3.63)</td>
</tr>
<tr>
<td>% Immobile</td>
<td>90.4 (5.57)</td>
<td>91.0 (3.29)</td>
</tr>
<tr>
<td>% Sleep efficiency</td>
<td>89.3 (6.77)</td>
<td>88.6 (4.63)</td>
</tr>
</tbody>
</table>

Subjective alertness
Visual analogue scales were used to assess alertness both before and after work. Table 3 shows that the seafarers did not differ from the onshore group.

Table 3: Alertness, simple reaction time, lapses of attention: Comparison of offshore and onshore samples
(Scores are the means, s.d.s in parentheses)

<table>
<thead>
<tr>
<th></th>
<th>Onshore (N = 113)</th>
<th>Offshore (N = 162)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alertness¹:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Before work</td>
<td>245 (67)</td>
<td>260 (69)</td>
</tr>
<tr>
<td>After work</td>
<td>257 (55)</td>
<td>261 (66)</td>
</tr>
<tr>
<td>Simple RT: (msecs)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Before work</td>
<td>313 (48)</td>
<td>316 (62)</td>
</tr>
<tr>
<td>After work</td>
<td>325 (61)</td>
<td>322 (69)</td>
</tr>
<tr>
<td>Long responses:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Before work</td>
<td>3.8 (8.9)</td>
<td>4.6 (10.1)</td>
</tr>
<tr>
<td>After work</td>
<td>2.7 (7.1)</td>
<td>3.5 (9.0)</td>
</tr>
</tbody>
</table>

¹ High Scores = more alert
Performance
Speed of responding was assessed using a simple reaction time task. Lapses of attention were measured using a focussed attention task. Both tasks were completed before and after work. Table 3 shows there were no differences between the seafarers and the onshore group.

Cortisol
Salivary cortisol assays were carried out on pre- and post work samples from 50 volunteers. These were compared with samples from 42 onshore workers. The offshore sample showed a much smaller difference between pre and post work levels (means : 7.1 and 5.7 nmol) than the onshore group (means: 9.8 and 5.9 nmol) which probably reflects the greater incidence of shiftwork offshore.

The above results show that a single assessment will not show large differences between seafarers and those working onshore. In a second series of analyses we have examined these measures on two days one week apart. Generally, performance and mood appears to be consistent over time suggesting that the absence of effects in the above analyses does not reflect the fact that only a single day was sampled.

The absence of effects in the above analyses should not be taken to mean that the methodology is insensitive to the nature of the job. In a study conducted on offshore installations we have shown that performance and alertness are reduced after a 12-hour night shift for the first few days of the tour. After this pre and post-work differences largely disappear suggesting that adaptation has occurred. The next section examines the effect of nightwork in the present sample to determine whether similar effects are apparent.

The offshore sample: working hours, days into tour and occupation
In the following analyses sleep, alertness and performance were considered as a function of shift, days into the tour and occupation (marine versus non-marine crew). Occupation had little effect with no obvious differences being apparent between marine and non-marine crew (although a more detailed classification of jobs is clearly still required). Nightwork was associated with lower alertness and slower reaction times after work (see Table 4).
### Table 4: Effects of shift on alertness and reaction time
*(Scores are means, s.d.s in parentheses)*

<table>
<thead>
<tr>
<th></th>
<th>Day Shift (12 hours)</th>
<th>Night Shift (12 hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(N = 49)</td>
<td>(N = 22)</td>
</tr>
<tr>
<td><strong>Alertness:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Before work</td>
<td>248 (70)</td>
<td>252 (60)</td>
</tr>
<tr>
<td>After work</td>
<td>257 (61)</td>
<td>219 (60)</td>
</tr>
<tr>
<td><strong>Choice reaction time:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(msecs)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Before work</td>
<td>487 (75)</td>
<td>487 (73)</td>
</tr>
<tr>
<td>After work</td>
<td>463 (68)</td>
<td>492 (93)</td>
</tr>
</tbody>
</table>

Days into tour interacted with nightwork and the results confirmed our previous research showing that those doing nightwork at the start of a tour are most likely to have impaired performance, especially at the end of the shift (see Table 5).

### Table 5: Effects of days into tour in night workers doing 12 hour shifts *(Scores are the means, s.d.s in parentheses)*

<table>
<thead>
<tr>
<th></th>
<th>Less than 5 days into tour</th>
<th>More than 5 days</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(mean length = 3 days)</td>
<td>(mean length = 18 days)</td>
</tr>
<tr>
<td><strong>Choice reaction time:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(msecs)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Before work</td>
<td>471 (75)</td>
<td>492 (78)</td>
</tr>
<tr>
<td>After work</td>
<td>494 (97)</td>
<td>478 (99)</td>
</tr>
<tr>
<td><strong>Percentage of errors:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Before work</td>
<td>5.6 (3.3)</td>
<td>2.5 (2.6)</td>
</tr>
<tr>
<td>After work</td>
<td>7.2 (5.9)</td>
<td>2.7 (3.0)</td>
</tr>
</tbody>
</table>

## CONCLUSIONS

The present project has aimed to determine the nature and extent of fatigue in seafarers on ships involved with the offshore oil industry. A review of the literature showed that there is little information on this topic and we have found that analyses of accident data do not clarify the impact of fatigue. A survey of fatigue offshore
suggests that it is selective, and may reflecting working practices such as the hours worked and the duty shifts. This view is confirmed by our initial analyses of data collected onboard ship. It is quite likely that we have been studying ships that adopt “best practice” and we have little information on the impact of combinations of factors that may lead to greater fatigue. Future research must consider a wider range of situations and ships as single snapshots may not reflect what can occur. The variation in life onboard ship can be clearly seen from the following quote:

“The life of a shipmaster has been described as hours of boredom punctuated by moments of terror” (Lowell, 1998).

At the moment we know little about either of the extreme conditions that may be the major causes of fatigue. An extended programme of research is now necessary to develop our knowledge of seafarers fatigue so that informed decisions about working practices can be made.

ACKNOWLEDGEMENT

The research described in this article was supported by the MCA, HSE, NUMAST and SIRC. The data collection and analyses have been carried out by Rachel McNamara, Alison Collins, Victoria Cole-Davies, Neil Ellis, Geoff Boerne and Jo Beale. The research would not have been possible without the support of the companies who have allowed us access to their ships and the participation of their employees.

REFERENCES


PART ONE

Today we are going to talk about the findings from a shipboard based study of mixed nationality crews which is a part of an ongoing 3 year research project. Although we have another 6 months until the completion of the study, the fieldwork for this Economic and Social Research Council funded study is almost complete.

The project involves 4 sets of integrated case studies:

1) Interviews with key informants in shipowner/management companies.
2) Expatriate seafarer community studies in Holland and Northern Germany.
3) Seafarer families in India and the Philippines.
4) Onboard case studies.

I would like to comment briefly on these case studies.

**Interviews with key informants in shipowner and ship management companies:**

The interviews with the key informants in shipowner and ship management companies are in progress and so far they have been conducted in Singapore, the Philippines, Germany, the Isle of Man, London, and Glasgow. We are also in the process of organising further interviews in other world regions.

The main focus of interviews include:
• What criteria are utilised in selecting the nationality of crew?
• What are the procedures for monitoring shipboard crew relations?
• Which elements of crew costs are most tightly controlled?
• Does the company have any preferred crew nationality ‘blends’?
• What are the positive and negative aspects of multinational crews?

One of the interesting patterns emerging from the interviews so far is that the companies closely assess the various aspects of the performance of individual seafarers onboard their ships, however there is no formal assessment procedure of mixed nationality crews as a whole.

Expatriate seafarer communities:

Historically hub ports around the world have played an important role in the recruitment of seafarers. However, over the last two decades seafarer labour markets have been very substantially re-formed and re-shaped by the globalisation of the shipping industry. Today, one of the main distinctive features of the global labour market for seafarers is that it is highly organised through extensive networks linking ship owners, ship managers, crewing agencies and training institutions. This linkage results in the periodic movement of crews from their homelands to ships in foreign ports. The once common practice of seafarers choosing their ships and employers has almost disappeared. However, there are still expatriate seafarer communities from developing countries living on the edge of legality in the Northern hemisphere’s hub ports. These seafarers are mainly ‘directly hired’ and usually are substitutes for deserted, deceased or sick crew members. They are also employed aboard small ships involved in coastal and near sea trades.

The research among expatriate seafarer communities was conducted in Northern Germany (Hamburg) and in Holland (Rotterdam and Amsterdam). Over 120 in-depth interviews were conducted with active and ex-seafarers. The main nationalities interviewed were Filipino, Ghanaian and Indonesian in Holland and Cape Verdian and
Filipino in Germany. These marginal seafarer communities live a complicated cultural existence. When ashore on leave they live in a foreign country, when they are at sea they live in a transnational community but in both these contexts they retain and sustain economic and cultural ties with their homelands. The other main characteristic of these communities is that they extensively use their informal networks (relatives, friends) in order to access the seafaring labour market.

**Seafarer families in India and the Philippines:**

As part of the transnational communities programme we have been looking at the lives of Filipino and Indian seafaring families. Researchers spent four months with these families in India and the Philippines - where Helen and myself conducted more than 130 detailed interviews and set up focus groups. The study was an in depth look at how families were affected, socially and financially, by their absent menfolk.

Our study covered all aspects of family life. Entry into the global seafaring labour market brings these families economic opportunities that would be hard to find within their own society. But the social cost of these economic opportunities is disturbing.

Seafarers spend 80 per cent of their time away from their families. Their wives, who often have to give up professional careers to shoulder the responsibility, learn to become, in their own words, “both mother and father” to their children. The children, meanwhile, envy "normal" two-parent families and grow up with few memories of a father.

**Onboard case studies**

Onboard case studies have been conducted aboard mixed nationally crewed ships. Mixed nationality crews are hardly a new phenomenon but what makes the modern mixed nationality crew distinctive is the extent to which it is consciously composed. Since the beginning of the development of substantial seaborne international trade some 500 years ago, mixed nationality crews have been common and in some periods became the norm.
A recent study of the crews of Spanish merchant ships in the C16th – *Spain’s Men of the Sea* – shows crews where Spaniards rarely provided much more than half of the complements. However, the apparent symmetry between today and times past is in critical respects, misleading.

In today’s shipping industry crew members of different ranks are commonly recruited from different world regions through networks of agencies and then flown across the world for subsequent assembly aboard ship. Whatever the reasons are – de-regulation, market fluctuations in the industry, shortage of skilled labour, employment costs etc. - the modern seafarer commonly sails in ships with multicultural crews whose cultural/nationality mix may vary from year to year even from one voyage to the next.

The *1998-99 SIRC Crew Survey* estimates that the total number of seafarers at sea aboard ships was 934,000 persons. The more recent SIRC Survey based on the analyses of over 10,000 crew lists also shows the extent of the multi-national crewing pattern. As can be
seen from Figure 1, only one third of ships in the survey group were crewed with single nationality crews. Approximately one quarter of ships had four or more nationalities in their crews.

The SIRC Survey shows us the extent of multinational crewing patterns however, what has not been studied previously in any detail is how mixed-nationality crews function as miniature societies. Indeed there have been no detailed and systematic studies of the life and work of modern seafarers. Our study contributes in a significant way to both these research areas and Helen is going to talk about some of the major findings from the onboard part of our study.

However, before that I would like to give some brief information concerning the ships we have been onboard.

On board case studies have been enabled by the co-operation of 11 shipping groups in various world regions. As can be seen from Table 1, over a two year period 14 on board case studies have been completed and only one voyage remains to be concluded; in total there will be 15 onboard studies.

Researchers in total spent 289 days onboard of ships. The average time spent by researchers on board is 3 weeks. Typically researchers kept diaries on the everyday working and social life onboard, conducted in-depth interviews with seafarers and organised focus group discussions.
Table 1: Ships Included in the Research

<table>
<thead>
<tr>
<th>Ship</th>
<th>Ship Type</th>
<th>Ship Size (dwt/TEU)</th>
<th>Crew Size</th>
<th>Number of Nationalities Onboard</th>
<th>Days Spent Onboard</th>
<th>Route</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Container</td>
<td>1400 TEU</td>
<td>17</td>
<td>3</td>
<td>17</td>
<td>Liverpool Mediterranean</td>
</tr>
<tr>
<td>2</td>
<td>Ro-Ro</td>
<td>11,000</td>
<td>36</td>
<td>4</td>
<td>34</td>
<td>Le Havre West Africa Rotterdam</td>
</tr>
<tr>
<td>3</td>
<td>Reefer</td>
<td>15,000</td>
<td>26</td>
<td>2</td>
<td>42</td>
<td>Europe Latin America Europe</td>
</tr>
<tr>
<td>4</td>
<td>Oil Tanker</td>
<td>VLCC</td>
<td>37</td>
<td>3</td>
<td>30</td>
<td>Gulf Philippines</td>
</tr>
<tr>
<td>5</td>
<td>Bulk Carrier</td>
<td>1,500</td>
<td>7</td>
<td>3</td>
<td>14</td>
<td>W. Europe</td>
</tr>
<tr>
<td>6</td>
<td>Gas Carrier</td>
<td>72,000</td>
<td>29</td>
<td>4</td>
<td>26</td>
<td>Gulf S. E. Asia</td>
</tr>
<tr>
<td>7</td>
<td>Bulk Carrier</td>
<td>31,000</td>
<td>26</td>
<td>3</td>
<td>21</td>
<td>Santos Sheerness</td>
</tr>
<tr>
<td>8</td>
<td>Car Carrier</td>
<td>26,000</td>
<td>26</td>
<td>3</td>
<td>12</td>
<td>W. Europe</td>
</tr>
<tr>
<td>9</td>
<td>Oil Tanker</td>
<td>99,000</td>
<td>25</td>
<td>6</td>
<td>21</td>
<td>Norway Canada</td>
</tr>
<tr>
<td>10</td>
<td>Oil Tanker</td>
<td>25,000</td>
<td>34</td>
<td>5</td>
<td>14</td>
<td>Kuwait India</td>
</tr>
<tr>
<td>11</td>
<td>Reefer</td>
<td>17,000</td>
<td>25</td>
<td>4</td>
<td>16</td>
<td>W. Europe S. America</td>
</tr>
<tr>
<td>12</td>
<td>Bulk Carrier</td>
<td>2,000</td>
<td>7</td>
<td>6</td>
<td>12</td>
<td>W. Europe</td>
</tr>
<tr>
<td>13</td>
<td>General Cargo</td>
<td>40,000</td>
<td>29</td>
<td>14</td>
<td>12</td>
<td>India Egypt</td>
</tr>
<tr>
<td>14</td>
<td>Oil Tanker</td>
<td>32,000</td>
<td>26</td>
<td>5</td>
<td>18</td>
<td>N. America C. America</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>-</td>
<td>-</td>
<td>350</td>
<td>-</td>
<td>289</td>
<td>-</td>
</tr>
</tbody>
</table>
The 14 ships we have been onboard so far show good variety in terms of ship types, nationality composition, manning levels, trading regions, voyage cycles and tonnage and age of the ships.

In terms of ship types we have been onboard of reefer, general cargo, LNG carrier, VLCC, product tanker, freight and ro-ro ship, car carrier, container carrier, dry bulk and container and general cargo ship.

The ships we have been onboard altogether had 31 different nationalities and Table 2 shows the details of these nationalities

**Table 2: Nationalities within the research frame**

<table>
<thead>
<tr>
<th>NATIONALITIES</th>
<th>NATIONALITIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filipino: 128</td>
<td>Maldivian: 3</td>
</tr>
<tr>
<td>Indian: 48</td>
<td>Kuwaiti: 3</td>
</tr>
<tr>
<td>British: 38</td>
<td>Turkish: 3</td>
</tr>
<tr>
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<td>Irish: 3</td>
</tr>
<tr>
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<td>Canadian: 2</td>
</tr>
<tr>
<td>Chilian: 9</td>
<td>Lithuanian: 2</td>
</tr>
<tr>
<td>Polish: 9</td>
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<tr>
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</tr>
<tr>
<td>Swedish: 8</td>
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<td>French: 1</td>
</tr>
<tr>
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<td>Maltese: 1</td>
</tr>
<tr>
<td>Cape Verdian: 5</td>
<td>Qatari: 1</td>
</tr>
<tr>
<td>Croatian: 5</td>
<td>Tanzanian: 1</td>
</tr>
<tr>
<td>Srilankan: 4</td>
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</tbody>
</table>

Out of total 350 seafarers only 3 were women. In-depth interviews were conducted with 258 seafarers totalling 90 per cent of these. The length of the interviews varied from approximately 45 minutes to 3 hours.

Crewing levels varied according to the size and the type of the ship however, a 3,000 grt dry bulk carrier had 7 crew members where as a VLCC had 37.
The trading regions of the ships involved are West Africa, Latin America, South East Asia, Middle East, Western Europe, Indian Ocean and the Mediterranean Sea.

Voyage cycles also show varieties ranging from:

- Deep-sea crossing and one or two port calls;
- Deep-sea crossing and intense port calls;
- Mediterranean Sea and intense port calls;
- Short-sea crossing and intense port calls.

The youngest ship we have been onboard was two years old and the oldest one 24.

The next part of the presentation will focus on the findings from the shipboard based study of mixed nationality crews with specific reference to communication, teamwork, power and discrimination and social isolation.

**PART TWO**

In the course of the research a number of issues have emerged that are likely to be of specific interest with regard to the functioning of multi-national/multi-ethnic crews. Amongst these are issues of communication, teamwork, power and discrimination, and social isolation.

**Communication**

Whilst researchers and the shipping community have mainly focussed on the importance of English in emergency situations, and for ship-shore communication, fluency in English has far greater significance than this for seafarers and, indirectly, for the safe operation of multinationally crewed vessels. Efforts have been made to simplify VHF radio and GMDSS messages to the extent of introducing a special approved vocabulary (Standard Marine Communication Phrases) (IMO 1997) however such efforts have not tended to be
mirrored in terms of improving the level of general English proficiency among seafarers. This is a serious omission given the need for safely run ships to operate with crews that function as societies (Lane 1996) rather than as a series of disconnected and perhaps disparate groupings. Within these societies good communication skills are required to carry out tasks, to operate socially avoiding creating unintended offence, and crucially to effectively engage in humour. The social side of shipboard interaction is frequently neglected by those institutions and organisations concerned with health and safety but interaction of this kind is critical to the maintenance of good shipboard morale which in turn impacts on the safe operation of vessels.

**On many of the vessels included in the research, the stated common working language (English) was a second language for everyone on board (see Table 3).**

**Table 3: Native speakers on board case study vessels**

<table>
<thead>
<tr>
<th>Ship</th>
<th>Number of nationalities</th>
<th>Number of English ‘native’ speakers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>4</td>
<td>7/36</td>
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<tr>
<td>3</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>4</td>
<td>3</td>
<td>14/37</td>
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<tr>
<td>5</td>
<td>3</td>
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<tr>
<td>6</td>
<td>4</td>
<td>14/29</td>
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<tr>
<td>7</td>
<td>3</td>
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</tr>
<tr>
<td>8</td>
<td>3</td>
<td>0</td>
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<td>6</td>
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<td>10</td>
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<td>2/34</td>
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<td>11</td>
<td>4</td>
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<tr>
<td>14</td>
<td>5</td>
<td>0</td>
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</tbody>
</table>
Seafarers frequently suggested that communication difficulties were the only, or the main, drawback of mixed nationality crews. One seafarer expressed a fairly typical view when he described how the benefits of working with other nationalities related to exposure to other cultures but the negative side related to communication difficulties.

Q  What are the good things, if any, about working with different nationalities?
A  *You learn different kinds of customs.*

Q  Are there bad things about it?
A  *No. Well, some of the guys don't really speak good English, and you can't understand them. But that's the only thing. Otherwise nothing.*

Q  So just language?
A  *Yes. Like Latin Americans, some don't really speak good English, and you can't understand what they're talking about.*  

*(Filipino 2nd engineer)*

Sometimes miscommunication caused problems when working together and undertaking job-related tasks. Such situations ranged from the merely irritating to the potentially hazardous. Irritations could relate to misunderstandings such as being unable to convey which tools were required for a particular job, or the way it should be carried out. For example a carpenter described how he struggled when he first became a ship’s carpenter because he had no idea what the various tools were called in English. He explained:

…the first time when I was on board …It's quite hard. You don't know the names for things, and the tools. In English. That's why we use Tagalog. So it's very hard. So I ask some other guys, 'What's the name of this?' …… Sometimes we have more problems with the English. Some other guys may use other terms. So you have to discuss it, how it is done. They can tell you to do this, and you do something else. That is a problem sometimes. A misunderstanding.

*(Filipino Carpenter)*
Whether merely irritating or actually hazardous, problems (on the ships observed in the TNC study) tended to be exacerbated by the unwillingness of individuals to admit to their difficulty in understanding or communicating. The working culture of most ships may not help here. Senior officers exercise a considerable amount of power over juniors and even more over ratings. Closed reporting systems and practices of ‘blacklisting’ seafarers combine to create a certain amount of fear amongst all but the most senior ranking and most are consequently afraid to be seen as less than competent in any aspect of their job including fluency in English.

Communication and risk

Occasionally incidents were observed which might have had serious consequences. A lifeboat drill aboard one ship was prolonged and greatly complicated by the inability of a Filipino Messman and an Indian 3rd Officer to comprehend the instructions of the Indian Captain who was shouting down to them in English from the deck. The Messman came close to hurting his hand when trying to operate a lever with which he was unfamiliar but it was clear that all personnel in the lifeboat were fortunate to escape unscathed. A field-note describes the action:

**Day 10 – notes after a lifeboat drill**

The third officer was in charge and there were a lot of things which did not go to plan. However after twenty minutes [suspended over the water] we were on the water (having free-fallen about three feet). We did a brief ‘tour’ and then returned to the ship. The engine was stopped and people believed we were going back up but then the Captain said we should go again and a ball was thrown from the ship for ‘man overboard’ practice. The engine would not start again and the Fourth Engineer and the Fitter set to work on it. In the meantime the Captain instructed us to try the release for the lifeboat again and a lot of time was spent practising locking the cables back onto the boat. J (Filipino Messman) was asked to pull the lever for the cable release/lock and there was a lot of confusion between the Captain (who remained ‘supervising’ from the ship), the Third Officer, and J. J had no idea what he was supposed to be doing and the Third Officer was doing his best to follow the Captain’s instructions. ...My conclusion was that in a real emergency the boat would have sunk and the ‘man’ overboard drowned!

(Sampson field-notes)
Miscommunication with shore-side personnel could also be potentially dangerous. A Filipino described how poor communication between a tug operator and the Pilot or Master of one of his ships had almost resulted in serious injury to himself. He explained:

It happened already one time to me when we were in Spain. We had already cast off the line, because the captain had given the order to slack the line. He told us that the ship's line was already cast off from the tugboat, but suddenly this ... pulled the line, and I was holding the line. I was stepping on one end of the line, because it was slacking. So accidentally, the boat pulled the line. My God, when it pulled the line, the line kicked me. I was lucky, because I grappled the gratings with my hand. I was able to defend my arm...Those things are very dangerous. That's why communication between the bridge - because the pilot is the one giving orders to the tugboat - they should pass the orders nicely, so we know what is going on. Once the captain gives orders, we presume always that everything is OK, and nothing happens accidentally. So those accidents arise sometimes because of miscommunication.

(Filipino rating)

The conditions aboard ships, the environment in which work takes place, and the equipment which has to be used for communication all increase the risk of misunderstandings whilst carrying out work whatever language is being used and regardless of the linguistic competence of seafarers. As a native speaker of English it can be difficult to understand what is being said on a VHF radio aboard a noisy vessel let alone over the noise of a powerful ship’s machinery down in the engine room. However even in non-working time our data suggest that problems can arise due to miscommunication aboard ships.

**Developing communication skills**

Providing seafarers with good basic skills and enabling them to establish effective social networks aboard is likely to have a knock-on effect of a very positive kind. A number of linguists advocate ‘immersion’ as the most effective platform for learning a language. If seafarers join ships with sufficient English to communicate with their colleagues socially they are more likely to utilise English, as a common language, on a daily basis. This will
inevitably improve their general skills as well as their understanding of the individual crewmembers around them. Some seafarers prefer to use English as a working language for convenience:

Work in German? – You haven’t tried it! No English is a much easier language. You can speak it with everybody and it is easy to use this language to write. I prefer now to write reports … I don’t write in German.

(German Captain)

Other expressly state that they prefer to speak English with their colleagues precisely because it increases their fluency:

Q. Do you normally work using English, or do you use Tagalog?

A. Mostly Tagalog and English. But I prefer English, they speak English much more often and you can get your English more fluent to communicate with the nationalities.

(Filipino chief cook)

This is important as communication does not just depend on a technical grasp of language but also relies on an ability to penetrate accents and indeed to understand new and particular forms of English. As Butler suggests, we cannot really talk of English but should think, instead, in terms of many Englis hes which differ in significant ways:

English has become Englis hes, and each of these Englis hes is characterised by the pronunciation, lexis, and idiom typical of many of those born and educated within the particular English language community.

(Butler 1999: 187)

Maritime English may be one such English but aboard vessels with multinational crews you might also have Singaporean English, German English, Filipino English, and indeed Chinese English. Such languages may combine aboard ships and common words and expressions can find their way into the discourse of stable and long established crews. For example, aboard one ship included in the research Indian and Bangladeshi officers and Filipino ratings had adopted a number of shared expressions. In the fieldwork diary for the vessel the researcher noted:
They have picked up patterns of speech from each other, for example, many of the officers and some of the ratings say ‘like this’ when they have finished explaining something to you and I am sure they have picked it up off the Captain who says it a lot. Another shared expression is ‘very less’ [used as ‘much less’ or ‘very little’].

(Sampson field-notes)

In this case it seems likely that the speech patterns were used frequently by Hindi speaking officers and were then picked up by Filipino ratings. This process is similar to that described by Hammerley when commenting on the development of ‘pidgin English’ in the classrooms of pupils being educated in the Canadian ‘immersion’ programme. Ellis notes that:

Hammerley (1987:1989) in discussing the Canadian French immersion programme has pointed out in some cases a kind of ‘classroom pidgin’ can develop. (Ellis 1994:226)

If we accept that ‘pidgin’ is:

A language which develops as a contact language when groups of people who speak different languages try to communicate with one another on a regular basis (Richards et al 1992)

Then it would appear that ships with multinational crews are perfect places for the development of pidgin languages (frequently English). However English is only likely to evolve in such ways where crews have basic levels of general English which allow them to establish and importantly to sustain contact across cultural and ethnic divisions, forming social as well as working relationships. On a ship it is all too easy for ratings and officers of different nationality to remain socially separate and to minimise communication if they choose to. They are most likely to choose to minimise contact where it requires a considerable effort to understand and to be understood. However where basic levels of communication can sustain social contact what can develop is a ship based ‘language’ that we might think of as a Santos Sunset English or Norwegian Imp English! Sadly, contexts in which such ship-based ‘languages’ can develop are
pretty rare in today’s shipping environment. Crews change all the time and it takes both time and practice for individuals to come to understand each other as the following example illustrates:

My first ship I did not understand what he was talking [superior officer] but later I could understand. At first it was difficult for me to understand.

(Filipino wiper)

The global labour market and the drive for cheaper labour sources in itself militates against the establishment of crews who serve together for significant lengths of time. Once we add company mergers, acquisitions, and bankruptcy, into the equation we can see why seafarers rarely find familiar faces amongst the crews they join on returning to work after vacation. Such fluidity means that in practice seafarers are constantly having to adapt to the English of their fellow crew members and this process can be stressful and is often undermined by fear of misunderstanding. In this context the importance of furnishing seafarers with adequate English language skills before placing them in multinational crews cannot be overemphasised. Seafarers need such skills to enable them to work and socialise aboard ships using English as a second language. They are thus able to develop and become part of a shipboard system of communication (which may rely on the development of pidgin English). This is essential not only in emergency situations but also in the maintenance of both the physical and mental health of serving seafarers. In any situation and aboard any ship safe working practices depend, in part, on adequate communication between crewmembers. Such ‘adequate’ communication implies a lot more than simply an understanding of technical job-related terms or a grasp of a Maritime vocabulary.

Teamwork

It has been suggested that cultural differences impact upon initiative, submission to authority, and rule following (Moreby 1990). However, data from the transnational communities project suggest that such cultural generalisations are misleading and unhelpful.
The occupational hierarchies which are sometimes quite formally observed aboard ships, can cause problems and dangers regardless of the national make-up of the crew. The loss of the mv Green Lily off the South East Shetland Isles with the associated death of a helicopter winchman is illustrative. The vessel’s Master, Chief Engineer, 2nd Engineer, Chief Officer, Second Officer and Third engineer were all Croatian nationals. Whilst miscommunication was not listed as a cause, the MAIB report into the incident suggested that the Master’s autocratic style of management was a contributory factor. With regard to the Master’s decision to sail from Lerwick in adverse weather conditions the report states:

Although at least one officer was concerned about the Master’s decision to sail, no one openly questioned him......The reluctance of anyone on board to question the master’s decision from Lerwick, and his decision not to turn back after realising he had failed to consider the worst predicted weather conditions, suggests an autocratic style of management. A less authoritarian style might have encouraged greater discussion of the issues and would have enabled decision making shortcomings to be identified at the outset.

(MAIB 1999:43)

Where similar management styles were encountered by researchers on the TNC project it was noted that junior, and sometimes even senior, officers were reluctant to challenge Masters. However there were no grounds to support the idea that such reluctance related to nationality and on several ships occasions were noted when junior Filipino officers ‘corrected’ European senior officers and sometimes Masters.

Sometimes a refusal to speak in English caused tensions in mixed nationality crews. Aboard one ship Swedish officers commonly communicated in Swedish on the bridge, on the radio, and in social settings with Filipino crew present. This was greatly resented by many members of the crew who thought it was ill mannered and that it presented a barrier to the safe operation of the ship. On the bridge for example, the Filipino Third Officer complained that bridge-engine room communication between Master and Chief Engineer took place in Swedish and he was consequently unable to follow what was happening,
contribute to decision making, or anticipate future actions. On board another ship the Master was unable to monitor conversations between the chief officer in the cargo control room and engineers working cargo pumps below because they were communicating by radio in Urdu. Filipino officers and ratings on the same vessel also had a tendency to relay instructions in their own language rather than in English, once again inhibiting the Master’s ability to check on proceedings.

In addition to the operational constraints associated with this type of behaviour there can also be negative social consequences. Filipinos on one ship felt that officers might be criticising or mocking them in their presence and a considerable amount of suspicion and mistrust was thus generated. One crew member explained:

> The Swedish crew, you can speak Filipino...sometimes they speak in Swedish. It is a different language. They can be talking about you!
> (Filipino Engine Rating)

The Third Officer went further suggesting that the Swedes habit of speaking in Swedish made him feel isolated on the bridge and cost him the sense of solidarity which he often experienced with 2nd Officers on other vessels. He said:

> Sometimes when the Second Mate and the Chief Mate are talking Swedish, it seems I was being outcast. Not like on my previous ships where Second Mate and me we were always strong enough to talk to the Chief Mate with some problem. Here I cannot.
> (Filipino Third Officer)

For a member of the bridge ‘team’ to feel so outcast and isolated is likely to have negative consequences for the operation of the vessel and over a nine or tenth month period (the length of the officer’s contract) such consequences might even become serious. Thus whilst there was no evidence to suggest that the presence of many nationalities impeded the development of effective teamwork aboard ships, there was evidence to suggest that the use of many languages, rather than one common language, could do so.
Power and Discrimination

In general there were low levels of racism reported by seafarers at interview. However some accounts of racism by white officers towards both officers and ratings of other ethnicity were given:

A Well, some guys, specially the French, used to think other people are - well, they think they are superior. Socially different. But they are people as well as us. But people have different attitudes. I don't know what's in their mind.

Q How would this manifest itself on the social life?

A They are not friendly. You can talk to them, but not in the normal way. You ask them questions, and they just answer, they don't talk properly. And they used to avoid you. That's what I felt, and what I saw. Just not right.

(Filipino officer)

On a different ship the previous Master was reported to have given instructions to have the lift re-wired so that Filipino ratings could not use it to get to their accommodation level. When the ratings were discovered riding the lift to the level above their floor and walking down one flight of stairs to their cabins they were told that if they were seen doing so again they would be sent home.

Discrimination was not always practised by officers against ratings. On one ship Filipino ratings collected and marked their cutlery prior to the arrival of new Ghanaian crewmembers. They kept their cutlery in their cabins and expressed fears about contracting HIV from the new crewmembers who were ‘required’ to eat their meals at a separate table.

Such attitudes and practices are clearly highly divisive and are unhelpful in developing reasonable work and social relationships on board ships. Their existence highlights the need for companies to be more proactive in encouraging good multi-ethnic relations on board.
Our evidence suggests that ethnic divisions are most prevalent aboard vessels with seafarers from only two or three nations. Where crews are more ethnically diverse discrimination and ethnic divisions appear to reduce.

Social Isolation

The social life on board merchant vessels is subject to considerable variation. In this the ship’s workload and trade are important factors, however our data suggest that the attitude of the Master is the single most important factor influencing ‘the happiness’ experienced on board. Where Masters encourage ‘parties’, sports tournaments, or ‘horse racing’ social interaction appear to thrive. However where Masters disapprove of such activities seafarers tend to withdraw to their separate cabins and mix little with their colleagues.

Company restrictions on alcohol may also have a negative impact on social life on board. Not only do complete bans on alcohol discourage the scheduling of communal events such as barbecues etc. they also encourage solitary drinking behind closed (cabin) doors. This promotes social isolation and may endanger the mental health of seafarers. It also inhibits the development of team relations. Aboard one vessel with a total alcohol ban social events were never normally held. Having attended a ‘party’ initiated by the researcher one officer described how he had:

…never spoken to some of the people on board and he has been on the ship for four months! He seemed pleased to have had the opportunity to mix with them and since the party I have noticed a distinct change in the atmosphere on board. There was a reasonable atmosphere before but today people seem to be smiling and joking with each other a lot more. This seems to enhance rather than inhibit the work rate.

(Sampson field-notes)

The TNC data reveals that a large part of the social interaction aboard ships involves the use of jokes and joking strategies. The use of jokes is frequently risky in terms of social interaction for a number of reasons. The joker may be offended if the joke is not
understood and ‘falls flat’; recipients of the joke may feel uncomfortable if they do not understand it; targets of jokes (where they are employed) may be offended; and people may be fearful of laughing at something which they incorrectly believe to be a joke. Joking consequently relies on a fairly sophisticated understanding of the ‘rules’ of social interaction and beyond this an ability to implement such ‘rules’. For obvious reasons, joking in a second language is fraught with further difficulties including the added complexities caused by cultural ‘interference’. Crew members with inadequate language skills may well avoid the use of jokes altogether thereby missing out on an important aspect of the social life on board. One Filipino crew member described how he avoided joking with non-Filipino colleagues altogether:

Like jokes....you cannot just...I try to be serious when I am with other nationalities. Maybe what I did was offensive to them. When we are together with Filipinos we make jokes, like this. Whenever I am with other nationalities I don’t do that.....Sometimes they misinterpret what you say and what you want is just a joke and they don’t know it.

(Filipino deck rating)

The decision to avoid joking with fellow seafarers, or indeed the inability to participate in social banter and joke telling, is likely to contribute to seafarer isolation. In the context of declining crewing levels the effect of social isolation, and the importance of English in minimising such isolation amongst mixed nationality crews, increasingly requires attention. Recent studies have highlighted the disproportionate levels of suicide amongst seafarers (Roberts 1998). These and general mental health problems, such as depression and those resulting in addictive behaviour patterns, may thrive in an environment of social isolation. In view of this, the importance of providing seafarers with skills that enable them to forge and maintain good, social as well as, working relationships should not be ignored.
CONCLUSIONS

Given that over sixty percent of the world’s merchant fleet is staffed with multinational personnel it is no surprise to find that they can operate at least as efficiently and effectively as single nationality crews given the right circumstances. The most fundamental of these circumstances relates to language and levels of linguistic skill. Fluency in a common language underpins almost all interaction on board multinational vessels and where fluency levels are good enough to facilitate and sustain close personal and working relationships crews are more likely to operate as successful ‘units’. However other factors also impact upon the operation of ships as both commercial enterprises and as micro societies. These include power relations on board, discrimination and racism, leisure and recreation, the management skills of senior officers, and the long-term stability of crews. The evidence from the TNC study suggests that in order to maximise the benefits of employing multinational crews, a number of strategies could be developed. These would include the following:

- Ensuring high minimum levels of fluency in English (or other working language of the ship where it is not English) when recruiting both officers and ratings
- Encouraging stable crewing patterns
- Promoting social activities on board via the Master
- Implementing anti-racist practices and policies
- Developing the personnel management skills of serving and newly appointed Masters

Shipping owners and companies in a position to implement such policies and practices are likely to be thoroughly rewarded by the efficiency and cost-effectiveness of multinational crewing, whilst serving seafarers will benefit from reductions in social isolation and work-related stress.
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INTRODUCTION

The Global Labour Market Study (GLMS) was set up by SIRC late in 1998 with the aim of providing a research framework to build a comprehensive knowledge base on the labour market for seafarers worldwide. To achieve this purpose, the GLMS features two streams of research. The first one looks at the qualitative characteristics of the labour market through the ‘Series of Regional Studies’, while the second one focuses on its quantitative side through the ‘Seafarers Database’. These two parts are mutually complementary. Information on the socio-economic and educational background of a given population of seafarers, for example, can be used to give an insight as to why their numbers may be increasing or decreasing.

This paper gives a progress report on the GLMS, gives examples of its potential uses and discusses what has been achieved and what is expected from it over the next two years. The paper is divided into four sections. Section one gives an update of the different research projects currently undertaken under the GLMS and also on those due to start in the near future. Section two presents three cases illustrating how the ‘Seafarers Database’ has been applied to recent research projects undertaken by SIRC staff. The first case is a project examining performance and crewing patterns of seafarers serving on bulk carriers. This research was commissioned to SIRC by an international consortium conducting a Formal Safety Assessment on bulk carriers for the International Maritime Organisation (IMO). The second case looks at gender composition of personnel on board passenger cruise ships as part of Dr Zhao’s project on working and social relations of women seafarers on cruise ships. The third case refers to a doctoral research undertaken by the author looking at the labour market for British seafarers. Section three explains when the results of the different research projects within the GLMS will be available and how they will be disseminated. Section four concludes by summarising what has been achieved so far and discussing what is the outlook for the future.
For the benefit of those who want to know more about the constituent parts of the GLMS, there is one appendix at the end of this paper explaining in more detail some of the technicalities of the ‘Series of Regional Studies’ and the ‘Seafarers Database’.

AN UPDATE ON THE GLMS: ‘SERIES OF REGIONAL STUDIES’

The ‘Series of Regional Studies’ is an in-depth investigation into the population of seafarers in specific geographical regions and the labour markets in which they participate. Each study collects information on the active seafaring population, covering its demographic profile, socio-economic background, employment prospects and conditions, career paths open to them (including training and certification), and the processes and characteristics of the labour markets in which the population of interest participates. (See Appendix 1 for a more detailed list of topics covered). The overall aims are, firstly, to provide accurate information on the labour market in each of the regions surveyed and, secondly, to build a holistic picture of the global labour market.

All regional studies follow the same format and contain the same type of information to allow a comparative analysis and a conceptual construction of the global labour market. However, each study will also give emphasis on exploring issues that are topical to each of the regions investigated. In Western Europe, for example, a key issue is the decline and ageing of the seafaring population whereas in Central America it would be employment conditions and the provision of training facilities.

The aim is to make each study as comprehensive as possible and for this reason they are being conducted over a period ranging from one to three years depending on the size of the population surveyed. Each study is conducted in association with researchers from the areas surveyed, except in those regions where it is virtually impossible to find research partners with the adequate type of expertise. Budget and logistical constraints dictate that only a limited number of studies can be undertaken at any one time. The ‘Series of Regional Studies’ aims to cover 14 different geographical territories worldwide.
At present, there are four regional studies being conducted. These are in China, the Black Sea Rim, Southern Europe (Spain and Italy) and South Africa. All of these are being undertaken through collaborative partnerships between SIRC and experienced researchers based in the geographical areas of interest. A study on Central America is expected to begin by the end of 2001 and SIRC is actively considering initiating, in the near future, other studies in SE Asia and Eastern Europe.

The following sections will briefly introduce the different regional studies that are already in the pipeline or planned to begin over the next six months. There is also a short discussion on some of the topical issues that each of the studies will be exploring.

**China Regional Study**

Over the past few years there has been considerable speculation on whether China can become or not a major labour supplying country. There is consensus on the high quality of its training and regulatory regime and this has already resulted in various foreign shipping companies and manning agencies tapping into this market. However, the likelihood of China becoming a major labour supplying country, say at the same level of India or even the Philippines, remains questionable. One of the issues that the China Regional Study will be examining is the underlying causes which are likely to influence the future supply of Chinese seafarers to the international fleet.

The study is being undertaken in collaboration with a research team directed by Professor Shen Guanbao of Shanghai University (PRC). It was commissioned in 1999 and it is expected to finish by the end of 2002. The first interim report of the study will be available later on this year. The study covers the population of Chinese seafarers from mainland China.

**Black Sea Rim Regional Study**

During the early 1990’s, most countries in the Black Sea Rim suffered profound political changes that affected all spheres of activity including the labour market for
seafarers and the maritime education and certification regimes. With the demise of large national fleets, a great number of seafarers from the region, adequately trained and competent, entered the international labour market. This had the effect of averting a major officer shortage that had been predicted earlier by the 1990 BIMCO / ISF manpower survey (University of Warwick Institute for Employment Research 1990). Almost a decade later, one of the questions that emerges is what effect will the actual economical and political conditions of the region will have on the supply of seafaring labour in the short and long term. In some of these countries, for example, the number of seafarers is already starting to decline and the age profile to rise. In some cases, the standards of training and education have also been lowered, when compared to those prevailing two decades ago. This has been mainly as a result of underinvestment in training infrastructure during the late 1990s. The Black Sea Rim Regional Study aims to give an unbiased picture of how far the training and education system has changed and whether it can be realistically expected that countries in this region will continue to be important labour suppliers of quality seafarers.

This study is being conducted in collaboration with Dr. Engin Yildirim from Sakarya University in Turkey. The study was commissioned in 1999, but due to unforeseen circumstances, its start was delayed until January 2001. It is expected to be concluded by January 2003. The study covers the seafaring populations and labour markets in Turkey, Bulgaria, Romania, Russia, Ukraine and Georgia.

Southern European Regional Study (Phase 1: Spain and Italy)

During the past two decades, there has been a marked decline of the seafaring population in Western Europe. Furthermore, the high age profile of the existing population and the prevailing low levels of recruitment are unlikely to change this situation in the short term. This decline in the maritime skill base has affected the shipping sector and has had a knock-on effect on the wider maritime industry. Phase 1 of the Southern European Regional Study will enable a better understanding and appreciation of the factors that have lead to this decline in Spain and Italy and why the signs for recovery remain weak.
The study is being undertaken in association with Dr. Ricardo Rodriguez-Martos, a maritime educator and sociologist from Barcelona (Spain). It was commissioned in early 2000 and it is expected that the first phase, covering Spain and Italy, will be finished by 2002. Subsequent phases of the study will focus on Greece and Croatia, which remain two of the largest labour supplying countries in the region.

**South African Regional Study**

Despite many African nations having a strong maritime tradition and being labour suppliers to the international fleet, the information available on African seafarers is very fragmented and limited, and for many countries, virtually non-existent. Many of these seafarers are employed in substandard conditions and subject to exploitation. There is also a reported shortage of training berths at sea and ashore to cover adequately the needs of the region, particularly in East and West Africa. Research on African seafarers is urgently needed and with the South African regional Study SIRC aims to make a start in filling this gap.

Early in 2001, SIRC commissioned a research project to Dr. Geoffrey Woods, a South African researcher based at Coventry University, to explore the skills development of black seafarers in South Africa. This project is due to finish by August 2001. Even though this is not a full regional report, it is hoped that this study on skills development will form the basis of a much wider regional study looking at the seafaring population and labour markets in various African countries.

**Central American Regional Study**

The employment of seafarers from Central America, particularly ratings, in the international fleet dates back from the early 1970’s. During that period, for example, there were relatively large numbers of Panamanian ratings and catering staff serving on board US-owned oil tankers. Today, the wider maritime industry in Panama, including the canal and ports, employs a large proportion of ex-seafarers and demand is likely to increase as Panama continues to develop into a regional maritime centre. In the case of Honduras, it has long been favoured as a labour supplying country by Southern European shipowners and some of the cruise companies operating in the
American market. At present the population of active Honduran seafarers is estimated at 50,000, with some 30,000 employed at any one time in the international merchant and fishing fleet. Cuba, with a reported population of some 8,000 seafarers is gradually breaking in as a labour supplier to the international fleet. On the other hand, Mexico, which has the best training infrastructure of the region, has never become an important labour supplying country due to internal demand and the prospect of alternative employment opportunities outside the maritime industry.

At present, there are plans underway to expand the training infrastructure in countries like Honduras and Panama. This will probably increase in the long term the participation of Central America in the global labour market. The Central American Regional Study will be determining the supply of seafarers from the region and examining to what extent the expansion and modernisation of the regional training infrastructure will affect supply.

The study is due to start late in 2001. It is to be conducted by the author who is familiar and has knowledge of the labour market in the area. It will cover Panama, Mexico, Honduras and Cuba.

AN UPDATE ON THE GLMS: THE SEAFARERS DATABASE

The ‘Seafarers Database’ can best be described as a census of the active seafaring population worldwide. It has been compiled from some 20,000 crew lists provided by port / immigration authorities in 7 countries and 4 continents and by the ITF for those ships with blue cards. All crew lists contained in the database are from the years 1997 to 2000 (See appendix 1 for a detailed description of the Seafarers Database).

The database contains information on seafarers and the ships where they were serving at the time the crew list was collected. Information on seafarers covers age, rank, nationality and place of birth whereas for the ship it includes flag, date and place of build, tonnage (dwt and gt), class details (class society and class status) and registered nationalities of shipmanager, fleetmanager and registered shipowner. The database accounts for some 373,000 seafarers, or 30% of the world’s population of seafarers,
and some 15,000 ships, or almost 50% of the world’s fleet of cargo carrying ships above 1,000 gt.

The ‘Seafarers Database’ is divided into two sections. The first one covers 335,000 seafarers employed on cargo ships and the second one 38,000 seafarers (including hotel personnel) employed on cruise ships.

SIRC takes the protection of individuals’ and companies’ identity who participate in any of our projects very seriously. For this reason, the ‘Seafarers Database’ does not contain any details that will allow the identification by name of seafarers, ships, shipmanagers, fleetmanagers and shipowners.

The collection of crew lists was not statistically random. Although most types of ships, flags and nationalities are represented, some of these may be slightly over- or under-represented. This should not affect unduly the robustness of the data as the different groups of seafarers (by nationality and rank) and ships (by shiptype and dwt) will be weighted and factored to ensure that the database is statistically representative of the population. Therefore, any projections made on the basis of the database are true for the whole population.

The task of data input has been a mammoth one, requiring two five-strong teams. The first one worked on the cargo ship crew lists full time for almost one year and the second one worked on the cruise ship crew lists for four months. Data input for the first version of the ‘Seafarers Database’ is finished. Its production for dissemination is due to start shortly. It is planned that it will be updated annually. Every new version will undoubtedly incorporate new features and will present the opportunity to improve previous coverage and focus on topical areas.

A further innovation of the ‘Seafarers Database’ is the way it is going to be disseminated. Considering the wealth of information it contains and appreciating that different users would like to use the database in different ways, presenting results in a printed tabular form would not do justice to the capability of the database. Doing so would considerably restrict the amount of information that could be extracted by end-
users. This is so because researchers writing a report cannot possibly anticipate all the information different users would like to extract from the database.

In order to give greater flexibility to the end user, the ‘Seafarers Database’ is to be released as an interactive CD-ROM. This will then allow the user to formulate queries and search the database according to his or her own particular area of interest. A printed report containing results of predefined queries will also be made available.

Each CD-ROM copy of the ‘Seafarers Database’ will contain the complete database for cargo and cruise ships. The end user, however, will not be able to access or overwrite this part of the product. What he or she will be able to interact with is a user-friendly software that will assist in formulating any queries and generating descriptive statistical reports (frequencies and cross tabulations) in graphical and tabular form. More detailed exploratory statistical analysis can be undertaken using more specialised statistical packages or it can also be commissioned directly to SIRC.

It is anticipated that the CD-ROM will be produced in partnership with Lloyd’s Register and will be marketed directly by them. The first version of the Seafarers Database CD-ROM will be released towards the end of 2001 with yearly updates to follow.

PRACTICAL APPLICATIONS OF THE GLMS

The ‘Series of Regional Studies’ and the ‘Seafarers Database’ provide a unique information base that can be used to support policy-making, research into the labour market, safety and accident investigations. But these are just some of the few possible applications. The following three cases of how the research has been applied so far illustrate the potential of the ‘Seafarers Database’.
Case 1: Crew Composition on Bulk Carrier Vessels

The Maritime and Coastguard Agency (MCA) commissioned SIRC earlier this year with a three-month research project looking into crew composition and performance, vessel safety and voyage cycles of bulk carriers (Alderton and Lane 2001). This research is part of an on-going study on Formal Safety Assessment for bulk carriers commissioned by the IMO to an international consortium under the co-ordination of the MCA.

SIRC’s contribution to this research project came largely from three separate databases generated in house. These were a database on crew performance, the ‘Seafarers Database’ and one on accident data. The first two are unique and provide information which is simultaneously statistically robust and not previously available. This research project was undertaken by Dr. Tony Alderton and Professor Tony Lane.

The ‘Seafarers Database’ provided information on approximately 118,000 seafarers working on board bulk carriers. This data covered seafarers’ nationalities (by rank, size and type of ship), age profile (by rank, nationality, flag and type of ship); and crew composition, i.e. number of nationalities on board and crew size (by flag and type of ship). Similar data was extracted for seafarers working on board chemical / gas tankers to do a comparative analysis.

Included below are some of the findings on the age profile of seafarers working on bulk carriers and the number of nationalities and manning levels found on board this type of vessels.

Based on the ‘Seafarers Database’ it was found that the mean age of the whole crew on bulk carriers (37.8 years) is very similar to that of chemical tankers (37.7 years). However, when the mean age of masters is compared by vessel type and nationality, significant differences were found. Figure 1 shows the results of this comparison.
Figure 1 Mean age of masters by vessel type and nationality

The mean age of masters from ‘Other’ countries and ‘India’ is significantly different from any other group, the Philippines group is significantly different from the ‘Other Asian’ group and the ‘China’ group significantly different from the ‘Eastern European’ one. In respect of chemical / gas tankers, the mean age of Filipino masters is significantly different from that of ‘India’, ‘Other Asian’ and ‘Other’ nationalities, and the ‘Eastern European’ group is significantly different from the ‘Other’ group. In respect of the two vessel types, there are only significant differences for the ‘Philippines’ and ‘Other’ groups. Overall, masters employed on chemical / gas tankers tend to be younger than their colleagues serving on bulk carriers. This finding was also confirmed when comparing the mean age of masters from these nationalities by flag of employment.

Turning now to the number of nationalities employed on all bulker size groups, it was found that, in general, the larger the vessel the greater the number of nationalities amongst their crews, although the Handysize bracket goes against this trend somewhat. Figure 2 shows the number of nationalities by bulker size groups.
On the majority of bulk carriers there are only one or two nationalities on board. When compared with chemical / gas tankers, bulk carriers are more homogenous in their crews. Only 28.3% of the former have single nationality crews compared with 46% of bulk carriers. Similarly, nearly 20% of chemical / gas tankers have 4 nationalities or more compared with 15% of bulk carriers. Table 1 shows the comparison between nationality mixes for both bulk carriers and chemical / gas tankers.

Table 1 Comparison between nationality mixes for officers and ratings by ship type

<table>
<thead>
<tr>
<th>Ship type</th>
<th>Number of nationalities (officers)</th>
<th>Number of nationalities (ratings)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 nationality</td>
<td>2</td>
</tr>
<tr>
<td>Bulk Carriers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>38</td>
<td>45</td>
</tr>
<tr>
<td>2</td>
<td>37</td>
<td>25</td>
</tr>
<tr>
<td>3</td>
<td>16</td>
<td>13</td>
</tr>
<tr>
<td>4+</td>
<td>11</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chemical / Gas tanker</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>68</td>
<td>24</td>
</tr>
<tr>
<td>2</td>
<td>0</td>
<td>69</td>
</tr>
<tr>
<td>3</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>4+</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

* less than 1%
The most obvious point from the table above is that the number of nationalities among the ratings tends to mirror the number of nationalities among the officers and vice versa. This is most apparent where there are four or more nationalities amongst either the officers or ratings. It is also the case that this pattern is, in general, most apparent on bulk carriers.

There are also significant differences in the mean crew numbers when compared by size group and type of vessel (bulk carriers vs. chemical / gas tankers). These differences are illustrated in figure 3 on the next page.

**Figure 3** Mean crew number by vessel size group

For bulk carriers, the minibulker crew size is significantly different from all other groups, whilst the Handysize group is significantly different from the Handymax and Panamax groups. In respect of chemical / gas tankers, the <10,000 gt size group is significantly different from all other size groups.

The final report for this project was submitted to the MCA in May 2001 and its results will be used to gather background information for the FSA of bulk carriers. The latter
is expected to have a positive impact in increasing the safety of bulk carriers and, more importantly, preventing loss of life at sea.

**Case 2: Gender issues on cruise ships**

The aim of this project, conducted by Dr. Minghua Zhao, is to look at the working and social relations of women seafarers employed on cruise ships. One of the first research questions she had to explore was to determine the number of women seafarers employed at sea and the demographic characteristics of this population. As there is virtually no secondary data available to answer this question it was necessary to develop a cruise ship database based on the one covering seafarers on cargo ships.

Dr. Bin Wu, who is the co-ordinator of the GLMS, took up the challenge of creating the cruise ship database. Working with a 4-strong team for four months he completed this task last April. The cruise ship section of the ‘Seafarers Database’ covers about 38,000 seafarers, between hotel and marine personnel, working on some 83 passenger vessels (roughly 30% of the world’s cruise fleet). The crew lists cover the years between 1998 and 2000 and were collected thanks to the collaboration of authorities in European and North American ports and the Panama Canal.

The content and structure of the cruise database is similar to that used for cargo ships but, in addition, it also features gender information. The database has been used to find the supply by geographical region, age profile, gender distribution and rank analysis among others. Figure 4 illustrates the age profile of male and female seafarers grouped by their geographical region of origin (Zhao 2001).
Figure 4 Age Comparison by Gender and Region

An initial analysis of seafarers’ age profiles indicates that the mean age is 33.2 for all seafarers, 35.4 for men and 31.5 for women. When comparing the mean age according to region of origin it is found that there is a significant difference between the age of male and female seafarers from one same region. Male seafarers from developed countries, for example, are on average 6 years older than their female counterparts.

The final report of this project will be available late in 2001 and will include expanded analysis based on the cruise ships section of the ‘Seafarers database’.

Case 3: Labour market for British seafarers

As part of a doctoral research examining the structure of the labour market for seafarers in the UK, the author has been examining what is the nationality of companies employing British seafarers. One of the obstacles in determining this is that the identity and nationality of shipping companies are more than often veiled in corporate secrecy, particularly in open registries, and it is a common occurrence that the registered owner turns out to be a paper company. Another problem is having access to a representative sample of British seafarers both employed by companies based in the UK and abroad. The definition of a foreign company is also open to

1 This research project is covered in more detail in Dr. Zhao’s paper included in these proceedings.
debate, but in this case it is taken in its most simplest interpretation; a company based abroad and with no apparent ownership ties to the UK.

In the UK there are two authoritative sources of information on the sea-going employment of British seafarers. The first one is the UK Chamber of Shipping (CoS) and the second one are the series of publications produced by Professor James McConville and Dr. David Glenn from the London Guildhall University (LGU) on the number and employment characteristics of British seafarers.

The UK CoS, estimates that 55% of the British seafaring population are employed by UK companies and 45% by foreign companies. On the other hand, research conducted by LGU (Glenn and McConville 2001) estimates that 65% of all British officers are employed by UK based companies and 35% by foreign companies. These two estimates differ because the former is based on research undertaken among CoS member’s whereas the second is based on a survey conducted among 1,929 officers affiliated to the UK officers’ union NUMAST.

To explore this research question from a different perspective the author used data from the ‘Seafarers Database’ (cargo ships) on British seafarers. There are a total of 3,731 British seafarers accounted for in the database of which 3,261 are relevant to this analysis. Of these, 588 are ratings, 2,413 officers and 160 cadets. These seafarers work on board ships of 36 different flags, so they will probably include a mixture of NUMAST members and non-members.

To answer the research question of what is the proportion of British seafarers working for UK and foreign companies, it was not enough to know how many of them were sailing on ships registered under the Red Ensign, as there are a large number of UK shipping companies who have ships registered in other flags. The next best option was to look at the nationality of the employer. Although the ‘Seafarers Database’ does not contain data that identifies names of seafarers, ships or companies, to protect confidentiality, it does contain fields that link the ship a seafarer is serving on with the

2 The Red Ensign refers to the UK registry and those of dependant territories
nationality of the shipmanager, fleetmanager and shipowning group\textsuperscript{3}. The registered owner is not considered as many companies in this category will be brass plate companies.

Probably the best indicator would be the country of economic benefit. At the time the data was compiled this type of information was not available (it is available now and will be included in subsequent versions of the ‘Seafarers Database’). The next best alternative left is the nationality of the shipowning group although this is likely to be an underestimate as in some cases its nationality will appear to be the same as that of the registered owner. Nevertheless, the shipowning group may appear to be a good indicator as the percentage of UK ‘nationals’ in this group is higher than for the shipmanager or fleetmanager groups.

If the flag of employment is taken as indication of nationality only 35\% of British seafarers in the sample work on board vessels registered under the Red Ensign group. If the nationality of shipmanager (including manning agency) is taken as a measure, then the figure rises to 43\%. If the nationality of fleetmanager is the selecting criteria, then the figure is 45\%, and when shipowning group is selected, the figure rises to 55\%. Figure 5 shows the number of British seafarers by rank employed by UK and foreign companies when taking as criteria the nationality of the shipowning group.

\textit{Figure 5}  UK seafarers employment patterns (by rank)

\textsuperscript{3} Lloyd’s Register defines the shipowning group as ‘the controlling interest (parent company) behind a fleet
The proportion of ratings deck and engine employed abroad is somewhat high but this could be because there is only a small sample of the UK ratings population in the ‘Seafarers Database’ which also reflects in the declining population of UK ratings.

The results appear to corroborate those of the CoS and LGU. In the case of the CoS estimates, the figures are the same. For the LGU study, the discrepancy is larger as that study estimates 64% of British seafarers employed by UK companies whereas the ‘Seafarers Database’ analysis puts this figure at 56%. The LGU study (2000) points out that it covers the employment characteristics of NUMAST members ‘who may be more UK company orientated than of all UK seafarers.’. It is primarily for this reason that the estimate of British officers employed by UK companies may appear to be higher than those of the ‘Seafarers Database’.

Other information obtained from the ‘Seafarers Database’ was the type of vessels on which British seafarers are employed (including age) and the age profile of the population. This research case highlights the versatility of the ‘Seafarers Database’ and how it can be used to enrich the discussion on maritime labour.

**DISSEMINATION OF RESULTS**

SIRC’s aim is to accomplish high-quality independent research that will be disseminated as widely as possible to the maritime industry, its regulators and seafarers. The GLMS is no exception to this rule.

The final report for each study in the ‘Series of Regional Studies’ will be published by SIRC in printed version. Table 2 shows the completion date for the studies already underway or planned to start before the end of the year. In each case the main reports will be available from SIRC shortly after completion of the study.
Table 2  Schedule for ‘The Series of Regional Studies’

<table>
<thead>
<tr>
<th>Name</th>
<th>Start date</th>
<th>Completion date</th>
</tr>
</thead>
<tbody>
<tr>
<td>China Regional Study</td>
<td>Jan 1999</td>
<td>Dec 2002</td>
</tr>
<tr>
<td>Black Sea Rim Regional Study</td>
<td>Jan 2001</td>
<td>Jan 2003</td>
</tr>
<tr>
<td>Southern Europe Regional Study</td>
<td>Jan 2000</td>
<td>Jan 2002</td>
</tr>
<tr>
<td>Phase 1: Spain &amp; Italy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>South African Regional Study</td>
<td>Jan 2001</td>
<td>Aug 2001</td>
</tr>
<tr>
<td>(skills study for Black South African seafarers)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Central American Regional Study</td>
<td>Oct 2001</td>
<td>Oct 2002</td>
</tr>
</tbody>
</table>

In turn, the first version of the ‘Seafarers Database’, published as an interactive CD-ROM and printed copy, will be available before the end of 2001. It is expected that there will be yearly updates to this database. The ‘Seafarers Database’ will be produced in association with Lloyd’s Register. It will be disseminated together with Lloyd’s electronic version of the ‘Ultimate Guide to Ships’.

The revenue generated by the sale of the ‘Series of Regional Studies’ and the ‘Seafarers Database’ will go towards covering part of the cost of research and production, which has been significant. It will also allow SIRC to develop further the GLMS by updating the ‘Seafarers Database’ and expanding the ‘Series of Regional Studies’ to the remaining 9 regions which are yet to be covered.

SIRC’s website, at www.cf.ac.uk/sirc, is also being used as a vehicle to disseminate information on our various research projects and give information about the centre and its staff. A special section on the GLMS will feature shortly giving updated information on its progress and, in due course, extracts and abridged reports of the ‘Series of Regional Studies’ and the ‘Seafarers Database’ will be posted there.

WHAT HAS THE GLMS ACHIEVED SO FAR?

The GLMS is the brainchild of SIRC’s director, Professor Tony Lane. From its inception he knew this was a very ambitious project, particularly when considering the scantiness of data on seafarers, which was the reason why this study was implemented in the first place. Almost three years on, the results achieved have surpassed any initial expectations. The GLMS is well on track in its purpose of
making a contribution and complementing the existing knowledge base on the labour market for seafarers worldwide.

The staff involved in the study has also increased as new full-time researchers have joined SIRC and collaborative studies have been set up in China, Spain, Turkey and South Africa. Dr. Bin Wu, a human geographer, has been appointed as co-ordinator of the GLMS.

The methodology used in the ‘Seafarers Database’ had its origins in a study on crewing patterns of ships calling at UK ports conducted by Tony Lane in 1995 (Lane 1995). The core method remains the same but the information and coverage have been expanded in the ‘Seafarers Database’. Ideally, crew lists should be collected randomly from the whole population of ships worldwide to provide a robust statistical data on the active seafaring population. In the real world this exercise is virtually impossible and so the next best option available is to do a combination of stratified and quota sampling.

One of the issues that has arisen is gaining access to crew lists from key ports all over the world to ensure that all major trades are represented and the data is reliable. There is still work to do on this front, but the initial results are encouraging and the largest seafaring populations and shipping sectors are accounted for in the first version of the database. One of the largest container ports in Asia, and in the world, recently agreed to collaborate in this study and it is expected that the authorities who collaborated in the first version will continue to provide us with data.

Data input into the ‘Seafarers Database’ has been a very labour-intensive process requiring considerable time and resources. As with any human activity there is always the possibility of human error considering that thousands of lists have being processed. For this reason, the ‘Seafarers Database’ is being verified to weed out any mistakes and ensure the robustness of its data. For those who like statistics, the average number of lists entered by one of our experienced operator is 6 lists per hour (taking a mean of 18 crew per list). This amount may be dramatically reduced to one list for an 8-hour working day if the list in question happens to be a cruise vessel with 900 crewmembers on board. Dividing the hourly rate of 6 by some 20,000 crew lists
(the approximate number of lists entered in the first version of the database) gives a total number of 2,857 man-hours. And this is only to enter data from the crew lists. Additional to this, time is also spent entering ships’ information into the database and many hours more are devoted to data analysis.

Thankfully for all, manning levels for the ‘Series of Regional Studies’ are less onerous. Nevertheless, this is not an easy ride either, as the studies are quite complex and require a high degree of knowledge and expertise on the region covered. This expertise may not always exist or be available and, even if this is the case, it may not be concentrated on a single researcher. This is one of the reasons why the regional studies have been set up as collaborative studies between SIRC and researchers in the regions of interest. There is a core research methodology for each study, but this has been adapted according to the specific issues explored in each regional study and the conditions of its labour market.

Funding for the GLMS is also critical. So far, the GLMS has been entirely funded through SIRC’s core research budget. With time, however, the GLMS should be able to generate enough revenue through the sale of publications to ensure its continuity and expansion. This will also allow SIRC to use resources, which would have otherwise being tied to the GLMS, to support research projects in other fields.

Before the end of 2001, it is expected that the ‘Seafarers Database’ electronic version will be ready for dissemination. The first two reports on the ‘Series of Regional Studies’, namely that of Black South African seafarers and the first intermediate report of the China Regional Study, will also be completed by then.

The year 2002 will see the culmination of three regional studies (China, Southern Europe and Central America) and the first update of the ‘Seafarers Database’. New studies on countries in Eastern Europe, not covered by the Black Sea Rim Regional Study, and South East Asia will be commissioned during that year.

SIRC gratefully acknowledges the collaboration of the people involved in data input and the authorities who have been able and willing to provide us with crew lists, in particular the US Maritime Administration, the UK Home Office, Stella Maris in
Barcelona, the ITF, the Australian Maritime Administration and the Panama Canal. However, there is always the need to collect more crew lists for subsequent updates and any contribution in this respect is gratefully received⁴.

SIRC’s commitment to the GLMS reflects not only the importance of this project but also our belief that it will contribute to the effort of building a firm knowledge base on the global labour market for the benefit of the maritime industry and the seafarers it employs worldwide.

BIBLIOGRAPHY


⁴ Please contact Dr. Bin Wu or Mr. Bernardo Obando-Rojas at SIRC, 68 Park Place, Cardiff CF10 3AS, United Kingdom.
Appendix 1
The ‘Series of Regional Studies’ and the ‘Seafarers Database’
**Series of Regional Studies**

The ‘Series of Regional Studies’ contains qualitative information on the workforce. This research is done on a regional basis with the collaboration of other professional research bodies in each of the regions of interest.

The regional studies are divided into 14 different geographical territories (see Figure 1) covering at least 95% of the countries of origin of the world’s seafaring workforce.

**Figure 1** Geographical scope of the regional studies

The collection of qualitative information for each of the geographical regions is done by a team of researchers visiting the different seafaring communities at sea and ashore, employers, training establishments, unions and regulatory agencies. The team’s task is to explore in detail the socio-economic background of seafarers in the region, their recruitment, training and certification, their employment potential and conditions, socio-economic geography of the region and the prevailing attitudes of seafarers to their profession.

The qualitative method involves collecting all this information, determining data categories, recognising relationships within and between categories of data, and developing and testing hypothesis to produce well-grounded conclusions on the workforce. Additionally, they will also be exploring topical issues in each of the regions covered.
A summary of the information contained for each regional study is shown in Table 1.

**Table 1. ‘Series of regional Studies’: Data collection and analysis fields**

<table>
<thead>
<tr>
<th>Field</th>
<th>Detail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demographic profile of the labour force</td>
<td>age; place of birth; nationality; rank</td>
</tr>
<tr>
<td>Demand for seafarers</td>
<td>at sea (deep sea and coastal); shore-based maritime sector; national and international (sea and ashore)</td>
</tr>
<tr>
<td>Employment conditions</td>
<td>wages; payment systems; lengths of contracts; social security payments; causes and extent of wastage rate; employment conditions ashore</td>
</tr>
<tr>
<td>Career paths</td>
<td>structure of career path; education and training capacity and infrastructure; certification process; perception and attitude towards seafaring career</td>
</tr>
<tr>
<td>Socio-economic background</td>
<td>Education levels; social and family background; geographical origins; socio-economical conditions of labour supplying Regions</td>
</tr>
<tr>
<td>Crewing patterns</td>
<td>Nationality composition by fleets of employment; Manning levels; major employers using regional workforce</td>
</tr>
</tbody>
</table>

**Seafarers Database**

The Seafarers Database contains information extracted from crew lists collected world-wide together with information on the ships where these lists originate. All these fields of information are filed in a database that can then be statistically analysed to make an accurate description of the labour force by age, nationality and rank, and an accurate portrait of crew size and nationality pattern by age, type and flag of ship.

The research team has collected about 20,000 crew lists covering approximately 373,000 seafarers between officers and ratings from 145 different countries, or some
30 per cent of all seafarers employed at present, and some 15,000 different vessels registered under 107 different Flag states, or some 50 percent of the world’s merchant fleet above 1000 gt. Considering the size of this sample with the total estimated population of seafarers (about 1.2 million according to BIMCO/ISF 2000) and the total number of merchant vessels above 1,000 gt (29,119 according to Lloyd’s Maritime Information Services) the margin of error in any projections based on this data is low. The coverage is such that practically every country with a seafaring workforce and all types of ships have a statistically significant representation in the database. The information contained in the Seafarers Database is by all accounts the largest representative sample ever to be used on any study on seafarers.

The crew lists contained in the database cover the years 1997, 1998, 1999 and 2000. This time spread ensures that the census collects information on back-up seafarers, i.e. those who are temporarily ashore in leave, sick or in between contracts. The database includes a mechanism to delete any repetitions of the same individual sailing on different ships over different periods of time.

From a statistical stance, the collection of crew lists for SIRC’s study cannot be described as a random process in the strictly technical sense, in that every list collected has an equal chance of being chosen from a population of lists whose total number at the moment of collection was known. Sampling in this sense is administratively impossible as lists are held by different sources, such as local immigration offices for a limited period, and since their contents are not entered on to a register, no sampling frame exists. Nevertheless, the collection of lists is random in the sense that ships and crews represented in them, were selected solely on the basis of their arrival to port.

The fields of information extracted from the crew lists are shown in figure 2.
The database contains no information on names or identification details of individuals, ships or companies. We are committed to protecting the confidentiality of all those accounted for in the database. Technical information on ships, such as age, type, flag, tonnage, date of build, nationalities of shipmanager and registered owner are extracted from specialised sources.

There are three main areas where the database can provide information. This are workforce profile, manning levels and crewing patterns. Figure 3 shows the main fields contained in the database. Each of these can be related to all others to create a query. The arrows show an example of how a query is constructed.
The example shown in Figure 3 refers to a query to find the rank, age and nationality of seafarers (officers and/or ratings) employed on all ships of a particular type by flag, size range and manager and ownership nationality. In other words, the Seafarers Database could be asked to generate a report (tabular or graphic form) covering the rank, age and nationality of all officers and ratings employed on oil tankers registered under Panama in the size range of 5,000 to 15,000 dwt, for ships managed and owned by British companies. This example is very specific but more general queries can be generated based on any of the fields in the database. An example of a less specific query could be a report of the total number of seafarers of a particular nationality by rank and age.

Based on the data contained in the database, projections can also be made to determine the world-wide supply of seafarers by rank, age and nationality.

The following sections will show examples of queries on workforce profile, manning levels and crewing patterns.

1) Workforce profile:

From the database, it is possible to extract information on nationality, place of birth, age and rank or any cross tabulation between these four. Figure 3 shows the result of a query on the age profile of all masters by selected nationalities:

**Figure 4** Age profile of master by selected nationalities
For this particular query, the user could have changed the nationalities, the rank or even the age brackets shown above. The report could have been produced in a tabular form as the one shown below and it could have included more detail on the actual numbers and projections under each category.

Table 2 Average age of deck officers by selected nationalities

<table>
<thead>
<tr>
<th>DECK</th>
<th>Master average age</th>
<th>C/O average age</th>
<th>2/O average age</th>
<th>3/O average age</th>
</tr>
</thead>
<tbody>
<tr>
<td>German</td>
<td>51.0</td>
<td>47.5</td>
<td>40.0</td>
<td>*</td>
</tr>
<tr>
<td>Filipino</td>
<td>47.0</td>
<td>42.4</td>
<td>39.7</td>
<td>37.4</td>
</tr>
<tr>
<td>British</td>
<td>49.0</td>
<td>47.0</td>
<td>40.0</td>
<td>38.4</td>
</tr>
</tbody>
</table>

* none in sample

2) Manning levels

Queries under this category may include manning levels by shiptype, flag, ship tonnage, age of ship or even nationality of shipmanager or registered owner. Any search can be refined to the level of detail required. Figure 5 shows a query on manning levels by size (dwt) and type of ship.

Figure 5 Manning level by size (dwt) and shiptype

Figure 6 shows the percentage of vessels registered under selected flags according to the number of different nationalities on board.
Figure 6 Percentage of vessels by flag according to number of nationalities on board.

Figure 7 Percentage of nationalities employed on ships registered in Panama

3) Crewing patterns

Queries under this category include nationality pattern by age, type, flag of registration and nationality of ship manager, fleetmanager and registered owner. The results of a query showing the percentage of nationalities employed (all ranks) on ships (all types) registered in Panama is shown in figure 7. For example, this query could be refined to include a particular type of ship of a determined age range for any given flag and specific ranks.
Another type of query shows the percentage of seafarers (all ranks) of selected nationalities employed under their respective national flags or on foreign flags.

**Table 3** Flags of employment for selected nationalities

<table>
<thead>
<tr>
<th>Nationality</th>
<th>Sample</th>
<th>Own Flag</th>
<th>Foreign flag</th>
</tr>
</thead>
<tbody>
<tr>
<td>Philippines</td>
<td>19043</td>
<td>4.9</td>
<td>95.1</td>
</tr>
<tr>
<td>Russia</td>
<td>1155</td>
<td>29.8</td>
<td>70.2</td>
</tr>
<tr>
<td>China</td>
<td>3829</td>
<td>25.4</td>
<td>74.6</td>
</tr>
<tr>
<td>Poland</td>
<td>3444</td>
<td>11.2</td>
<td>88.8</td>
</tr>
<tr>
<td>India</td>
<td>3013</td>
<td>4.0</td>
<td>96.0</td>
</tr>
<tr>
<td>Ukraine</td>
<td>2253</td>
<td>7.5</td>
<td>92.5</td>
</tr>
<tr>
<td>Latvia</td>
<td>1495</td>
<td>3.9</td>
<td>96.1</td>
</tr>
<tr>
<td>Croatia</td>
<td>1361</td>
<td>11.9</td>
<td>88.1</td>
</tr>
<tr>
<td>Greece</td>
<td>2169</td>
<td>50.1</td>
<td>49.9</td>
</tr>
<tr>
<td>UK</td>
<td>1992</td>
<td>56.2</td>
<td>43.8</td>
</tr>
<tr>
<td>Germany</td>
<td>1046</td>
<td>55.2</td>
<td>44.8</td>
</tr>
<tr>
<td>Norway</td>
<td>844</td>
<td>77.5</td>
<td>22.5</td>
</tr>
<tr>
<td>USA</td>
<td>1107</td>
<td>86.9</td>
<td>13.1</td>
</tr>
</tbody>
</table>
INTRODUCTION

There has long been a tradition that the law of the sea has been grounded in the notion of the freedom of the sea. This freedom has, historically, three underlying principles: a ship of any nation can navigate the oceans freely; the ship’s national state has exclusive dominion over the ship; and no other nation can exercise dominion over that ship. Freedom is thus the guiding principle of the law of the sea, but it is a principle strongly mediated by nationality.

There has been a very long history of shipowners flagging their vessels to states other than their own country of origin. The earliest examples of such a phenomenon were usually for political or military reasons, whilst the more recent examples are much more likely to be on economic grounds. It is only in the period between the two World wars, however, that certain nations were specifically developed as ‘open’ registers, i.e. states that will accept the registration of vessels from any other nation with virtually no restrictions (IMA, 1979).

In this inter-war period, a number of United States owned passenger ships were transferred to the Panamanian registry in order to avoid the prohibition laws. Additionally, in the early 1920s a treaty between the US and Panama exempted shipping profits from taxation and this, in conjunction with laws that had raised labour
costs in the US, gave further incentives to US owners to flag to Panama. The first European ships were also re-flagged to Panama in this period, when some Spanish owners felt that social reforms in their own country had increased their operating costs to unacceptable levels (Carlisle, 1981). The US Ship Sales Act of 1946 gave an additional boost to the Panamanian registry, whilst Liberia entered the open register scene in 1948 with the drafting of the Liberian Maritime Law. This piece of legislation established a system for recording mortgages that was acceptable to lending institutions (IMA, 1979).

By 1939, the Panamanian register was already being thought of as ‘convenient’ in shipping circles, but the actual term ‘Flag of Convenience’ was not utilised until the early 1950s, and followed on from the Campaign Against Flags of Convenience inaugurated by the ITF at its 1948 World Congress in Oslo. In 1974 the ITF defined a FOC quite simply as being: ‘where beneficial ownership and control of a vessel is found to be elsewhere than in the country of the flag the vessel is flying’ (ITF, 1999, 13:1). In 1982, the United Nations Convention on the Law of the Sea (UNCLOS) was established, and article 91 also gives great weight to the idea of a ‘genuine link’ between the ship and the flag and states that:

Every State shall fix the conditions for the grant of its nationality to ships, for the registration of ships in its territory, and for the right to fly its flag. Ships have the nationality of the State whose flag they are entitled to fly. There must exist a genuine link between the State and the ship. (UN, 2001)

In 1998 the ITF held its World Congress in Delhi, at which the a new policy on FOCs was unveiled. In recognition of the fact that pay and conditions on nationally flagged vessels can, in some cases, be worse than on some FOC vessels, the ITF included
non-FOC sub-standard ships within the campaign. There has, therefore, been a move away from the simple definition given above, towards a more all-embracing notion of regulation, standards and enforcement. This is, perhaps, in recognition of some of the reasons why owners may now flag to open registers, which are often complex and not necessarily equated to labour issues of pay or conditions. Twenty-nine registers are, in fact, now classed as being FOCs by the ITF.

In the period from the 1950s onwards, more and more open registers have come into being and, partly as a response to this, some ‘traditional’ maritime countries have from the 1980s onwards set up second registers offering more beneficial environments for ship owners than in the state itself. This has been partly successful in slowing the re-flagging of ships from such flags to FOCs, although by 1998 the majority (51.3%) of the world fleet was flagged to FOCs (ITF, 1998).

**THE FLAG STATE AUDIT**

The Flag State Audit project was commissioned by the ITF in May 1999, and was designed to include all Flags-of-Conveniene and Second/International registers, and a selection of national flags. The project was completed ahead of its projected end date of 30th June 2001. As part of the project, the researchers have developed the present Flag State Conformance Index system, or FLASCI for short, in order to measure the relative performance of flag states. In its final form the Flag State Audit offers both a detailed report on each country and a FLASCI score by which each country can be compared to all others.
The present distribution of countries in the report is slightly different from that originally envisaged, and some FOCs have now been excluded. The reason for this exclusion is that the size of these fleets is both very small and static, indicating that the flag state is not aggressively marketing itself as a FOC, a good example of such a flag state is the Cook Islands. All of the second/international registers are still included, as are five national flags, namely Estonia, Latvia, Netherlands, Russia and Turkey. In order to establish the criteria by which other states could be measured, it was also necessary to identify two exemplars of maritime best practice, and the two countries chosen in this respect were Norway and the UK. That said, there is still extensive coverage of the world fleet, even taking into account the flag states that are not included, the report still covers 42% of the world fleet by numbers, and 70% by gross tonnage.

**SOURCES OF INFORMATION**

The main sources of reference for this study are as follows:

1. *Electronic/Internet Resources*. An extensive analysis of the material produced by flag states, maritime trade unions, shipowners organisations and international bodies such as IMO, ILO, ITF, OECD and EU.

2. *Non-Electronic Documentary Materials*. This included those produced by all of the bodies mentioned above, in addition to material derived from Lloyds List, other maritime journals, magazines, academic journals and books.

- *ITF actions database.* This examines the causes and outcomes of c5,000 complaints from seafarers.
- *Missions to Seafarers database.* This contains similar information to the ITF actions database and contains c2,500 entries.
- *The ITF/MORI Survey.* This survey examined various aspects of the working lives of seafarers and had c6,000 respondents.
- *Port state control data.* This relates to all detentions and inspection of vessels in the three year period for 1996 to 1998.
- *Lloyds Maritime Information database on CD-ROM.* This contains full details of the world fleet, including flag, structure of ownership, history etc.
- *Lloyds casualty database.* This covers details of vessel casualties covering the period from 1978 to the present day.
- *SIRC seafarers database.* This gives details of c340,000 seafarers working on board approximately 12,000 different ships, and has been constructed from crew lists collected by SIRC from various port around the world.

4. Original Data. With regards to our own original data, we have issued questionnaires to all flag states included in the project, and to all seafarer unions in those states. We have also interviewed key informants in both administrations and unions in a large number of the flag states.

**THE FORMAT OF THE REPORT**

There are two main parts to the report. Firstly the FLASCI index which will be discussed in more detail later, secondly country reports for each flag state. The latter is split into six sections, namely: administration, fleet, seafarers, labour law, company law and governance. In more detail the sections are comprised of the following elements.
• **ADMINISTRATION**

This section considers the exact nature of the administration, and whether the extent of its responsibilities and degree of efficiency legitimately place it into the category of national, second or international ship register. The distance, if any, between the geographical location and true ‘ownership’ of the register is considered, as are the restrictions placed upon crewing and certification requirements. The extent to which the register is genuinely ‘open’ is also examined, as are the scale of registration fees and taxation regime.

• **FLEET**

This section examines a wide range of measures that describe the characteristics of the flag state fleet of vessels. As well as indicators of the current status of the fleet, a range of measures are examined that depict trends over the last ten years. Such indicators include the size, tonnage and age of the fleet. Additionally, measures depicting the relative quality and safety of the fleet, such as PSC detention rates, casualty statistics and pollution figures are summarised.

• **SEAFARERS**

This section is concerned with both those provisions made for seafarers’ safety and welfare by each administration, and those cases either where such provisions fail, or are absent, and seafarers are forced to seek the assistance of other bodies such as the ITF or Missions to Seamen. In short the section looks at the nature and extent of compliance and complaints.
• **LABOUR LAW**

This section examines in some detail the employment legislation in each flag state. An analysis is made of the relevant legislation, in order to establish if nationals of the state are allowed to form and join trade unions; whether such unions have rights to collective bargaining; and whether, in the case of a dispute, the parties to collective bargaining have access to independent arbitration. An examination is also made as to whether the rights inherent in state employment law are extended to non-indigenous and/or non-resident seafarers.

• **COMPANY LAW**

ITF policy stipulates a need for the shipowner to maintain a substantial corporate entity in the flag of registry, thereby ensuring that effective control may be exercised. Therefore the status of company incorporation is considered, and this section is approached from the perspective of the benefits to be gained from registering an ‘offshore’ style company in that jurisdiction.

• **GOVERNANCE**

This section is not a discussion of the political situation within that country but a consideration of a number of salient points that contribute to the situation of both shipowners and seafarers, namely.

  • *Politico-Economic Risk.* The pre-requisite requirement for anyone wishing to establish their business or private interests offshore is to select a jurisdiction that provides political and economic stability so that business can be conducted with certainty, confidence and corporate security. If a shipowner wished to flag and/or incorporate on a territory there is a need for knowledge of the stability of the political regime and hence the risk level of the analysis.
• **Corruption.** Corruption effects both the operations of shipowners in terms of the operation of business and the implicit hidden costs in this operation, and to seafarers concerning the effective and fair operation of certification procedures.

• **Governments relationship with capital.** This includes both the governments commitment to creating a low risk environment for the operation of business, and attempt to entice capital through legislation favourable to an investment climate. It also includes how much government policy is other-directed by this capital.

• **External Threats.** At the current time, there is a two pronged attack on both harmful tax competition and money-laundering. Both of these interventions derived from the OECD, and both are expected to significantly effect the structure of international business regimes. As an indicator to the future a brief look will be taken at the current status of a country vis-à-vis these two factors.

**THE FLAG STATE CONFORMANCE INDEX (FLASCI)**

The Flag State Conformance Index is designed to represent a robust and valid index of the capacity of a Flag State to discharge all of its responsibilities in the context of international maritime law. The score itself is a composite of various measures of ‘best practice’ both in terms of the possession of a capacity, and the demonstration of its effective operation, i.e. the measure concerns both the formal capacity of an administration and the substantive results of its operation.

In order to operationalise the concept of ‘best practice’ of maritime states, the researchers divided the concept into seven sections which recognise different aspects of the operations of a flag. It is claimed that concentrating all the sections solely on maritime factors would omit a number of salient features which contribute to the functioning of the flag state, i.e. there is a need to look at the broader context in which a flag state functions such that it is not treated as operating in a political, legal and social vacuum. However, it must be borne in mind that this index should display a bias towards those measures that concern the maritime field directly, since it is a
measure of *maritime best practice* and not simply *best practice*. Hence the final score is weighted such that 70% of the measures are concerned with *strictly maritime* factors, and only 30% of the measure are *maritime-related* factors. Within the seven sections identified there occurred a further round of operationalisation in order to provide key analytical units that may combine to produce an account of the general subject area, and it is these that are reproduced below.

- **§A: The Flag Fleet (weight = 15%)**
  - Port State Control rates
  - Casualty rates
  - Pollution incidence
  - Extent of own-citizen labour force participation
  - Extent of own-citizen beneficial ownership
  - Abandonment of crews
  - Appearance in crew complaints databases

- **§B: Flag State Administrative Capacity (weight = 30%)**
  - Seafarer death records
  - Records of seafarer death investigations
  - Crew records of service
  - Serious accident records
  - Health screening procedures and records
  - Statistics of ships and owners
  - Seafaring labour force statistics
  - Certification of seafarers
  - Involvement in seafarer training and education
  - Accessibility of consular services
  - Supervision of safety surveys
  - Enforcement of ratified IMO and ILO conventions
  - Casualty investigation capacity
  - Publication of Maritime notices

- **§C: Flag State Maritime Law (weight = 20%)**
  - Ratification of IMO and ILO conventions
  - Provisions of maritime legal code
  - Publication of relevant law reports
  - Specialist law practitioners
  - Location of registry
• ‘Ownership’ of registry
• Vessel Registration Requirements

➤ §D: Miscellaneous Maritime (weight = 5%)

• Maritime welfare support
• Existence of maritime charities
• Existence of maritime interest groups
• Existence of government ministries/departments with maritime remit
• Stock exchange maritime listings/existence of state-owned shipping

➤ §E: Employment and trade union law and practice (weight = 10%)

• Legal rights for migrant labour
• Existence of independent trade unions
• Right to withdraw labour without penalty
• Existence of mediation/arbitration procedures
• Enforcement of trade union recognition procedures
• Existence of industrial tribunals/labour courts etc.
• Provision for trade union recognition
• Specialist law practitioners
• Publication of law reports

➤ §F: Corruption (weight = 10%)

• Probity of public officials
• Misapplication of public funds
• Integrity of legal process
• Integrity of political institutions
• Corporate integrity

➤ §G: Company & Corporate Practice (weight = 10%)

• Regulation of financial institutions
• Regulation of PLCs
• Regulation of non-resident companies
• Regulation of accounting standards
• Legal definition of corporate public responsibility

Concerning these sections two points are worth emphasising.

• Each analytical unit contains within itself a number of subsections that operationalise this unit, for example ‘Port State Control rates’ concerns Detention rates from each individual MoU (where data is available), and the
appearance of certain flags within the, variously termed, target lists. Hence the
51 measures open out into 97 distinct scoring tests.

- The measures themselves are internally weighted in terms of the subject area
  in order to reflect the importance of each measure in terms of each section.

The result of this method is the production of a scoring system that reflects ‘best
practice’ that includes a large number of measures covering a wide variety of aspects
of the operation of flag states. The measurement itself produce a score from 0 to 100,
where 100 is the benchmark of optimal practice and 0, the absence of any criteria that
constitute best practice.

THE CONSTRUCTION OF THE INDEX

The construction of any index must bear in mind a number of (potentially competing)
factors. To this end we offer a brief discussion of these in the context of this particular
index, and its construction.

- Validity—that the measures utilised in the calculation of the index actually
  measure salient factors that the index is designed to represent. Our aim in the
  choice of factors is to utilise a wide range of measure that together constitute a full
  account of the operation of the flag state, and the measures themselves take a
  number of forms. However there are three key types of variables, those that
  measure the capacity of a flag state administration (for example, do certain
  structures exist, are they staffed to an adequate level by trained individuals, are
certain operations carried out); measures of the effectiveness of that capacity (for example pollution rates, and port state control figures); the final category concerns more descriptive measures that are considered vital to the characterisation of a flag state and interact with the context of the operation of its maritime administration (for example, company law, regulations concerning who may register). Each measure is designed to elicit an aspect of the range of elements that together constitute ‘best practice’ in this field.

- **Weighting**—that key factors have the most impact on the index, in contrast to related, but less important measures. Since this index is devoted to ‘flag states’ and not simply ‘states’, it was decided that the majority of the weighting should lean towards the maritime field directly. However it was felt that to devote the index in its entirety to those maritime factors would miss out key indirect factors that contribute to an assessment of the operation and functioning of a flag state: Hence, as previously mentioned, 70% of the FLASCI score derives from direct maritime measures and 30% is indirect.

- **Objectivity**—that the measure used are not subject to forms of bias. The goal of an index is that it does not rely upon subjectively biased opinion, such that the index is but a reflection of the preferences of an individual or group. In order to minimise such bias we have attempted, as much as it is possible, to focus the measures on factual data which may be obtained in a non-biased manner. For example, where a criterion exists we have, in the first instance, sought to gain access to a centralised form of the data which provides a common definition of an event which can be applied to all countries in a valid manner. Where flag state
administrations have been unwilling, or unable, to provide certain information, the researchers have had to resort to an assessment based on other sources of information; if no information was available the measure was absent and the section was internally reweighted accordingly. Although it would be desirable to include certain measures in an index of this kind, that fact that no objective measures of these factors exist led us to leave these measure out entirely (for example although we have included the existence of maritime unions, we have not included any measure of their effectiveness or autonomy for the simple reason that such a measure would introduce subjective bias). Additionally, objectivity may also be gained through the use of a number of different sources that measure the same item, such that bias may be identified and removed.

- Cross national comparability—that when the measure exists its measurement occurs in the same way across all flag states, or that there exists some standard with which to adjudge different regimes. Although this point has been noted above, it is worth emphasising that understanding may be culturally bound, and that ‘best practice’ as a standard may include items that reflect the researchers own understanding of the process and may not be accepted across all groups. In that case it is important to consider the problem of ethnocentrism, i.e. that certain measures express only the understanding of a particular geographical, ethnic or cultural group in terms of what constitutes a ‘quality’ maritime nation. It is important to emphasise here that the inclusion of a measure should not be used in an uncritical manner, i.e. that a measure should be introduced because it is defensible; that there should be a clear rationale behind the use of a particular measure; and that if it does not find favour with another group, it should,
minimally, be defensible (and not only in terms of the preference of a particular
group); for example, a shipowner could describe best practice in terms of a Flag
State where costs are low and leaves them to act in an autonomous fashion
without the burden of regulation being forced upon them.

- **Availability**—*that the measure used are available for the majority of countries
utilised, and that the cost and time of extracting the data is not prohibitive.*

Obviously it would have been advantageous, if time and money had been
available, for the researchers to conduct full inspections of all the relevant
maritime administrations, and observe their operations at first hand, however such
a time investment would be prohibitive, nor would access be granted in all cases.

Hence the most readily available data and sources of information have been
extracted, utilised and coalesced, in order to present the most accurate picture
possible. There is always a trade-off between availability and objectivity in that
the latter is constrained by the former; however the researchers have endeavoured
to use all available relevant information.

- **Sensitivity and Extensiveness**—*how a measure reacts to changes that occur over
time.* An index may be of value if it displays two characteristics, that it:
  
  a. provides an extensive assessment of the factors of interest, i.e. it lists all
     the key elements of the factor; and
  
  b. that it is sensitive to changes over time.

There is something of a trade-off in these two items, to put it simply, the more
measures used, the less the change in one single factor (unless heavily weighted in
the calculation) affects the resulting index score.
RESULTS OF THE INDEX

Table 1. Summary of FLASCI Scores

<table>
<thead>
<tr>
<th>RANK</th>
<th>COUNTRY</th>
<th>FLASCI SCORE</th>
</tr>
</thead>
<tbody>
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<td>Norway</td>
<td>84</td>
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<tr>
<td>2</td>
<td>United Kingdom</td>
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<td>Kerguelen Islands</td>
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<td>Cambodia</td>
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Fig. 1. Distribution of FLASCI Scores (each bar represents a flag state)

The distribution of scores runs from a high of 84 belonging to Norway, the lowest 19, Cambodia. There appear to be a number of bands which occur in the distribution of data and these falls into five categories, a summary of which is offered below.

Table. 2. General Groups of FLASCI scores

<table>
<thead>
<tr>
<th>Category</th>
<th>Range of Scores</th>
<th>General Characteristics</th>
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<tbody>
<tr>
<td>High</td>
<td>72-84</td>
<td>Traditional Maritime Nation and second registers that are centrally operated and controlled</td>
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<tr>
<td>Med-High</td>
<td>58-64</td>
<td>Semi-autonomous second registers</td>
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<tr>
<td>Med</td>
<td>41-50</td>
<td>More established open registers with higher scores belonging to those states seeking EU membership</td>
</tr>
<tr>
<td>Low-Med</td>
<td>35-36</td>
<td>Newer open registers</td>
</tr>
<tr>
<td>Low</td>
<td>19-30</td>
<td>New entrants to the open register market.</td>
</tr>
</tbody>
</table>

These general characteristics, though representative of some general properties as a whole, are by no means exhaustive and may serve to disguise a number of interesting points, namely:
• Although national flags tend to score better than others, it is no guarantee of a high score. Indeed Turkey is ranked 27th with a score of 41, and Ukraine is ranked 29th with a score of 36. Eastern Europe occupies a complex position with, Ukraine being the lowest scorer in this geographical region and Latvia (Rank: 13, Score: 60) the highest.

• Whether a flag state is determined by the ITF to be a Flag of Convenience does have an effect on the score. However it not a simple matter that because a register is a FOC then it will necessarily achieve a low score, and *vice versa*. It is only possible to state that generally FOCs score lower than national flags, however there are a number of exceptions, e.g. GIS (Rank:6, Score: 75), and Bermuda (Rank: 11, Score: 63).

As with all statements concerning general trends within this data, care must be taken concerning general characteristics of groupings of the data and the specific qualities of individual countries.

**THE INDEX AND THE POLICY PROCESS**

This index represents an objective, extensive and valid summary of flag state best practice. However there are a number of factors that are salient to its relationship with the policy making process:

• *The nature of the index, i.e., it is factual.* The index offers a factual account of regulatory capacities but it does not, and cannot determine policy making
decisions of itself. It provides a composite scoring system based on a large number of criteria, but it would be erroneous to assign the decision making process to this measure alone, i.e. that a certain score determines the ‘status’ of a register.

- *There are different reasons why scores arise.* A low score could arise because a country is going through traumatic political, legal, and economic changes, however such a score could arise through a country setting up an open register as an autonomous business with no interest in its regulation. This index does not measure the reasons behind a poor rating, or otherwise, nor potential for the future, it merely reports that situation as it is.

- *The index does not reflect changes in just one factor.* If a country passed legislation that allowed shipowners to decide their own safe crewing levels, then this would have an obvious effect on policy decision making. However because this index relies on a large number of measures, the change in this one factor alone would not be reflected by a large change in the index scoring. Due to the fact that the FLASCI index system is both robust and extensive, changes in a single factor will not adversely affect the whole score.

**CONCLUSION**

The Flag State Audit Report, comprising both the textual country report and the FLASCI rating system will certainly help interested bodies in their decision-making processes simply by identifying appropriate criteria and levels of conformance with
best practice. The Flag State Audit will therefore provide the means for focusing
debate by identifying the balance of strengths and weaknesses of different flag states.
Of course the results of this audit process cannot determine policy decisions but their
objectivity and verifiability will make it much easier to make judgements defensible.

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CONCLUDING: INTERNATIONAL COMMUNITIES OF SEAFARERS

Tony Lane

This morning I referred to my voyage aboard a small bulker earlier this year. When I have talked to other people about my experiences I have always begun by saying that the ship had a crew of seven with six nationalities. Except for my colleagues in SIRC who are not fazed by this opening gambit, my offering of this evidence of multinationality to family, friends and many shipping industry folk, has almost invariably been met with raised eyebrows and an immediate presumption that this must have been a hellship. When faced with this response I’ll confess to being pleased at having yet another chance to refute what is taken to be common sense. But I must also tell you that there is irony in my insisting that I had actually sailed with a very likeable and professional crew. Five years ago I contributed to a book of essays concerned with international transport and I argued at some length that it was unlikely that mixed nationality crews could be as good as single nationality crews. Now I know better and not just as a result of my own experience.

With these matters often in the forefront of my mind, you will appreciate my immediate reaction to an excellent article last Saturday by Fergal Keane, a BBC Special Correspondent, who was writing in one of the UK’s leading dailies, The Independent. The headline is on the screen behind me.

I was impressed by what Keane said. On the one hand it was a well-argued discussion of collective hatreds between peoples in so many world regions. On the other hand I could relate to his argument that maybe it was only in small-scale communities that it was possible to promote unity through diversity. But what a shame, I thought, that he didn’t know about developments in world shipping where thousands of ships with multinational crews are at sea as I speak - and with never a mutiny among them! I need hardly say that they do not all work wonderfully and some of them are undoubtedly woeful. But I am suggesting that where things are bad it is not because of their multinationality.
I do know better than to be starry-eyed. I know perfectly well why we have so many multinational crews - and it is not because shipowners, shipmanagers and trade unions are dyed-in-the-wool but closet internationalists, committed to promoting peace and harmony among the peoples of the world. Generally speaking, trade unions have been at best deeply suspicious of mixed crews because they have seen them as attempts by employers to inhibit collective action and find ways of cutting costs by hiring cheaper crews. For their part, employers have been making decisions about costs and labour availability in the context of the impact of commodity and manufactured goods’ markets on freight rates. I don’t know anyone who has idealistic reasons for their crewing policies … and I suspect crew managers would be horrified at the thought and go into instant denial. There may be some exceptions but I am not going to embarrass anyone here by asking for a show of hands!

Pragmatism is what determines crew patterns as indeed it always has. When the British Commodore Anson set off with five ships for some routine looting of the Spanish Pacific empire in 1740 he left Portsmouth with close to 2000 men. He returned five years later with only 190 remaining of the original complements and to make up the crew to get his one remaining ship home, a contemporary account said his crew included and I quote: ‘Dutch, French, Spaniards, Italians, Germans, Swedes, Danes, Muscovites, Lascar Indians, Malays, Persians, Indians of Manila, Timor and Guam, Negroes of Guinea, Creoles of Mexico and Mozambique’. In short, not hugely different from the crews of several companies represented here today.

In the modern period pragmatism is followed by planning where crews are consciously assembled from various world regions on the basis of price, experience and certification. International crews are here to stay. The UK which never had very stringent nationality requirements for its ships, today has even fewer. Italy and Japan have substantially reduced their nationality restrictions while Singapore and Hong Kong, like the UK, have always had modest restrictions. Of the Asian countries who are relatively new entrants to world shipping, China is just about the only one with national crews. And if I could be sure of being around to collect the winnings, I would be willing to bet a lot of money that in thirty years time Chinese ships will also have international crews.
Perhaps I can now come back to what prompted me to take up Fergal Keane’s discussion of ethnic and national hatreds and say that the global shipping industry can do its bit for international relations. You may find this idea surprising so let me persuade you that it can be done without getting involved in politics of any description or persuasion. All the industry needs to do is carry on with its international crewing practices but carry them through more consciously and thoughtfully. Several years ago in Germany and in response to a neo-Nazi revival and racist attacks, the principal of one of that country’s largest shipping companies apologised for these outbreaks in his company’s newsletter and asked his employees to understand that most Germans repudiated this sort of behaviour. A small thing you might say but considered gestures of this sort are often taken by seafarers as meaningful and substantial, especially where they are consistent with other evidence of quietly responsive personnel policy.

Since ships are necessarily hierarchical communities, care in the selection of senior officers and the instructions given them is of course essential. Ships with small crews can be lonely places and a bit of thought given to accommodation design aimed at optimising the use of public spaces without intruding on privacy would be helpful. Food cultures matter a lot so sensitivity to victualling and the training and selection of cooks could almost be critical. Good pay and conditions are basic. Ships are places where people work extremely hard and for hours far longer than would be tolerated ashore. The opportunity costs paid by seafarers must surely be higher than those incurred by employees in any other modern industry and here I am thinking particularly of absences from home. The social costs incurred by absence do not vary with nationality or rank. We can be confident that Filipino ABs working on car carriers miss their homes as much as their Norwegian or Italian officers and the same goes for everyone else everywhere else.

Yes, the industry’s workforce will get more international. And yes, there is no going back. But if we are to see well run ships with highly skilled and motivated crews then there is bound to be an upward levelling of conditions among the various nationalities. And no, I cannot see why anyone should get anxious about this. Shipping is an incredibly cost efficient and environmentally friendly way of moving commodities and no technological developments remotely in sight are going to change any of that.
None of what I am suggesting is especially radical. It may not often have been said in our industry but it’s mostly yesterday’s news in many others. In shipping, however, we have an extra and huge advantage. Merely by observing the standards of best practice industrial employment but doing it with an international workforce gives us a wonderful opportunity to present the shipping industry as a working example of the advantages of globalism. In a world where everyone hungers for peace and stability, it would be hard to exaggerate the commercial and human benefits to be had from being the world’s role model.

I am retiring next year and my successor will be standing here in two years time. In 2003 I will be joining my predecessor, Alastair Couper, in the audience. I shall not have many more opportunities to address such a varied and international audience as this one so I am sure you will understand that I found it impossible to miss the chance to say publicly what a lot of people of goodwill can be heard saying privately. Thank you all for coming and I hope you have found it worthwhile.
BEHIND THE SCENES: SEAFARING AND FAMILY LIFE
Michelle Thomas, Helen Sampson and Minghua Zhao

Abstract
Separation from partner and family has been found to be one of the most significant causes of stress for seafarers (Parker et al., 1997), with separation from the family one of the most important ‘stress’ factors influencing a decision to reduce planned sea service (Telegraph, 1999). Drawing on in-depth interviews with seafarers’ partners in the UK, China and India, this paper focuses on the impact of seafaring on family life, with particular attention given to the effects of differing conditions of service and the range of company support available to seafarers and their partners. The paper concludes that the negative consequences of seafaring can be minimised by such policies as shorter trips, continuous employment (rather than employment by voyage) and opportunities for partners and families to sail. Whilst these measures may have financial costs, these can be off-set by improved retention of seafarers and the avoidance of stress-related illnesses. Indeed, at a time when there is a projected shortfall of well-trained seafarers, such steps may be sound company policy.

INTRODUCTION

The world’s seafarers can be seen as one of the first truly international and global workforces, comprising of individuals from regions as geographically and culturally disparate as Western Europe, Russia, India, South America and the Philippines. Such seafarers work on a range of different vessels, operating different trades, with a diverse range of work conditions. However, one thing that these individuals have in common is that their work necessitates prolonged separations from their home and families, separations that are often characterised by infrequent opportunities for communication. As such, seafaring may be seen as a more than an occupation, rather a lifestyle - a lifestyle that involves a constant series of partings and reunions with associated transitions from shore-based life to the unique work environment of the ship. Inevitably it is a lifestyle that will impact dramatically on both seafarers and their families alike.

Given the dearth of research on seafarers in general, it is no surprise that little attention has been given to the impact of seafaring on family life or the effect of prolonged absences from home and family on the seafarers themselves. However the
little research that does exist suggests that such separations from home and family may be problematic for seafarers and their families. Research with harbour physicians in Rotterdam identified three main psychological problems among seafarers: loneliness, homesickness, and "burn-out" syndrome. The problems were primarily caused by long periods away from home, the decreased number of seafarers per ship, and by increased automation (Achterberg and Passchier, 1998). More recent research by the Australian Maritime Safety Association (AMSA) found that seafarers reported the ‘home-work’ interface to be their greatest source of stress (Parker et al., 1997). Such problems may not be without consequence: investigations into suicide at sea have identified marital and family problems as contributory factors to the event (Roberts, 1998).

Whilst seafarers’ partners do not have to physically leave their homes and families in the same way that seafarers do, they are, nevertheless, also faced with a relationship characterised by separation and reunion and the constant adjustments these transitions require. Research suggests that such a pattern may affect health resulting in higher rates of depression and anxiety amongst seafarers’ partners than in the general population (Parker et al., 1998). As with seafarers, studies of partners highlight the difficulties associated with the transition periods of the work cycle. In 1986 an Australian study of seafarers’ wives found 83% reporting some degree of stress when their partners were due home or due to return to sea, with nearly one in ten (8%) reporting taking medication to cope (Foster and Cacioppe, 1986). Nearly half (42%) of the women in this sample felt that their relationship with their partner was strongly at risk due to the seafaring lifestyle and 25% believed that their partner was having, or had had, an affair.

This paper will focus on the impact of seafaring on seafarers' families. In particular, it will consider the impact of differing conditions of work on seafarers’ families and will explore the range of company support available to address and minimise the impact of a seafaring lifestyle. It draws on data collected from two different studies: the Transnational Communities Project (TNC) (Kahveci and Sampson) and the Seafaring and Family Life Study (Thomas and Zhao).
METHODS

The data presented in this paper is drawn from 35 interviews conducted over an 12 month period. Interviews were conducted in the UK, India and China, with a small number of interviews being conducted aboard ship in international waters. Women were identified using a number of strategies, including use of existing SIRC databases, an advertisement in the NUMAST Telegraph, contacts made whilst doing shipboard research, and information from shipping companies and trade unions.

Seafaring and family life is a relatively unexplored area and as such, interview formats were structured in a flexible way, in this way ensuring that researchers were not restricted by their own pre-conceived ideas but could encourage participants to explain things in their own terms, allowing the researcher to explore interesting issues and experiences as they were introduced by the informant. All interviews were conducted in English, with the exception of those with Chinese seafarer’s wives, which were conducted in Chinese by Zhao and our Chinese collaborators. All interviews were tape recorded and transcribed verbatim.\(^1\)

The women interviewed for this study were of different ages and points in their lives, some were recently married, some had young children, some had adult children and some had partners who had recently retired. All the women’s partners were employed in cargo shipping. The Indian women’s partners were both officers and ratings. Chinese and British women were married to officers.\(^2\)

Throughout the text, verbatim quotes are included from the interviews. This gives a vivid account of how respondents think, talk and behave. Each quote is assigned an identifier to indicate the rank of their partner and the country where the interview took place.\(^3\)

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\(^1\) Chinese interviews were transcribed in Chinese and translated to English.

\(^2\) In the British data there was an over-representation of women married to Captains and Chief Engineers, reflecting the increased likelihood of those in these groups to respond to the recruitment advertisement.

\(^3\) Throughout this paper seafarers will be attributed the male gender and their partners, female. However, the authors recognise that seafarers may be female and have male partners, and that both male and female seafarers may choose same-sex partners. We also recognise that partners, may, in some cases not be married and hence not be ‘wives’ or ‘husbands’. However, for the purposes of this
CULTURAL CONTEXT

The women interviewed for this study experience their lives as seafarers' partners in quite different cultural contexts. The Chinese women participating in the research lived in either Shanghai or Nanyang. Most of the women in Shanghai lived in apartment buildings built and subsidised by their husbands’ companies, and hence in a seafaring community near the port. The living context for the Nanyang wives was different. Far from the sea and the shipping company, these women lived in an environment, which was land-oriented and they had little knowledge of shipping or seafaring. The wives of British officers were geographical dispersed and lived in both coastal and inland regions. Many had little previous connection with the sea or shipping. Although occasionally, these women were aware of other seafarer’s wives who lived in their locality, they usually had little or no contact with each other. In India the women included in the study lived in very different social, geographic, and economic, environments. Some officers wives lived in the highly urban environment of Mumbai. They tended to live in small, sparsely furnished, low-rise apartments on private estates that were generally protected by security guards. They normally relied on domestic help with cleaning and childcare. Their lives were less exposed to public scrutiny than those of their Goan counterparts. In Goa, officers wives lived in luxurious detached houses with large well cared for gardens and a range of paid helpers including gardeners and maids. They were surrounded by a close community and had much less freedom than seafarers’ partners in Mumbai. Nevertheless many were in paid employment and social attitudes did not seem as constraining as they were in the small village communities that tended to house the wives of ratings. In these small villages, some ratings' partners lived in poverty. They were frequently in debt to their neighbours and families, and where ratings’ wives were in paid employment, this was invariably for the little financial reward they could gain. Many wives of seafarers in India had been married by arrangement. Their domestic, as well as their economic and social situations, were, therefore, rather different to those of the British and Chinese partners of seafarers.

paper, our choice of language reflects the characteristics of those participating in the studies from which this data is drawn.
FINDINGS

Working Conditions
Length of contract
Not surprisingly length of contract was a significant factor shaping the experience of being married to a seafarer. Contract lengths vary according to nationality and rank, and reflect company employment policies, types of trade and differential labour market values (SIRC, 1999). In China, in order to deal with surplus seafarers, large employers have adopted policies to shorten seafarers’ sailing time by as much as half so that ‘seafarers take turns to go to sea’ (Zhao, 2001, personal communication). Such strategies have resulted in Chinese seafarers working for local companies having a sea-time of approximately 6 months with a corresponding leave period of a further 6 months. Chinese seafarers working for foreign ship owners can expect to work for one year or longer before they are allowed to take 3-4 months leave ashore. Indian seafarers experience tours of similar duration however they correlate more strongly with rank (with officers enjoying shorter contracts than ratings) than with flag or company. As with Indian officers, the partners of women in the UK study worked tours of duty ranging from 3 weeks to 6 months, with the majority working three-four months away. For British seafarers, leave periods varied from equal time to a ratio of two to one (work to leave).

Only those British women whose husbands worked tours of relatively short duration (4 weeks or less) reported that they found the length of the period apart acceptable. Regardless of their nationality, the majority of women found such long absences led to considerable problems, including loneliness while their partner was away and an irreconcilable emotional distance when their partner returned home.

*It’s just an awful long time, you know it’s just - they’re just away for such a chunk of the year, and every time they come home on a leave for a little bit and then gone, they just seem to be away for an awfully long time.*

*Third officer’s Wife, UK*

For women whose partners worked longer tours of duty, the difficulties of maintaining an emotional closeness with their partner seemed more apparent.
I would enjoy having my husband come home at night, in a way. It's a different life. Not together for months sometimes. Sometimes it gets to you. But I am more used to it than anything, but there's nothing like having the person there. Eight and a half months, and then back again. As you get old, things change, and you have to get back into the routine. Feelings change, emotions change, ways of thinking change.

Captain’s wife, India

The difficulties of separation could be exacerbated in the situation where families had young children. Women were aware that their partners were absent for large and significant periods of their children’s lives and witnessed the distress of both their partners and their children when husband and child were as strangers to one another.

Too long. And for the children also, they are lost without their father. They want father's love. So it's a problem. That's the main thing when you go for too long...Yes, he used to feel bad. `Why are they not coming and talking to me?' Sometimes it was like they had not seen their father at all. When they are born, and then he comes home after seven months or eight months, they don't recognise who he is. When they were two or three years, he used to say `Why are they not coming to me?' I said, `It takes time, they must get used to you.' Then after they get used to him, they go and play.... Disadvantages in the sense of, the love between the father and the children, it comes less. They don't get to know the father properly, and he's away a very long time at sea. Then he comes home, and stays for a long time with the children. They say, `How long are you home, when do you go away?' Because they didn't know him much.

Chief cooks’ wife, India

The wives of Indian officers appeared to fare better than the wives of Indian ratings: Indian officers working on Flag of Convenience vessels were often in the position to pick and choose contracts so that they might work as little as four months in twelve. British seafarers and their partners also enjoyed a better ratio of leave to work than Indian ratings and Chinese seafarers working for foreign companies. Indeed, for the partners of British seafarers, what appeared to be crucial to the experience of their partner being away was not simply the length of the trip, but rather the ratio of work to leave time. A ‘one-to-one’ ratio of work to leave time was desired by most wives of British seafarers. However, for seafarers’ partners from China and ratings’ and petty officers’ partners from India, their different economic circumstances and seafarers employment contracts could mean that long leave periods could, in fact, be filled with anxiety and tension.
And it becomes too much, with the man at home, they are out drinking, and we are eating. It is too much. When we are at home, we know how to adjust ourselves, but when they are they are at home as well, it is too expensive. Very high. With the company, there should be a gap of maybe two months, or three months, at the most. You know how these officers, they have four and a half months they work and then four and a half months leave. They know. And still they get wages. But ours, my husband doesn't get wages. He's on completely no wages at all for the six or seven months. That becomes very difficult for us.

Chief Cook’s wife, India

Most of the women interviewed in Shanghai were redundant workers and solely dependent on the seafarers’ wages for financial support. Thus, the reduced wages during the seafarer’s leave period could have a significant impact on the financial resources available to the family (at a time when, perversely, the presence of the long-absent seafarers could cause living costs to rise). For Indian women, their partners’ contracts were often only for the duration of any one trip so leave periods were often entirely unpaid, resulting in a dependency on savings for the duration of the leave period. Whilst, in some cases seafarers could be recalled by the same company, there appeared to exist a general uncertainty about when they would be recalled. Indian ratings without an Indian CDC\textsuperscript{4} appeared to find it particularly difficult to get regular work, often resulting in very long leave periods.

For the partners of these seafarers, there existed a conflict between the desire to spend time with their husband and partner and concerns about the economic survival of their family when the seafarer was at home. Such concerns could result in a long-awaited family reunion being fraught with tension and anxiety.

Demands on leave time

Leave time may be vital in order for the seafarer to rest and relax after their sea voyage and for couples and families to re-establish bonds and relationships. As noted earlier, for some seafarers, ratios of leave to work time may be very low, and as such, time may be at a premium. Our interview data suggests that such shore-based time cannot be considered as uninterrupted free time for seafarers to utilise according to their own wishes and indeed figures for leave periods may in fact give a misleading

\textsuperscript{4} Indian Seaman’s Book.
impression of seafarers’ time away from the demands and restrictions of the workplace.

Increasing global regulation of the shipping industry, such as the STCW ’95, has led to increased demands on seafarers to ensure that they meet with industry training standards. Unable to attend courses whilst at sea, seafarers often have no choice but to complete pre-requisite courses during their leave period. Such training courses may be substantial, both in duration and in financial cost to the seafarer and their family. Whilst some courses may last only a few days, this period is increased by, often considerable, travel time, and indeed it was not unheard of for courses to last up to three months \(^5\). In the context of a leave period of perhaps eight weeks, even relatively short courses could present a significant encroachment on leave time. Both the wives of Chinese and Indian seafarers commented on training demands that infringed on the seafarers’ leave period.

> It is an ocean going vessel and the voyage lasts for a minimum of 11 months, normally it lasts for more than a year. Last year he was on the ship for more than 13 months, only came back this April, and a month and a bit later he was called back by the company, to do a 48-day training scheme. The scheme was in Guangzhou. During the four months when he was back, he was home for less than half the time. Then he went to the training course, after that he was home for less than a week, then he was called to go back aboard the ship.
> 
> Second Engineer’s wife, China.

Ratings’ and petty officers’ wives in India also reported that their husbands were required to ‘report in’ to the office upon their return home. The office could be a flight distance away and so further prolonged the separation between seafarers and their families. Senior officers generally did not report back to their offices in person but would wait to be called to return to their ships or would call in when they were ready to return to work.

\(^5\) During fieldwork in Shanghai, Zhao spoke with a group of seafarers taking a three month course in language and STCW training at a marine colleague. Seafarers who stayed on campus were not allowed to visit their families until the weekend and for some, in other cities, this meant separation from their families for the entire duration of the course.
The wives of British seafarers did not talk about training requirements or demands from the office cutting into leave periods. This may be because more favourable contracts may add any training time to the seafarers’ leave period, thus avoiding the loss of time with the family. However, the wives of British seafarers did feel that work invaded leave periods albeit in a less tangible way than experienced by Chinese and Indian women. The wives of British seafarers reported that their partners often returned home from sea, exhausted and stressed and took sometime to unwind and adjust to family life again. Similarly women reported that their partner’s began to make adjustments for their return back to sea as they neared the end of their leave period. Where the leave period was short in duration, couples and families could be left with very little quality time together.

_I found it horrendous, he would come home so tired, absolutely zonked out cos he was still a second mate and he’d come home absolutely shattered - took him days and days to get over it – and then half way through he would come alive and then be worried about going back to work the fourth week. So you’d always have two out of the four weeks that were useless._

_Captain’s wife, UK_

Thus, regardless of nationality, women in this study found leave periods to be far from unfettered by the demands of work. For Indian and Chinese seafarers, the need to undergo training to meet with new regulations and international standards often necessitated further periods away from their homes and families. For the wives of British officers, this did not appear to be such a problem, possibly due to better conditions of service which meant that they were compensated for any loss of leave due to training. Other company demands, such as requirements to visit central offices, could also encroach on leave periods. Changes in the industry such as increased automation, decreased crewing levels, increased work load and decreased job security have put pressure on seafarers to put in extra hours to keep their jobs (Collins, et al., 2000). Such pressures have resulted in increased levels of stress and fatigue (NUMAST, 1995). These increased hours of work and occupational pressures appeared to expand beyond the confines of the ship to impact on home life. For the wives of British officers, one of the most common problems during the transition period between ship and home was related to the stress associated with the job and the problems their partner had ‘switching off’ when they returned home from a tour of
duty, and the subsequent anxieties in the period prior to re-joining the vessel. Thus even for those on more favourable contracts, where training time was compensated by additional leave, work concerns could still be manifest and have a detrimental effect on family life.

Ship visits and women sailing

The opportunity to sail with a partner was something that was made available to the majority of wives of British and Indian officers. Those women who had sailed were generally very positive about the experience and felt that not only did it give them valuable time with their husbands but that it also led to a greater understanding of their partner’s work. Indian women reported feeling that the time spent together aboard improved their abilities to communicate with their husbands and that sailing with their husband allowed them to come to understand that the life of a seafarer was mostly hard work and this prevented them from being resentful or suspicious.

Yes. Definitely. I would have felt that understanding may not have been there, the closeness may not have been there in the initial years of marriage, if I had not been able to sail with him. Now that I look back now. That helped me a lot.

Chief Officer’s wife, India

Where women (British and Indian) were able to take their children aboard to sail, they also felt this had a positive effects on relationships between children and their fathers.

Wives of Indian seafarers employed as ratings were less likely to be able to sail with their husbands. The data suggested that those Indian women who were not allowed to sail regretted that they were not able to do so and seemed to feel shut out of their husband’s lives.

Is there anything you think is important that I haven’t asked about?

Only the seafarers can't take their wives on the ship. That's the worst problem. Otherwise - we are used to it. He must go.

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6 One company that employed several of the Indian seafarers whose wives were included in the study allowed the wives of any ranks to sail, subject to available (suitable) living accommodation and safety regulations.
Why is it so important, do you think?
It’s like that. For many years my husband has been a shippie. And I should like also to share his job or whatever his life is on the ship. I am a shippie’s wife.

Chief Cook’s wife, India

In China, women have not traditionally been allowed to sail with their husbands. More usually, seafarer’s wives have tended to visit their husbands on board when the ship is in port. This was true of the Chinese women interviewed in this study. Women reported travelling long and arduous journeys with their children, and sometimes their families, in order to spend some precious time with their husbands.

When the child was small, we have met twice on his ship. Once in 1983 was in Shanghai, he wrote to say when the ship would be arriving and asked me to take the child to Shanghai. Then our child was only four, we took the train from Huang Shi in Hubei to Shanghai, and it took us three days and two nights by train. After that, we stayed on the ship for three days, then he sent us on the ship bound for home, then his ship left.

Second Engineer’s wife, China

The opportunity to spend time with each other was valued by the seafarers and their partners alike. However, there was evidence that the drastic reduction of turnaround time had had a direct effect on the length of the wife’s visit. In the past, when time in port was longer, the visiting wife could stay aboard with her husband for several days while the ship was operating in port. In contrast, more recently, it appeared to be quite common for a woman to travel for several days from inland provinces, only to be able to her husband for a few hours, (if, indeed, she did not miss the ship altogether). A woman recounts her experience when she visited her husband’s ship in 2000:

He was sailing at sea when our child was born. Our child is 8 months old now. Three months ago, when his ship was calling Qingdao, I took the child and my parents to visit him there. He missed us very much and said that he would be happy if he could only have a look at the baby. Otherwise, he would have to wait for another few months and when our child could become one year old. So I agreed. I had a painful arm, I had to take my parents to help me on the way. It was a long journey, from Nanyang to Qingdao, 29 hours by train. By the time we arrived there, it was already 5 o’clock in the afternoon and the ship would be sailing at 10. We met for only 4 hours. I was really sad . . . I wish he could have stayed longer. But the ship had been loaded and
unloaded so quickly that I had to take my baby and leave the ship after only meeting with him for 4 hours!
Second Officer’s wife, China

The accounts of British and Indian women who had had the opportunities to sail with their husbands reflect the beneficial effects of this opportunity for both seafarers and their partners. Indeed, the efforts made by Chinese women to visit their husbands, even for very short periods, illustrates the importance of physical contact, however brief, for couples and their families. For women, spending time with their husbands aboard served to bridge the gap between ship and shore life and to facilitate support and understanding between couples. Women could have an insight into the occupational world of their husband whilst simultaneously reducing or avoiding the lengthy separations which could be so detrimental to relationships.

Company support

The level of Company support varied considerably amongst the women in the study. Chinese women appeared to have considerably more company support than their Indian and British counterparts. The most clear illustration of this can be seen in the example of the ‘Seafarers’ Wives Committee’ which was introduced by the Party Committee through the trade union of the shipping company. The chief objective of the Committee was to ‘unite seafarers wives at home front and to provide support for seafarers at sea,’ (Zhao, 2001, personal communication). As a woman in charge of the Seafarers Wives’ Committee explained:

The Committee commits itself to help the seafarers’ families. We have a tradition here. Any seafarer returns from the sea for leave, one of the first things he does is to report to the Committee. He would drop in and say hello to us. And, he would say, “Hi, I am home for two months. Please don’t hesitate to let me know if you need any help.” In this case, we would know who is at home and who isn’t. Then, when seafarers’ wives need help, for instance, when they need to move house, to buy coal or do other physically demanding tasks, we would give some of the men a ring and ask them for help. Oh, yeah, they are always happy to help, because they know their wives may need help when they are away sailing at sea.

Aided by the close physical proximity of seafaring families to each other, the Committee played a crucial role in organising the seafarers and their families together
and formalising a mutually beneficial relationship which otherwise could only be realised through the informal means of seafarers’ social networking. The Chinese wives recognised the work and contribution of the Committee in promoting the welfare for seafarers and their families.

*His work unit has been good to me, especially when I was sick. In 1988, I somehow adopted hepatitis and our son was only 7 years old. I phoned his company, asking if they could allow him to leave this ship and come back to look after me. They told me that it might take him a while to return, but they offered to send a person to help me. Although I declined their offer, because hepatitis is a very infectious disease and I didn’t want anyone to pick it up, I have been touched by their kindness. Then, in 1999 when I had a major surgery, the company phoned me several times to send their best wishes. They also gave me some money and bought me fruits when I returned home from the hospital.

Chief officer’s wife, China*

However, at the same time, these women also expressed disappointment with the company as, as a result of the country’s economic reform, such an important service has been reduced in recent years.

*The company calls us as Haifuren (seafarers’ wives) and we also refer ourselves so. I believe that Haifuren’s role is very important, but the work unit doesn’t pay us much attention now. They used to organise parties or other gathering occasions for us, but they no longer organise such activities now.

Captain’s wife, China*

The importance of the clustering of seafaring families to the success of the Committee can be seen when the situation of seafaring wives in inland areas is examined. The geographical distance between them prevented the ‘Wives Station’ to function effectively or in the same way as the Committee in the port cities where most seafarers and their families live in the same apartment buildings.

*Well, I met them only once, it was when they came to organise the Wives Station. Other than that, my contact with them is mainly by phone or post. They sometimes send forms for us to fill in, such as the medical form for him, the family planning form, their annual thanks letter etc. They were always very kind whenever I phoned them ... but I don’t think that I can rely on them for practical help. I have to depend on my own family, my parents for help whenever I have any problem.

Second officer’s wife, China*
In this case, seafarers’ wives were more dependent on their informal social networks, especially their own parents, for practical support.

In contrast to the experience of the Chinese seafarers’ wives, contact with company was reported to be low by several of the wives of British officers. Approximately one third of these women said they had little of no contact with the company that employed their husband. About a third of the UK seafarers’ wives had had reason to contact the company for the husband to be brought home in a family emergency, ranging from a parent’s stroke to the illness of daughter. However many women had had negative experiences in relation to their partner’s company. In extreme cases, two seafarers had been made unexpectedly redundant and informed by letter after many years of service for the same company, another woman found, from reading a national newspaper, that the ship her husband was on was caught in cross-fire during the Gulf war and a third seafarer was never paid over £20,000 salary owed to him. Less extreme was the frequently expressed complaint relating to the unpredictability of work schedules. Difficulties finding reliefs was reported as extremely stressful for seafarers and their partners and families and led to an inability to plan, from small events like trips to the theatre to family holidays. The uncertainty associated with transitions from work to home and from home to work could be a particular source of tension for seafarers and their families.

Like I was, that’s another thing because it disrupts my lifestyle because I work full time when he’s away and he’ll come home unexpected now and I wasn’t due for holidays until September cos I was hoping to book a couple of weeks off when he comes home in September. So now he won’t be home in September and of course I’m saying ‘is there any way you can give me a week off cos he’s only home for a week?’, you know.

Captain’s wife, UK

The experiences of the wives of Indian seafarers varied accorded to the rank of their husband: senior officers’ wives appeared to have good company support and access, rather similar to that reported by the wives of British officers. However for the wives of Indian ratings, the situation was quite different. Some women reported that they felt they were deliberately kept in the dark by their husbands’ companies and sometimes they were just not kept informed at all.
If there was an emergency at home, do you know how to contact him?
Yes. I try to contact the office. Last time, when I lost my mother, they didn't know where he was. We sent a fax message to them, but they didn't contact [him]. [. . . . .]
How long was it, from when you lost your mother to when he came?
It was twenty-eight days. My brother came from abroad. But my husband didn't get the message.
So you knew how to contact him, but it didn't work. And you don't have any direct contact with the ship?
No.

Motorman’s wife, India

The experience of the Chinese seafarers’ wives in terms of company support largely reflects the specific historical and cultural context\(^7\). However, regardless of the origin – it was clear that this support was valued by the women and appeared to lessen the impact of having a partner who was away from home for long periods. More support and contact from the company was often mentioned as a means of improving the welfare of seafarers and their families by both Indian and British seafarers’ wives. In particular, it was felt important that that partners should feel that they could get in touch with their husband in the event of an emergency and that the company should keep families informed of their partner’s ship’s movements. Several British seafarers’ wives reported that they would welcome any efforts by their husband’s company to put them in touch with other seafarers’ wives and families. Efforts to reduce the uncertainty regarding dates as to when their partners were due to return home or join ships were also steps that women felt would be welcomed.

Communication

The separation from family and home has been found to be one of the most significant factors contributing to stress amongst those in offshore industries (Sutherland and Flin, 1989). Contact with home can be particularly important at times of ill health of family members when stress levels at sea can rise dramatically (Parker et al., 1997). Advances in communication technology have considerable significance in the lives of

\(^7\) In China, employees refer to their employers, such as schools, factories or hospitals, as danwei or the work units. Under the planned economy the work unit was responsible for providing its employees with both their wages and virtually all the social services such as child care, children’s education, medicine, pension, and even incurred cost for funerals. Whilst economic reform has drastically restructured the institution of the work unit in the last 20 years, the work unit still carries far more weight in shaping individuals’ work and life than most employers in the Western economy.
work-separated couples (Robertson, 2001) and in maintaining relationships with the family and shore-based life (Davies and Parfett, 1998). Indeed, reduced frequency of contact can lead to relationship decline and eventual breakdown (Argyle, 1990).

It is not surprising that for all women, regardless of nationality, communication with their husbands and between ship and shore was of considerable significance. Communication was important for a number of reasons, to allay fears, to maintain close relationships, to improve seafarers morale, to relieve stress (on board and at home) and to maintain relationships with children.

*It's OK for me, we don't have kids. But others, it is very difficult for a father to leave the child and go. When they go they really feel bad. They don't like to leave the family. They wait for the letters from the family, I have seen them. Specially when they go to port, they come running, 'My letter has come.' And they are happy, when they receive their letters. The person who does not receive his letter - my husband always tells me, 'Write something and send it to me.' When they are over there, they keep on thinking about the family. So when you read something again and again, it makes you feel a little better*

Chief Officer’s wife, India

For Indian women who had had arranged marriages, ship-shore communication could be vital, not just to sustain the relationship, but for the couple to actually get to know each other.

*I think - because you know he keeps on ringing me up from every port, every port there is not any money matters for him. He will just keep talking. I say 'It is becoming expensive', but he will say no, no. 'You keep on talking to me.' Then he will call his mummy, call his father. He kept on talking to them. After that, I came to know. Because initially, since we didn't know each other, you always have that feeling, because you don't know the person as such.*

Chief Officer’s wife, India

Seafarers and their partners reported utilising a wide range of forms of communication, from conventional letters, to satellite and mobile phone calls and email. Advances in communication technology were heralded as quite life-changing to this group. Increasing access to email and to cheaper international phone calls via cell-net phones served to expand opportunities for communication considerably.
Before, we contacted each other by letters. Letters were our spiritual food then. We wrote to each other a letter every month. Occasionally we made phone calls. But phone calls were too expensive at that time, so I would have to prepare well what to say before dialling the number. Now we use the phone and mobile to keep in touch.

Captain’s wife, China

However, whilst advances in telecommunication technology were undoubtedly advantageous to seafarers and their partners, access varied considerably. All wives appeared to use a combination of letters and phone calls, with British, and occasionally Indian, women reporting using email to stay in touch with their partners. All couples were, in fact, very reliant on modern communication technology for contact with their partners. All of the British couples (where the seafarer was currently serving) used cell phones to communicate (both nationally and internationally). This is considerably higher than the national rate of mobile phone ownership\(^8\). In addition, nearly half of the British couples reported having email facilities at home. A much higher proportion than those wives of Indian and Chinese seafarers.

Those women who had access to email were very positive about its effect on their lives and their relationships.

*It’s [email] absolutely wonderful because whereas before I’d say ‘Oh bloody hell the girls – they’ve pissed me off!’ or something like that….Now he can say ‘well what have they done now?’ Whereas before I’d have had to bottle it all up and you might put it down on paper but when you do that it isn’t anything like the day that you’ve gone through. Maybe by the time he’s come back you’ve got it all resolved but its better to be able to share it there and then.*

Captain’s wife, UK

Email and telephone conversations allowed wives to keep their partner informed of small day-to-day events that might not be reported in a letter or mentioned on their return home. The frequency and style of email and telephone conversations was reported to be vital in managing the transition from home to work and work to home and in linking the two domains so that movement between the two was less problematic. Those British seafarers working coastal routes could often call home

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\(^8\) From 1990-2000, 44% of households in Britain had at least one mobile phone (National Statistics, 2001).
using shore-based mobile networks, at dramatically lower costs than satellite phone calls. Weekly telephone communication was not uncommon for those British seafarers working in these conditions. Emotional needs were met by frequency of telephone calls but such contact was also valued for its practical implications, allowing seafarers to take part in, and respond to household and family decisions such as queries over house insurance, and decisions relating to children’s well-being.

Then there were no telephones, we wrote to each other. At the shortest there were a letter every one and a half months, and at the longest it was two to three months. Now we have telephone in the house, it is a lot convenient. He says that he bought a telephone card there and that it is cheaper if he calls us from the port. He cares about his family, although he can’t help me much, only letters and telephones, it gives you a psychological comfort.

Second Engineer’s wife, China

How do you feel now because he is working on coastal routes?
I feel like he is working somewhere in [local town] because we keep in touch all the time by phone.
Chief Engineer’s wife, UK

However technological advance was seen as a doubled edged sword by some of the women. Chinese women reported still finding it quite expensive to phone internationally and opportunities for seafarers to call home were found to be impeded by the drastic reduction in turnaround times and the development of ports in areas remote from town facilities, leaving seafarers without the time or the facilities to call their families.

The accounts of women interviewed highlights the crucial importance of communication to seafarers and their families. Communication allowed relationships to be developed and sustained, over often lengthy absences and provided opportunities for couples to provide mutual support and for the seafarer to feel an active part of the family and household through participation in every-day events and decision making. Despite technological advances, the data suggested continued discrepancies in access to telecommunication facilities. Some wives of Indian ratings reported only recently having a domestic telephone installed at home, whereas it was not uncommon for wives of Indian officers to have email facilities at home and all of the wives of serving British officers reported having a household and cell net (mobile)
phone from which contact could be made in both national and international coastal waters. Many couples in these studies were fortunate in that seafarers held senior ranks and had access to shipboard telecommunication facilities (such as email) and salaries that allowed the financial costs associated with communication to be less than prohibitive. However, this may not be the case for seafarers of different ranks and nationalities (SIRC, 1999) and indeed, did not appear to be the case for the wives of Indian ratings interviewed for this study. Access to cheaper (or free) communication was frequently mentioned as a means of improving the welfare of seafaring families and reducing the negative effects of a seafaring lifestyle on family life.

**Hidden Costs**

Seafarers are often seen as high earners and in India and China being ‘dollar-earners’ gave seafarers and their families a ‘wealthy’ status within their communities. In the UK the tax-benefits of working in international waters can often mean seafarers have a higher disposable income than many of their peers. However seafaring is not without its costs. The emotional cost to seafarers and their families may be immeasurable, however in addition, our research suggests that whilst, for many, the relatively high salary is an incentive to work at sea, the very nature of the seafaring occupation can place additional financial burdens on seafarers’ families which are not faced by those with shore-based jobs.

Perhaps the most significant financial cost for seafaring families, regardless of nationality, is the cost of communication. As outlined previously, in the absence of any opportunity to be physically in each other’s presence, communication between ship and shore could be vital to seafarers and their families. Indeed, for many seafaring families communication was of such importance that the financial implications of ‘staying in touch’ were often disregarded.

*Sometimes he calls me twice a day. Sometimes - well, it depends. If he gets a port, the first thing he will do is call me. Sometimes he does satellite calls also. He really doesn't think about the money. He talks to me and I talk to him, and we feel good about each other.*

*Chief Cook’s wife, India*
In addition to the cost of the communication, the cost of purchasing equipment to
communicate could also involve large initial financial outlay. Of the British couples,
approximately half of those households, where the seafarer was currently working,
had access to email at home\(^9\). It was not clear whether access was solely the result of
the need to communicate with an absent partner or whether the equipment and
Internet connection would have been purchased regardless. However the initial cost
of purchasing computer hard and software and the ongoing cost of Internet connection
can be considerable. Other couples in the study reported buying FAX machines to be
installed in their homes as a cheaper alternative to satellite phone calls. It is unlikely
that such equipment would have been purchased if their husbands had been in shore-
based employment.

Other costs associated with seafaring reflected the (sometimes vast) differentials
between employment contracts and conditions of service. Some wives of Indian
seafarers reported that their husbands occasionally had to pay, quite considerable,
sums of money in order to secure a contract for a single voyage. Where seafarers
were employed on single voyage contracts then money had to be saved to cope with
periods of unemployment between contracts, and, in the case of Indian seafarers, costs
of training and travelling to training venues often had to be met by the seafarers
themselves. Whilst the Chinese seafarers in this study were paid during their leave
period, this was at a rate considerably reduced from their salary during sea-time.
Thus seafarers and wives had to manage money to cope with these fluctuating salary
levels and periods where there was no income at all.

So you're really careful when he's at sea.
Yes. Very careful. We have to save. If something happens, something comes
up, and you are not able to cope, sickness or something, or accident takes
place, how are you going to manage? So I keep on saving a little bit. Whatever
expenditure I have, and then what I have over I keep aside.
Chief cook’s wife, India

\(^9\) This is considerably higher than statistics for the general population, which showed that in 1999 –
2000 38% of households in the United Kingdom had a personal computer (National Statistics 2001).
Data was not available on the percentage with Internet access, however it is likely that when this is
taken into consideration the figure would drop considerably.
Even for those seafarers on more favourable contracts, if their wives wished to visit a ship or join a ship the cost of travel had to be met by the family.

The nature of a seagoing career also impacted on women’s own employment choices. Many of the British women in the study reported that their own participation in paid employment was a crucial factor in enabling them to cope with their partner’s intermittent absences. This also appeared to be true of the wives of Indian officers who were all working for reasons other than economic gain. However, paid employment could also be problematic for the wives of seafarers. British women talked of the difficulties in arranging leave to coincide with their partner’s leave periods and, in one case, one woman chose not to work for this reason. Other women took more flexible (and hence often lower paid) jobs that allowed them to work reduced hours when their partner was home. Both Indian and British seafarers’ wives talked about giving up their own paid work in order to sail with their husbands.

I didn't work, because after I got married it was always going to the ship, coming for a short holiday, going back again to the ship, then a holiday. So I never had the opportunity, or perhaps never gave myself to try to work. That work would confine me to stay separate from my husband. So my option was to sail, so I never worked.
Captain’s wife, India

Other British women chose not to work as the felt this would have a detrimental effect on their children who already had to cope with an intermittently absent father. These women felt with a father at sea, their children needed the consistency and security of their mother at home. Thus seafaring may also impact financially on the household in the loss of potential earnings of the female partner.

DISCUSSION/ CONCLUSION

It may be argued that seafarers’ family and home life are peripheral to the workplace and therefore not of company concern. However a consideration of, and interest in, the family dimension is, in fact, sound company policy. The problems of the retention and recruitment of well-trained seafarers is a matter of global concern (BIMCO/ISF 2000). Data shows the stress associated with separation from family is significant for seafarers (Parker et al., 1997) and that separation from family is one of
the most important ‘stress’ factors influencing a decision to reduce planned sea service (Telegraph, 1999). Indeed, in their accounts for the Seafaring and Family Life study, many seafarers spoke of colleagues leaving the sea due to pressure from their partners and families, and the difficulties they themselves experienced, being separated from home and loved ones. High staff turnover has significant financial implications for companies, and indeed in the current, and projected future, labour market, companies may face considerable difficulties replacing exiting seafarers with crew of a necessary high calibre. These issues aside, company retention of existing seafarers is vital to stable, effective and safe crewing. Maintenance of regular crew has important implications for safety, teamwork and effective communication within the ship setting. Increased duration of employment within a company fosters company loyalty and allows an awareness of specific company policies to be developed and crew to be effectively trained according to company requirements. Thus, maintaining a stable crew directly effects and promotes improved crewing and safety standards.

Anxieties about family and loneliness caused by prolonged separations and lack of opportunity for contact can also impact on seafarers’ work performance and this may have significant repercussions on safety within the work environment\(^\text{10}\). Indeed, even where there are no perceived problems in family relations, the emotional deprivation associated with prolonged absences from partner and loved ones can lead to psychological deterioration and increased rates of emotional tension which in turn may lead to increases in stress, emotional alertness and aggression, threatening individual and workplace health and safety (Horbulewicz, 1973). In the context of the high number of accidents attributable to ‘human error’ (UK P&I Club, 1999) such factors should not be disregarded.

Intermittent separation from family and home may be seen as an inherent and unavoidable feature of seafaring. Our interviews suggested that absences and separation do have a considerable impact on seafaring families. However, our data

\(^{10}\) Research with airline pilots has suggested that domestic stress and other major life events may have a detrimental effect on pilot’s judgement and wellbeing (McCarron et al., 1982). The importance of the spouse as a social support system and in enabling the pilot to cope with stress has been acknowledged by the Aviation industry, along with the specific problems associated with a marriage where one partner is frequently absent (Karlins et al., 1989).
also showed that this impact was neither uniform nor indiminishable. Rather, the conditions of service and degree of support from the company can considerably effect the experience of seafarers and their partners.

Experiences of seafarers’ partners in our studies varied, however this was not just by country. The, sometimes dramatically, different experiences of the wives of Indian seafarers could be seen as directly related to the rank of their husband. For those Indian women married to senior officers, the impact of the seafaring lifestyle was lessened due to their partner’s more favourable conditions of service: shorter trips, better company access and support, opportunities to sail with their husband, ready access to rejoin vessels and higher salaries allowing better access to communication technology. Indeed, the experiences of the wives of Indian officers was, in fact, more similar to that of the wives of British officers, than wives of Indian ratings. The lives of Chinese seafarers’ wives were also varied, reflecting whether their partner was employed by a national flag or a FoC and their location, whether in a traditional port or coastal city, such as Shanghai where they were lived in close proximity to other seafaring families and received company support in the form of the successful ‘Seafarers’ Wives Committee’, or in a inland region where they were geographically separated from other seafaring families and as a consequence, received little effective company support.

However, despite these differences, and regardless of nationality or partner’s rank, the effect of varying conditions was the same. Shorter trips were found to be advantageous for all involved, allowing family and couple relationships to be developed and sustained. For the wives of Indian ratings and Chinese seafarers working on foreign flagged vessels, leave periods were often strikingly short in comparison to the many months (10 or more) spent at sea. Leave periods were often encroached on by training requirements introduced by global regulations. For many women in this study leave periods were tainted if not spoiled altogether by the anxieties associated with the sudden reduction or indeed cessation of the seafarer’s salary into the household. Tensions could be increased where contracts were for single voyages only and there was no assurance of future employment. Such unpredictability made it difficult for seafarers and their families to budget and manage household finances and could led to tension within relationships. The wives of British
officers reported that increased pressure in the work place meant that their partners were often stressed for a considerable portion of their leave period, again, effecting quality of time at home.

Wives were very positive about the opportunity to sail with their husbands and felt this led to an increased understanding of their partner’s work environment\footnote{The importance of allowing partners to sail has not gone unnoticed by some shipping companies. COSCO has recently begun to allow the wives of some senior officers to join their husbands aboard for a voyage in order to promote communication or ‘mutual understanding’ between the seafarers and their wives. As a senior manager explained, ‘our intention is to provide opportunities for the wives to understand or appreciate what a hard job their husbands do,’ (Zhao, 2001, personal communication).}, however, this was an opportunity that was often restricted to the wives of officers. In the absence of physical contact, communication took on an increased significance, however access was highly variable and communication was not without a financial cost. The financial implications of purchases communication equipment (household telephones, cell net phones, FAX machines and personal computers for internet and email access) and the on-going costs of making contact were considerable and sometimes prohibitive.

Interviews with seafarers’ partners suggest that there are a number of steps that can be taken to reduce the impact of seafaring on family life. These can be very effectively undertaken by companies, with any financial costs off-set by better retention of expensively trained staff who might otherwise leave the sea or be subject to stress related illnesses. In particular our study showed that efforts should be made to ensure:

- Shorter trips (preferably no longer than four months)
- Paid leave of a comparable duration to sea-time
- Continuous employment rather than employment by voyage
- Training time to be added on to leave period
- Opportunities for partners (and where possible, children) to sail
- Improved access to cheaper communication
- Increased contact between seafarers’ partners and their employers
- Opportunities for seafarers’ families to make contact with each other
These changes will benefit seafarers’ partners and families, and also seafarers’ themselves, with direct positive consequences for their employers. Partners and families are a neglected but vital part of the success and the sustaining of the shipping industry. As one seafarer interviewed for the Seafaring and Family Life study noted:

And it’s like...a seaman’s life is all about freedom isn’t it? He comes, he goes, he travels, but you’ve still got to have a base. Without a base you’ve got nothing.

Captain, UK

If companies wish to employ stable, content and above all, safe crews, then they could do worse than to give some attention to seafarers’ families.
REFERENCES


INTRODUCTION

Seafaring has, until very recently, been an overwhelmingly male dominated industry. In old liners like the *Queen Mary* or *Titanic* women were found serving as nurses, stewardesses and telephonists. However, their number was extremely small and they were mostly all white Europeans. This leads to Lane’s conclusion ‘(T)here were too few women seafarers for them to have had any impact on the occupational culture (1990:9).’

Half a century later the picture has changed dramatically. During the 1980s the rapid growth of female employment and women’s entry into occupations previously dominated by men led to the designation of this trend as ‘the feminisation of labour (Standing, 1989). This has occurred in the context of economic liberalisation, deregulation and privatisation, leading to a more flexible workforce and the casualisation of employment. In shipping, however, such a ‘feminisation of labour’ did not occur on any significant scale until well into the 1990s.

The growth in world trade and the consequent expansion of world shipping, taken together with the globalisation of the world seafarers labour market in the 1980s and 1990s, has led to an increase of women’s shipboard employment. The trend is believed to begin to take shape in the 1990s when both the industry and unions became increasingly frustrated with a growth in cases of sexual harassment on cruise ships. They began to believe that a balanced sex ratio among the crew could help build a positive atmosphere aboard and this in turn would generate ‘some positive impacts on both passengers and the crew’ (Author’s Field-notes, March 1999; March 2000). The growth of the women’s participation in the world shipping is especially marked in the cruise sector, where, while the overall growth of the work force in the cruise sector in the 1990s was as high as 60%, an increasing number of women of
different nationalities are found serving aboard in various roles and positions. Such a relatively dense concentration in a dynamic industrial sector can only have a considerable impact on the structures and processes of shipboard social organisation. While the shipboard socio-technical system remains highly hierarchical, the introduction of gender as a new source of both lateral and vertical differentiation is certain to affect what might be seen as a ‘traditional’ social division of labour.

Women seafarers in general and women employed on cruise ships in particular have drawn little attention from scholars and commentators. As already cited from Lane, the classical literature has had very little to say about women except as dependent relatives or at best it mentions women’s employment aboard only in passing (Dana, 1969; Maxtone-Graham, 1985; Lane, 1986, 1990, Chapman, 1992). More recent literature, on the other hand, is preoccupied with the displacement of seafarers from the developed world by those from developing countries and it tends to limit its study to seafarers employed on cargo ships (Stopford, 1997; ITF/MORI, 1996; Cartwright & Baird, 1999). In the 1990s, some trade unions and maritime museums have made attempts to look into the working and living conditions of women seafarers, but the scope of this kind of study is confined to seafarers of a particular ethnic origin and is, therefore, unable to reflect the extremely global nature of the labour force in the world maritime industry (Diack, 1994; Keitch, 1997). The 1990s also saw a quiet, but clear growth of academic interest in the study of women seafarers, mainly by women scholars in North America. During this period, maritime history was, therefore, put under the scrutiny of primarily feminist discourse especially by feminist historians. As a result, the academic discourse produced in this period focuses almost exclusively on a handful of women seafarers in history with little reference made to women’s roles in the world fleet today (Stark, 1998; Creighton & Norling, 1996; Fournier, 1993; Dugaw, 1992). At the same time, both ship owners and world trade unions initiated studies looking into the business or labour conditions of world cruise shipping (Dickenson, 1997; Goff, 1998). A major problem with these studies is that they are seriously biased not only with their respective commercial or political interests but also with strong male prejudice.
Since 1998, following its successful study of women seafarers in the European fleet, SIRC has expanded its research attention to include women employed in the world cruise fleet and set a research project for this purpose. The overall objectives of this study include three dimensions. Firstly, it aims to analyse the socio-economic background of women employed on cruise ships. Secondly, it examines the recruitment practices of crewing agencies - especially in some key labour supply countries. Thirdly, it is intended to explore how gender and ethnicity 'map' onto the status hierarchy of cruise ships operating in world waters and, thus, it is hoped that the study will generate some important theoretical findings. To date, the data collection for this study has been completed and both the quantitative and qualitative data are being prepared for final analysis. A SIRC Report is due later in the year.

A wide range of issues concerning women seafarers’ work and life on today’s cruise ships has been covered in this study. Limited by time and space, however, this paper concentrates on the following: 1) the extent of women’s participation on cruise ships; 2) women’s demographic profiles, especially their age and regional representation; 3) the occupational roles they play aboard. Then, the implications of women’s advances in the world cruise shipping will be discussed the main opportunities and barriers for women’s further participation in the industry will be identified. Finally, the conclusion attempts to suggest what strategies should be taken to promote women’s further participation in this part of the world maritime economy.

RESEARCH METHODS

There are three major sources of information for this study. Firstly, SIRC’s Global Labour Market Database (Cruise), which contains the information on 38,000 seafarers gathered from 104 crew lists. The crew lists were collected from 83 cruise ships calling at some of the world’s major ports including Barcelona, Dover, Southampton, Rotterdam and Miami between 1998 and 2000. Secondly, over 100 in-depth interviews were conducted in Europe, North America and Asia with shipping managers, crewing agents, trade unionists, naval architects, port & sailing chaplains, and seafarers, female and male, of various nationalities serving in various ranks and positions aboard cruise ships. Thirdly, a shipboard research voyage in the Atlantic.
Most of the interviews have been taped and transcribed and are currently being analysed with the assistance of NUDIST; the data obtained through the surveys conducted on two cruise ships is under analysis with SPSS. Data drawn from the crew lists are supplemented with information on other dimensions of seafarers personal and social-economic backgrounds, which is gathered through our surveys of, and interviews with, the seafarers. For example, we find that the majority of women crew members are from families who do not have traditions of seafaring. By contrast, SIRC’s study on women seafarers aboard European cargo ships indicates that two thirds of the female seafarers have family members or relatives that have an employment history in seafaring (Zhao, 1998).

FINDINGS

As noted above, while a comprehensive analysis of the data will be presented in the final report, the rest of the paper represents a segment of the research findings.

1. The Extent of Women’s Participation
The increase of women’s employment on cruise ships has been recognised as a new trend emerging in the 1990s. Although large numbers of women are found sailing cruise ships world-wide and some estimates indicate that women account for up to half of the total work force at sea in certain parts of the industry, there was no reliable data available depicting such trends, until the recent creation of the Global Labour Market Database (Cruise) in SIRC. A preliminary analysis of the database finds that, on average, women make up 18.4% of the total work force, although the exact number of women on individual vessels varies greatly from ship to ship (Figure I).
Whilst our attempts to quantify the increases in women’s employment aboard during the period has been constrained due to the lack of adequate longitudinal data, such an increase has been confirmed through our interviews with crew-members who have long employment histories on cruise ships.

**Sima, Hotel Manager with 11 years of sailing experience on 15 ships in 5 cruise companies:** In 1990 when I came into the cruise industry with Carnival there was not 1 single woman in the dining room as a matter of fact, no dining room waitresses, nothing, and very few bar waitresses. But times have changed. During 1993-94 there were more women working for Carnival, there were even women in the kitchen .... I have noticed an influx of women (on cruise ships) in Europe, the Mediterranean, Caribbean and the United States. (Interview-101).

**David, Restaurant Manager with 15 years working experience in cruise shipping:** When I started 6 years ago in the restaurant we had only 2 women. Then when I went to another ship two years later, we had already 4 women. When I joined this ship we had around 8 or 9, and now the restaurant department has around 12 (Interview-102).

**Farcio, Bar Manager serving on cruise ships since 1990 and talking about changes on the same ship he joined 5 years ago:**
Since my 1st contract, I have been assigned as an assistant bartender behind the bar in this ship. We have only 2 women behind the bar 4 years ago. After that, during my second contract, I was surprised when I came back as a bartender that in the bar there were 4 and in the other bar, 4 as well. So, it’s 8. It’s becoming more and more. I became a head bartender in my 3rd contract. I was head bartender for 5 or 6 months, and noticed an increase in female staff. Now I’m the Bar Manager now, I have plenty female staff (Interviewee-105)

It is interesting to note that both the passengers and crew-members contacted, regardless of their gender, tend to perceive a higher proportion of women serving aboard than is the reality. For example, women seafarers consist of 21% of the total crew on the ship on which I recently sailed. However, most of the seafarers interviewed believe that women contribute about 30%, 40% or even 50% of the crew aboard. Such a misinterpretation of reality is due to the gendered occupational segregation, which places more men in certain areas of the ship - typically in the deck, the engine and the galley departments - where seafarers have less contact with passengers and the crew-members serving in the public areas. Relatively, women have a higher representation in departments like bars and housekeeping, hence are more likely to exposed themselves to the ‘public eye’.

2. The Regional Origin of Women Seafarers

Where are these women seafarers from? As illustrated in Figure 2a, the largest proportion of women is recruited from developed countries (49.5%), followed by 30.1% from E. Europe, 13% from Asia, 5.3% from Latin America and 2.1% from other parts of the world. It is worthwhile to note that the regional composition of the female workforce deviates from that of the male workforce. In contrast, most of the male seafarers are recruited from Asia (40.8%), followed by 25.7% from developed countries, 16.7% from E. Europe, 2.9% from Latin America and 3.9% from other world regions (Figure 2b.)
Such a difference between the regional composition of male and female crew members reflect at least two issues important to the stratification of the labour market in today’s cruise shipping: the industry’s efforts to keep its ‘classical image’ and, therefore, its preference to place seafarers of European origin, especially women, as front line workers - hence their higher representation in the female work force, and the constraints the industry has in recruiting women from other world regions. For example, in some Asian countries, women are not encouraged to take employment away from home and it is a taboo for women to work on ships.

3. The Age Profile of Women Seafarers

How old are women seafarers on cruise ships? An initial analysis of seafarers’ age profiles indicates that the mean age is 33.2 for all seafarers, 35.4 for men and 31.5 for women. In other words, women crew-members are approximately three years younger than their male colleagues, as illustrated in Figures 3a, b and c.

When seafarers’ regional origins are introduced, we find that there exist highly significant statistical gender differences within regions. The differences between the mean age of men (35.7) and the age of women (29.7) from developed countries is as large as 6 years, followed by a difference of 3.7 years for E. European seafarers, 2.6 years for Latin Americans, and 1.2 years for Asian seafarers (Figure 4).
Figure 2a. Women by Region

- Developed world: 49.5%
- Asia: 13.0%
- L. America: 5.3%
- E Europe: 30.1%
- Other: 2.1%

Figure 2b. Men by Region

- Developed world: 25.7%
- E Europe: 16.7%
- Asia: 40.8%
- L. America: 12.9%
- Other: 3.9%
Figure 3a. Histogram of Seafarers' Age (women)

Std. Dev = 7.82
Mean = 31.5
N = 6959.00

Figure 3b. Histogram of Seafarers' Age (all)

Std. Dev = 8.94
Mean = 33.2
N = 40652.00

Figure 3c. Histogram of Seafarers' Age (men)

Std. Dev = 9.03
Mean = 35.4
N = 31154.00
4. Women’s Participation Aboard and Occupational Segregation By Gender

Women play important roles on today’s cruise ships. Some of them have advanced to key positions as pursers, cruise directors, financial controllers, housekeepers, food and beverage managers, chefs or even executive chefs. Women are found employed in middle, or even senior, positions with supervisory or managerial responsibilities, as shown in Figures 5a and b. When comparing women’s shipboard status with that of men, we find that women’s representation in senior positions is as low as 9%, yet they comprise 15% of the low position holders. In the middle part of the ship hierarchy, their representation is 31%, higher than their average participation rate across all ranks. In proportion, more men than women are clustered in low positions on board ships.

Figure 4. Age Comparison by Gender and Region

<table>
<thead>
<tr>
<th>Gender</th>
<th>Region</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>Developed World</td>
</tr>
<tr>
<td></td>
<td>E Europe</td>
</tr>
<tr>
<td></td>
<td>Asia</td>
</tr>
<tr>
<td></td>
<td>L. America</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gender</th>
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</tr>
</thead>
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<tr>
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<td>36</td>
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<tr>
<td>Female</td>
<td>30</td>
</tr>
<tr>
<td>Female</td>
<td>28</td>
</tr>
</tbody>
</table>
Clearly, women have improved their positions in the cruise-ship hierarchy in recent years. This has received further confirmation from the interview data. For example, Lina, a purser with 18 years experiences on cruise ships says:

I first started seeing more women on ships when I joined that cruise line in 1989, 6 years after I started working on cruise ships. It was the first time I had ever seen a female purser. On the ships I had worked previously all pursers were male. Now even our Chief Purser is a woman! (Interviewee-114).

Similar remarks have been made by Catherine, a female security officer who leads the Security Department on a world-famous cruise ship. Such a change has also been clearly felt by crewing agents in various world regions. In Manila, the director of a crewing company that specialises in supplying seafarers for cruise ships notes, ‘we find more and more positions that used to be monopolised by men on cruise ships are now opening up to women applicants’ (Interview-90)

Seafaring on cruise ships is, however, still clearly segregated by gender. For example: there is only one woman amongst all the captains in the database Whereas over 20% of the total male work force is placed in the marine sector, women’s participation here is less than 0.5%. All the ship doctors are men; all the ship nurses are women. As

![Figure 6. Section by Gender](image-url)
shown in Figure 6, women concentrate in hotel and other ‘non-technical’ sectors of the ship as cabin stewardesses, waitresses, cleaners or utility workers and their representation in the marine and the galley departments is extremely low.

The low female representation in the marine sector of the ship confirms the findings in SIRC’s research on women seafarers employed in cargo shipping. Despite the IMO initiative to promote the integration of women into the maritime industry since the late 1980s, women still find it difficult to be accepted into this sector of shipping and they remain an extreme minority of the crew in either deck or engine departments regardless of ship type.\(^1\) As in the deck and the engine departments, the galley, the restaurant and the security departments are traditionally men-only territories. As already noted, women have begun, in recent years, to advance in these spheres.

\(^1\) In line with the UN’s commitment to encourage women’s advancement in all levels of political, economic and social development and to promote gender equality since the mid 1970s, the IMO produced its strategy for the integration of women into the maritime sector in 1988. It also began implementation of the IMO Women in Development Program in 1989, concentrating on equal access to maritime training through both mainstream programs and gender-specific projects (IMO, 1988, 1992). An immediate effect of the Program was the increased percentage of women students at the highest level of maritime training (IMO, 1997). However, there is no significant increase in the number of women aboard the present world fleet.
Figure 5a. Women by Status

- Senior: 2.0%
- Middle: 34.8%
- Junior: 63.3%

Figure 5b. Men by Status

- Senior: 4.1%
- Middle: 16.8%
- Rating: 79.1%

Figure 5c. All by Status

<table>
<thead>
<tr>
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<th>Percent</th>
<th>Gender</th>
</tr>
</thead>
<tbody>
<tr>
<td>Senior</td>
<td>100</td>
<td>F: 9</td>
</tr>
<tr>
<td></td>
<td></td>
<td>M: 91</td>
</tr>
<tr>
<td>Middle</td>
<td>90</td>
<td>F: 31</td>
</tr>
<tr>
<td></td>
<td></td>
<td>M: 69</td>
</tr>
<tr>
<td>Junior</td>
<td>80</td>
<td>F: 15</td>
</tr>
<tr>
<td></td>
<td></td>
<td>M: 85</td>
</tr>
</tbody>
</table>
Nevertheless, these sectors remain overwhelmingly male dominated on all the ships and heated debates are found between male and female crew-members with regards to women’s ‘proper’ role on cruise ships. Women’s perceived physical and emotional ‘weakness’ is at the center of the debate. In many men’s view, for example, women should not be employed in the galley. Men would feel uncomfortable if they see or even imagine women working in the galley. This is because, as Larry, an Executive Chef on a ship sailing in European waters explains:

Number one, with a man, you say something once, you say it twice. But for a woman you have to say once, twice, three times .... The speed of the service is another consideration. For a man there is a certain amount of time to prepare a dish, whereas for a woman it is different, the amount of speed to service a passenger you won’t get from a woman (Interviewee-104).

Larry has served on cruise ships for 12 years in various positions in the galley, but has never experienced working with women chefs in the department. Tony, the Safety Manager, makes a similar comment on women’s waitresses in the Dinning Room,

For the men, even though however hard it is or how heavy (the object) they are carrying, they don’t mind. That is the advantage. You just can’t tell women to carry such things. It’s not good for their body. And, there is another problem. They are very sensitive. You cannot tell them that they’re wrong because sometimes they cannot accept the reality of what it means (Interviewee-107).

Women have different views on the subject. Most of the women interviewed believe they are as strong as their male colleagues, physically and emotionally, and that they do not need, nor like, preferential treatment in the work place. Some women, however, reserve their views on questions like ‘Do you think women can carry as many plates as men in the Dinning Room?’ Nevertheless, the women who answered this question firmly and in a positive way without any hesitation are actually the waitresses who have experienced such load carrying duties.
In the final analysis, we find that the arguments against women’s participation in certain roles aboard ship is based upon assumptions, not on reality. In the dining room, for example, I observed both waiters and waitresses carrying large piles of plates, as shown in the photograph I took on one of the cruise ships where the research was conducted.

My interview with the Restaurant Director and the Medical Doctor confirms that my observations are rooted in reality. The Restaurant Manager reported that:

I have women that are carrying trays, some of them are carrying more than the males and doing the job better than some of the men. When I assign tasks I never make a difference between the male and female staff - I just try to be clear with everybody and make the job easy for everybody (Interviewee-102).

To the Medical Doctor, health and safety is an important issue to both men and women. According to him, ‘(T)here is no evidence to show that women have more health problems than men.’ Indeed, he expressed a great concern with both men’s and women’s health and safety regarding heavy loading. He believes that all seafarers, regardless of their gender difference, should receive proper training and take proper protection when they conduct such tasks.

**OPPORTUNITIES AND CHALLENGES FOR WOMEN**

The opening up of traditionally male-dominated positions on cruise ships, in conjunction with the industry’s enthusiasm to recruit more seafarers, male and female from developing countries, has broadened the potential for women to participate in this part of the world maritime economy. Indeed, young, well-educated women who have experience of working in prestigious hotels, bars or restaurants and speak fluent English are being actively sought by the industry in many parts of the world, particularly in some Asian and E. European countries such as Bulgaria, Poland, Russia, Ukraine, Indonesia, the Philippines, India, and China.
However, the labour market is by no means gender-blind. Compared with men, women have to make extra efforts to be accepted by the industry. Karen, a Norwegian ex-seafarer who served on a prestigious cruise ship between 1994 and 1997 and currently works as a senior chef in a land-based top-market restaurant reports:

> It is not easy for women to get a position as a chef on board cruise ships. Although I had formal training in catering and hospitality and had lots of experience in 5-star hotels as a chef, it took much trouble to be accepted in the galley on the ship. I tried to go on the cargo ship, tried to go to the fuel ship, there was no chance, and they do not take any women. Sorry, go home. So after a time I got in contact with XXX (name of the cruise line) and heard that they can take about a couple of chefs, and I phoned up again, and phoned twice, phoned a third time and then I said, “Come on, we’ll meet in your office”. So we meet up and I was accepted in the cold galley.

Gender bias is even more obvious in some Asian countries. For example, a maximum age limit and a minimum employment experience limit are set in the Philippines to ensure that the industry gets a young, energetic and experienced workforce. In Manila, the upper age limit for men to be employed on cruise ships is 40 years old; for women it is 29. Unlike men, women are also checked for their ‘moral standards’. The following quote is from a senior crewing agent in Manila:

> Well, I must tell you that we’re very strict as far as women employees are concerned. We like to check on their moral status. We’re more concerned as to how their moral values are. How do we check them? Well, we ask, we investigate, we look at their applications, of course more closely than we do with men’s.

Onboard ships, most male seafarers welcome women joining them in the workforce. Many, however, have reasons typically noted by Tom, the Food and Beverage Manager on a cruise ship sailing in some European waters:
‘[T]he male staff are happy because they (the women) are looking like flowers in the Dinning Room and make the atmosphere beautiful’

and by John, the Bar Manager when his ship was calling at Dover,

‘[I]t’s nice to have women around. They make men more civilised. I have noticed my male staff dress better, shave more and behave better when they work with female staff around’ (Author’s field-notes, August 2000 & March 2001).

A handful of men were sensitive to the gender issues raised in the interviews and demonstrated an awareness of important topics like equal opportunities and equal treatment to individual seafarers regardless of their gender identity. They are, though, in the minority and tend to be the highest-position holders on the ship such as the Captain or the Hotel Manager.

At the same time, a clear male resistance against women’s further participation on cruise ships has been identified among a small number of male seafarers. Such a resistance is mirrored in the debates about women’s ‘proper’ roles on ships and extends to define the scale or extent of women’s employment aboard. When asked if they would welcome more women working on cruise ships, many of the male seafarers would respond by saying, ‘(T)here are already enough women in our department’, or ‘(T)hey are surely welcome so long as they won’t take our jobs away’, whilst a few insisted ‘(S)hips are not a place for women – they should stay with their husbands and children (Author’s Field Notes, August 2000 & March/April 2001).

Women reported their experiences of discrimination during their service on board ships, with reference made to the attitudes and behaviour of their male colleagues. Although the actual number of the men involved is small, these men’s attitude and behaviour have implications for women’s evaluations of the quality of their life aboard and has affected the normal or professional
interactions between men and women on the ship, which is at once their work place and home.

Despite this, the majority of the women seafarers contacted have positive views on their choice to work on cruise ships. While the hard work conducted by seafarers on cruise ships is by no means a secret and many of the women did give detailed accounts about their experiences and feelings of working and living at sea for most part of the year, few women regret their decision to go to sea. Like the male seafarers, these women decided to endure the hard labour and the long separation from their families for financial or/and career considerations. They also believe that their employment on cruise ships is an extraordinary experience and indeed the majority of the women seafarers participating our shipboard survey state that they would encourage other women to have similar experiences by working on cruise ships, although few of them extend such an encouragement to their children in future.

CONCLUSION

As part of the process of globalisation in world shipping, the ‘feminisation’ of the work force on cruise ships has complex implications. Shipping companies and trade unions both welcome the change. We anticipate a further increase of women’s employment in the world cruise fleet in the near future due to the following factors: The IMO’s commitment to promote women’s full participation in all sectors of world maritime industry; the world cruise shipping expectation of a further expansion of the market with some further demographic changes amongst the passengers; further market pressures on world cruise shipping due to intensified competition. To promote women’s further integration into the world seafaring labour force, barriers blocking their access to employment opportunities and factors affecting their working and living conditions on vessels must be removed. Women’s real integration into the industry means both the increase of their representation in the labour force and the improvement of their employment conditions as well as working and living conditions at sea. To achieve this, strategies must be taken to accommodate the change. This requires, for instance, the industry to overcome its prejudice and further open the jobs
traditionally held by men, to integrate gender issues into seafarers’ education and training, aboard and ashore, and to extend such training and education to their crewing agents in all the world’s regions. Clearly, given the current conditions as presented above, there is a long way to go before the goal can be reached. This then calls on some more committed efforts and resources from the major players in the world maritime industry. Ship owners, managers and crewing agents, national and international regulating bodies, trade unions, seafarers missions etc. should be fully aware of the fact that the seafaring labour force in the new century is no longer homogeneously male. For their own interest, they will have put women’s rights, interest and welfare on their social, economic and political agenda.
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Mr Zafrul Alam
Singapore High Commission

Capt Orlando Allard
Panama Maritime Authority

Capt Phil Anderson
North of England P & I Association Limited

Mr Dani Appave
International Labour Office

Mr Gilberto Asuque
Embassy of the Philippines

Dr Michael Barnett
Warsash Maritime Centre

Mr James Bell
ICONS

Mr Simon Bennett
ISF

Dr Catherine Berger
Université Paris XIII

Capt C A Brindle
Apostleship of the Sea

Capt David Bruce
Marshall Islands Administration

Mr John Bywater
Maritime Leisure Ltd

Dr Tim Carter
Department of the Environment, Transport and the Regions

Mr Stephen Chapman
International Ship Managers' Association

Mr Nicolaos Charalambous
Cyprus High Commission

Capt P Chawla
Anglo-Eastern Ship Management Ltd

Mr Andreas Chrysotomou
Cyprus High Commission

Mr David Cooke
Department of the Environment, Transport and the Regions

Emeritus Prof Alastair Couper
Former Director, SIRC

Mr Eric Deans
Maritime Authority of Jamaica

Mr Mark Dickinson
NUMAST

Mr Trevor Downing
Lloyd's Register

Mr Hazem Abed El Halim
Ministry of Transport, Egypt

Mr Andrew Elliott
International Committee on Seafarers' Welfare

Prof Hadyn Ellis
Chair, Cardiff University Research Committee

Ms Gillian Ennis
The Mission to Seafarers

Capt Colin Evans
International Federation of Shipmasters' Associations

Mr Michael Everard
F T Everard & Sons Ltd

Mr Michael Ferris
US Department of Transportation

Capt Bob Goodall
Dorchester Maritime

Capt John B Gorrie
BP Amoco - Exploration Operating Co Ltd

Mr Allan Graveson
NUMAST

Prof Shen Guanbao
Shanghai University

Mr Richard Guy
ISF
Mr Claude Hamilton  
Maritime and Coastguard Agency

Ms Michelle Hannah  
Kuwait Oil Tanker Co

Mr Henrik Hansen  
Danish Maritime Occupational Health Service

Rev Tom Heffer  
The Mission to Seafarers

Capt Kevin Hewlett  
Teekay Shipping (Glasgow) Ltd

Mr Patrick Hitchen  
Lloyd's List Events

Mr Michael Hollmann  
Tageszeitung (Berlin)/MPH Media

Mr Tom Holmer  
ITF

Capt Chris Hunter  
Glasgow College of Nautical Studies

Cmdr Nicholas Iliopoulos  
Centrofin Management Inc

Capt Jack Isbester  
Eagle Lyon Pope Associates Port and Marine Consultants

Sr Miguel Angel Jaen  
Panama Maritime Authority

Mr Olaf Jensen  
Research Unit of Maritime Medicine - University of Southern Denmark

Capt Arne Jørgensen  
Norwegian Shipowners' Association

Mr Rick Kent  
Centennial Maritime Services Corp

Mr Peter Kidman  
Intercargo

Dr Fabienne Knudsen  
Research Unit of Maritime Medicine - University of Southern Denmark

Mr Burt Kunze  
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Rear Admiral John S Lang  
Marine Accident Investigation Board

Mr Timo Lappalainen  
ITF Seafarers' Trust

Mr Herry Lawford  
Thomas Miller P & I Ltd

Mr K L Lee  
The Government of the Hong Kong Special Administrative Region

Dr Heather Leggate  
London Guildhall University

Revd Sakari Lehmuskallio  
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Ms Mary Martyn  
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Mr Stephen Matthews  
LLP Limited

Mr Stefano Mazzoleni  
Carnival Cruise Lines

Mr James McConachie  
Carisbrooke Shipping

Dr Mike McDaid  
Turkü University, Finland

Capt Paddy McKnight  
The Japanese Shipowners' Association

Revd David Mesenbring  
Seafarers' House, Port Everglades
Mr Robert W Miles
Health & Safety Executive

Mr John Millican
Warsash Maritime Centre

Ms Joanna Mortimer
Fairplay

Prof Theo Nichols
School of Social Sciences, Cardiff University

Mr Tony Nunn
International Union of Marine Insurance

Mr Leif Asbjorn Nygaard
Norwegian Ministry of Trade and Industry

Mr William O'Neil
IMO

Prof Sarah Palmer
Greenwich Maritime Institute

Mr Julian Parker
The Nautical Institute

Capt David Parsons
Merchant Navy Welfare Board

Revd Canon Ken Peters
The Mission to Seafarers

Capt Simon Pettey
BP Amoco Shipping

Mr Philip Robinson
Merchant Navy Welfare Board

Mr Ricardo Rodriguez-Martos
"Stella Maris" Barcelona

Mr Tony Santamera
Rail and Marine Transport Union

Mr Torsten Schroder
Leonhardt & Blumberg Shipping Co

Mr Ian Sherwood
Delta Marine

Capt Kevin Slade
Northern Marine Management

Mr Wulf Steinvorth
OTV, Germany

Mr Josef Stingl
Transocean Shipmanagement (PTE) Ltd

Mr Roger Storey
C F Sharp Shipping Group

Mr Avi Tal
Carnival Cruise Lines

Dr Ali C Tasiran
Göteborg University, Sweden

Mr K Y Ting
Hong Kong Seamen's Union

Mr S Y Tsui
The Government of the Hong Kong Special Administrative Region

Mr Nonoy Ty
Filipino Seafarers Assistance Programme

Mr Guoqing Wang
Cosco (UK) Ltd

Mr Jens Wassmann
Egon Oldendorff

Mr Roger White
Shipping & Transport Lawyer Magazine

Capt Andrew Winbow
International Maritime Organisation

Capt Willi Wittig
Bremen Polytechnic

Dr Geoffrey Wood
Coventry Business School and Rhodes University

Dr Victor N Yerofyeyev
Ministry of Transport of Ukraine

Dr Engin Yildirim
University of Turkey
SIRC Staff

Tony Alderton
Tel: +44 (0)29 2087 4740
Alderton@Cardiff.ac.uk

Phil Belcher
Tel: +44 (0)29 2087 6429
BelcherPM@Cardiff.ac.uk

Mick Bloor
Tel: +44 (0)29 2087 6238
Bloor@Cardiff.ac.uk

Louise Deeley
Tel: +44 (0)29 2087 4620
DeeleyL@Cardiff.ac.uk

Maria Goldoni
Tel: +44 (0)29 2087 4740
GoldoniM@Cardiff.ac.uk

Erol Kahveci
Tel: +44 (0)29 2087 4741
KahveciE@Cardiff.ac.uk

Tony Lane
Tel: +44 (0)29 2087 4620
LaneA0@Cardiff.ac.uk

Bernardo Obando-Rojas
Tel: +44 (0)29 2087 4620
Obando-Rojas@Cardiff.ac.uk

Helen Sampson
Tel: +44 (0)29 2087 6236
SampsonH@Cardiff.ac.uk

Michelle Thomas
Tel: +44 (0)29 2087 6236
ThomasM4@Cardiff.ac.uk

Jaime Veiga
Tel: +44 (0)29 2087 4741
Veiga@Cardiff.ac.uk

Nik Winchester
Tel: +44 (0)29 2087 4740
WinchesterN@Cardiff.ac.uk

Bin Wu
Tel: +44 (0)29 2087 6435
WuB@Cardiff.ac.uk

Minghua Zhao
Tel: +44 (0)29 2087 4742
Zhao@Cardiff.ac.uk

Fatigue Research Team:

Jo Beale
Tel: +44 (0)29 2087 6454

Geoff Boerne
Tel: +44 (0)29 2087 6454

Neil Ellis
Tel: +44 (0)29 2087 6602

Andy Smith
Tel: +44 (0)29 2087 4757

Seafarers International Research Centre (SIRC)
Cardiff University, 68 Park Place, Cardiff, CF10 3AS, UK
Tel +44 (0)29 2087 4620, Fax +44 (0)29 2087 4619, www.cf.ac.uk/sirc
Enquiries: SIRC@cardiff.ac.uk