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Into the (Gendered) Blue: New Perspectives on Gender Equality and Participation in Blue Growth

Edited by Kristina Svels, Milena Schreiber, Kristen Ounanian, and Magnus Boström

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EDITORIAL

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Into the (Gendered) Blue: New Perspectives on Gender Equality and Participation in Blue Growth

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Abstract

In the context of the global adoption of the blue economy agenda, new challenges and opportunities emerge for gender mainstreaming in traditional male-dominated maritime industries. This thematic issue mobilizes knowledge on barriers and structural hindrances faced by women in the blue economy, from exclusionary workplace norms and hierarchies to inadequate support for work–life balance. These hindrances discourage women's entry and retention in industries like fisheries, aquaculture, maritime transportation, and marine research. Lessons from the Nordic countries, which have significantly advanced gender equality and adopted numerous policies to enhance gender inclusivity, show that in the absence of effective implementation and evaluation of policy impacts, policies alone are not effective. Using gender as an analytical perspective reveals the importance of language and discourses in advancing gender inclusion, highlights issues of intersectionality across national borders, and exposes the need for blue justice alongside blue economy agendas. The collection of articles underscores the need for both systemic change and localized, tailored interventions. The methodological contribution exemplifies how discourse analysis unpacks societal norms, while ethnography reveals on-the-ground experiences of exclusion and resistance. Furthermore, tracking career trajectories provides data-driven insights into workforce retention, while interviews analyze the nuanced motivations and challenges women face. It is concluded that the agendas of the blue economy and gender equality could be indeed compatible, however, it must be acknowledged that the way these two can be simultaneously pursued remains a challenge that needs action.

Keywords

aquaculture; blue economy; blue growth; blue justice; fisheries; gender; marine research; maritime transportation; seafarer; sustainability

1. Introduction

At the onset of the 21st century, the world's oceans are once again in the spotlight, as nations strive to pursue continued economic growth while respecting the natural boundaries of the planet. The vision of a vibrant and prosperous ocean space, teeming with cutting-edge and highly profitable industries that offer local employment opportunities and are boosted by research and technological innovation, was termed the "blue economy", a term that is often used interchangeably with "blue growth" (Martínez-Vázquez et al., 2021). Blue economy is defined by the World Bank (2021, p. 8) as "the sustainable use of ocean resources for economic growth, improved livelihoods, and job creation while preserving the health of ocean ecosystems." Over the last decade, the use of the concept has grown exponentially, and today blue economy plays a central role in policies and negotiations over the use of the oceans at national and international levels (Voyer et al., 2018). In the context of the EU, the blue economy agenda is also predicated on the promotion of economic growth and the improvement of life and social inclusion. This is done without compromising the environmental sustainability of the oceans and their natural resources, which are dwindling due to human activity (European Commission, 2020). Encompassing the improvement of life and promoting social inclusion, the blue economy is in line with the EU Gender Equality Strategy 2020–2025 and its objectives of closing gender gaps in the labor market, achieving equal participation across different economic sectors, and advancing gender balance in decision-making and in politics. Regarding social inclusion, the blue economy is also enshrined in the EU's Cohesion Policy, launched in 2000 (EU Council, 2000), which aims to support the social inclusion of marginalized people, including women in the labor market.

According to the latest *EU Blue Economy* report (European Commission, 2024), seven maritime sectors of the blue economy in 2021 directly employed close to 3.6 million people and generated around €623.6 billion in turnover and €171.1 billion in added gross value (European Commission, 2024). These seven sectors are: marine living resources (fisheries); marine non-living resources (oil, gas, and minerals); marine renewable energy; port activities; shipbuilding and repair; maritime transport; and coastal tourism. Despite the important economic output, the contribution to employment in maritime sectors has decreased from 2.3% in 2009 to 1.8% in 2021. However, blue economy statistics on employment broken down by gender are not publicly available and are unlikely to be collected for all seven maritime sectors. The words "women" or "gender" are absent in the 48-page report. Furthermore, the database of the EU Blue Economy Observatory, established to monitor and analyze the economic indicators of the seven principal maritime sectors in the region, presents statistics of employment without gender disaggregation. These examples illustrate that the EU follows a human-rights approach for which gender equality is a subsection of social policy and excluded from economic issues (Crowley & Sansonetti, 2019), and while mainstreaming gender in the EU blue economy agenda remains a slow ongoing process, research and knowledge on the economic benefits of gender equality and guidelines on how to achieve it are crucial for strengthening policymakers' engagement.

The underpinning role of women in the economic landscape has been subject to extensive inquiry by sociological and gender research. This research spans from national and sectoral, all the way down to household economies, and has been ongoing for many years. The hidden contribution of women to the national economies through their unpaid household work is a well-known concern. In maritime spaces, the lack of acknowledgment of women's work in the fisheries sector has been extensively documented. However, as Harper et al. (2017, p. 91) report, despite a broad literature focusing on the crucial role of

women in this sector dating some decades ago, "the contribution by women to fisheries economies globally continues to be overlooked." In consequence of the advent of the blue economy, and its pledge to regard the oceans as the new frontier for economic growth, new challenges have arisen for women and gender equality in the maritime sector. Among key questions that have emerged are how the blue economy will advance gender participation in the maritime workforce, whether a real potential for new employment opportunities for women exists, what factors hinder or advance these opportunities, and how women in real life experience the impacts of the new agenda for the oceans. The thematic issue, Into the (Gendered) Blue: New Perspectives on Gender Equality and Participation in Blue Growth aims to address these issues and contribute to the mainstreaming of gender equality in a global society struggling for a just transformation to unfold over the next decades. By highlighting and examining case studies for which gender is used as an analytical category, the thematic issue mobilizes knowledge and opens a discussion that is crucial for guiding this transformation toward gender-inclusive maritime sectors.

2. Gender Equality in the Blue Economy: Shared Struggles and Solutions

The articles in this issue collectively highlight shared challenges in achieving gender equality in the blue economy, emphasizing systemic barriers, the need for inclusive policies and practices, and the critical link between social sustainability and workforce retention. Women face structural hindrances, from exclusionary workplace norms and hierarchies to inadequate support for work–life balance, which discourage entry and retention in male-dominated industries like fisheries, aquaculture, maritime transportation, and marine research. Although many regions, especially the Nordics, have adopted policies aimed at improving gender inclusivity, we argue that policies alone are insufficient without effective implementation and evaluation. Ensuring that gender-sensitive policies are operationalized is essential for creating equitable conditions. Moreover, regular assessment of policy impacts is critical to ensure that intended outcomes are achieved, ultimately leading to a more innovative, resilient, and sustainable blue economy. Without these steps, the promise of gender-inclusive strategies will remain unfulfilled, leaving industries unable to address labor shortages or achieve long-term social sustainability.

While the articles share many similarities, other differences provide complementary perspectives on the lack of women in the blue economy, enriching our understanding of this multifaceted issue. For example, studies analyzing media discourse and identity formation illuminate how language and representation shape societal perceptions, while research on intersectionality delves into how overlapping identities exacerbate exclusion. Policy-oriented studies highlight structural barriers, such as inequitable quota systems or gender-blind economic policies, whereas ethnographic and life-history approaches provide deeply personal insights into the lived experiences of women in the maritime sector. Together, these angles capture both the macro-level systemic challenges and the micro-level individual realities, creating a holistic picture of gender inequality in the blue economy.

The varying methodologies further emphasize how different lenses can illuminate distinct yet interconnected aspects of the issue. Discourse analysis unpacks how societal norms are constructed through language, while ethnography reveals on-the-ground experiences of exclusion and resistance. Quantitative approaches, such as tracking career trajectories, provide data-driven insights into workforce retention, while qualitative interviews uncover the nuanced motivations and challenges women face. These diverse methods act as complementary tools, each contributing a piece to the broader puzzle of understanding and

addressing the underrepresentation of women in the blue economy. Together, they underscore the need for both systemic change and localized, tailored interventions.

3. New Blue Perspectives

In the first article in this thematic issue, Ekstedt et al. (2025) examine gender disparities in the Nordic blue economy. Despite Nordic countries' reputation for gender equality, women in the blue economy, encompassing fisheries, aquaculture, and maritime transport, face systemic barriers to participation. The authors highlight how women's contributions are often *hindered* by structural barriers, *overlooked* in terms of their potential and contributions, and *undervalued* in their roles and labor. Furthermore, Ekstedt et al. (2025) identify gaps in policy and management systems as barriers to women's contributions, particularly in fisheries and aquaculture. While inclusive policies are important for equal participation, the authors also emphasize the need to transition from policy rhetoric to practical implementation through workplace adjustments, gender-inclusive strategies, and a cultural shift toward recognizing and valuing women's contributions. The authors advance discussions on gender equality in the blue economy by proposing a conceptual framework—hindered, overlooked, and undervalued—to analyze gendered barriers. Such a framework should be of value for many researchers, regardless of geographical context, as a tool to categorize and compare constraints, as well as describe ways to advance equality measures. By calling for practical policy implementations, inclusive measures, and sustained monitoring, the article enriches feminist discourse on economic inclusion and promotes actionable insights to close gender gaps in traditionally male-dominated fields.

In the second article, we shift focus from a Nordic setting to transnational intersectionality. Here, Hägele and Hornidge (2025) examine the pervasive nature of intersectional discrimination in marine science and maritime transportation, emphasizing how inequalities based on gender, age, ethnicity, and social class are amplified in the confined, hierarchical environments of ships and research institutions. They show how these dynamics influence marine knowledge production, often resulting in harassment, leading to either withdrawal or resistance among victims. The authors argue for a shift toward more inclusive, intersectionally aware practices in marine science and shipping, to improve collaboration, knowledge sharing, and retention of diverse talents in these fields. Furthermore, the article expands the understanding of intersectionality in the blue economy by providing detailed empirical insights into how multiple identity markers (for example gender, ethnicity, and age) intersect to shape individuals' experiences of discrimination and harassment. Hägele and Hornidge (2025) introduce the concept of "transnational intersectionality" to account for the global, cross-cultural, and hierarchical contexts of marine science. The findings challenge existing norms and propose actionable steps to create more equitable and inclusive workplaces at sea and in marine research, where both expert scientific knowledge and non-scientific knowledge are highly valued to ensure the progress of marine scientific work.

We then turn our attention to South America and Peru, where Doolittle Llanos et al. (2025) examine the participation of women in Peru's blue economy, focusing on their roles in small-scale fisheries and scallop aquaculture. They highlight the systemic constraints, such as gendered division of labor, male dominance, and precarious working conditions, that shape women's experiences and limit their opportunities for empowerment. The authors argue that simply rebranding economic activities under blue growth is insufficient; instead, achieving blue justice requires addressing structural inequalities and providing equitable

opportunities for all genders. Doolittle Llanos et al. (2025) contribute to ongoing discussions on gender and sustainability in the blue economy by showcasing the lived experiences of women within a specific national context, as well as integrating the concept of blue justice, emphasizing recognition, fair participation, and the redistribution of opportunities. By combining individual life stories with broader socio-political and economic analyses, the researchers challenge the male-dominated narrative and offer a gender-sensitive framework for policy and practice in the blue economy.

The final two articles, while presenting research from a Swedish perspective, do provide food for thought for a larger readership. Based on a register-based follow-up study, a survey questionnaire, and interviews with current students at two maritime upper secondary schools in Sweden, Österman and Boström (2025) emphasize the importance of creating socially sustainable conditions in the maritime industry to address the shortage of skilled seafarers. A holistic approach is essential for attracting, recruiting, retaining, and developing maritime professionals. This approach must encompass individual motivations, organizational practices, and industry-wide initiatives to be effective. Factors such as good working conditions, gender equality, social cohesion, and opportunities for professional growth are identified as crucial for sustaining a skilled workforce. The study also underscores the need to modernize the industry's image to appeal to diverse groups, including women and underrepresented demographics. Their research contributes to maritime sociology and organizational studies by identifying the interplay between individual motivations and structural barriers in maintaining a sustainable maritime workforce. Also, by providing evidence-based recommendations tailored to different career stages of maritime professionals, Österman and Boström (2025) encourage managers and decision-makers to take a decisive step from merely focusing on policymaking, to operationalize policy into practice. Even though some of the recommendations are tailored for maritime transportation, most of them are likely to be of value for other male-dominated sectors both within and outside of the blue economy.

The final article conveys the complexity of professional identity formation within the male-dominated maritime industry. Through a discourse analysis of articles in Swedish maritime magazines, Boström (2025) explores how seafarers are depicted, and the way these roles are shaped through both social norms and individual agency. While traditional masculinity continues to play a significant role in how seafarers are depicted, the magazines also portray alternative subject positions, such as the flexible seafarer and the gender-equal seafarer, which allow individuals to break free from hegemonic masculinity. Still, Boström (2025) calls for more inclusive portrayals of seafarers, particularly in terms of gender-neutral language, to improve recruitment and retention in the maritime industry and address the workforce shortage. The article contributes to the field of gender studies and maritime sociology by analyzing how language and representation in media contribute to professional identity construction. The study's findings are relevant to understanding the intersection of gender, language, and identity in professional settings. Examining how any line of work is perceived externally offers valuable insights for any industry or company striving to attract a more diverse and gender-balanced workforce.

4. Setting Sail Towards the Future

The world's oceans are at a crossroads. On one side of the breakwater, the blue economy is about turning the oceans into sites in which marine industries using highly advanced technologies can efficiently leverage the untapped economic potential of the marine environment and its resources. In this vision for the future, the

pursuit of economic growth is inextricably linked to the preservation of healthy oceans and fair use of marine natural resources. On the other side of the breakwater, gender equality scholars and advocates imagine an ocean where all genders are allowed to contribute equally to the ocean's economies, and all gender rights are recognized, making all contributions and voices valued and respected. In this vision, gender equality is not only a prerequisite for the efficient use of the oceans but a crucial turn to end the notion of marine industries being a male-dominated economic sector. However, these visions for the future of the oceans are not mutually exclusive. We suggest that the blue economy should be regarded as a unique window of opportunity for the achievement of gender equality in maritime economic, social, and environmental realms. To capitalize on this opportunity, it is essential to highlight the multiple ways in which women are hindered, overlooked, and undervalued in traditionally ocean-male-dominated fields and to advocate for the inclusion of all genders. Research must continue to contribute to this direction.

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Conflict of Interests

The authors declare no conflict of interests.

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ARTICLE

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Hindered, Overlooked, and Undervalued: Gender Equality in Nordic Blue Economies

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Abstract

The Nordic countries are ranked among the most gender equal countries worldwide. Equality, political, and civil rights, leading to the high participation of women in the workforce, have paved the way for this egalitarian view. However, women remain the minority in managerial positions in general, and they are also strongly underrepresented in many male-dominated sectors of the blue economy. The aim of this article is to introduce and discuss gender equality in the blue economy, and to assess the status of gender research in the Nordic context. To achieve this, a purposive interdisciplinary literature review resulted in three encompassing themes on how women's participation is hindered, overlooked, and undervalued. Using these themes as an analytical lens, we propose that the underlying mechanisms are similar within fisheries, aquaculture, and maritime transportation in how they affect women's participation. Still, there is a lack of statistics and research within parts of the blue sector. To move forward, there needs to be a shift in focus from policy to practice. One starting point could be to implement current knowledge, e.g., regarding workplace design and tailoring equipment to fit a diverse workforce. We call for scaling up best practices and evaluating policy performance and effectiveness. These are prerequisites for sustainable recruitment and retention of the blue sector workforce and the only way forward for countries aspiring to be truly gender equal.

Keywords

blue economy; fisheries; gender equality; labor market; male-dominated; SDG 5; seafarer; social sustainability; women's participation; workforce

1. Introduction

Gender inequality and women's empowerment have been acknowledged in the global political agenda through the UN SDG 5 "gender equality." The Nordic countries (Denmark—Faroe Islands and Greenland—, Finland—Åland—, Iceland, Norway, and Sweden) have historically been at the forefront of women's rights, being among the first countries to grant women the right to vote. Their efforts towards gender equality are well regarded globally, and international gender equality monitoring and reporting indices regularly list Nordic countries at the top of global or regional rankings (Teigen & Skjeie, 2017; see European Institute for Gender Equality, n.d.; UNDP, n.d.; World Economic Forum, 2023). Such regional trends in gender equality are partially attributed to strong Nordic welfare states (Bergqvist, 2015; Daly, 2020; Mustosmäki et al., 2021), and additionally Nordic policies' positive influence on women's citizenship, education, labor market opportunities, and caring roles (Melby et al., 2008).

The Nordic region is also considered to be a blue sector stronghold, Nordic countries are prominent in many marine and maritime sectors (Sepponen et al., 2021) and the marine environment has throughout history played important roles as a source of food, livelihoods, and transport. Today aquaculture, fisheries, and maritime transport hold the highest importance in the region, while coastal—and ocean—tourism and country-specific industries, e.g., Denmark's global leadership in offshore wind development, add significant value (Sepponen et al., 2021). Notably, while Nordic countries are often perceived to be gender equal, marine and maritime industries remain some of the most male-dominated industries in these countries (Karlsdóttir & Guðmundsdóttir, 2024; Svels et al., 2022). Persistent inequalities have been identified in women's participation in the Nordic labor market including segregation across industries and male-dominated occupations, pay gaps, and underrepresentation of women in higher managerial and corporate positions (Mustosmäki et al., 2021; Nordic Council of Ministers, 2021).

Women's labor participation in blue sectors is an especially worrying case in the struggle for gender equality worldwide and in the Nordic countries. Globally it is estimated that women represent only 2% of all the workforce in seafaring (Baltic and International Maritime Council, 2021). Statistics from the Nordic countries compared to global numbers are less alarming, however still disconcerting, division in the workforce where women represent 14–35% of the aquaculture workforce, and 2–17% of the fisheries workforce (Karlsdóttir & Guðmundsdóttir, 2024). Factors contributing to this skewed gender division in maritime industries are systemic and cultural and include prejudices against women professionals, persistent stereotypes, workplace bullying, (sexual) harassment, lack of role models, scarce training opportunities, and unfavorable working patterns (Österman & Boström, 2022). With such conflicting images of Nordic gender equality, some are calling for a more thorough and cautious analysis of gender equality indices and the remaining challenges for gender equality (see Lister, 2009). Moreover, with marine and maritime sectors poised to expand under the new blue economy initiatives, questions about Nordic gender equality and labor participation become even more pertinent. In this article, we identify the progression of thought on the gender aspect of the blue economy in the Nordic context and aim to present existing mechanisms that hinder, overlook, and undervalue women across aquaculture, fishing, and marine transport.

Rather than addressing gender issues in the blue economy sector by sector, this article will use thematic categories, conceptualized by the researchers, to present mechanisms that hinder, overlook, and undervalue women and their roles in the blue economy. *Hindered* refers to placing barriers for greater participation (entry

and retention) of women in the blue economy. In contrast, *Overlooked* refers to the ways women are not seen as being a (legitimate) part of—or as potential contributors to—the blue economy. Here, the emphasis on potential is particularly important as will be illustrated later in this article. When women's actual contributions are not recognized (to their full extent) within the blue economy or defined as being outside the purview of the blue economy, then such mechanisms are defined as *Undervalued*.

1.1. Blue Economy and Gender

Solidly promoted by supranational and national-governing bodies, blue economy (and blue growth) strategies depict the "yet untapped" oceans, as the world's new frontier for economic growth and development (Cohen et al., 2019; Gamage, 2016; Ulmann, 2017; Zulkifli et al., 2023). Demonstrating the blue sector's importance for the Nordic region, Denmark, Finland, Norway, Sweden, and Åland have all developed national strategies for a future blue economy while the Faroe Islands, Greenland, and Iceland have several industrial strategies within separate maritime sectors (Sepponen et al., 2021). However, there is a clear lack of inclusion of gender and strategies for gender inclusion in most Nordic national and sectoral policies (Svels et al., 2022).

The EU has been a frontrunner in fostering a vision for blue growth and adopted its Blue Growth—Marine and Maritime Agenda for Growth in 2012 (European Commission, 2012, p. 2). In addition to their vision of blue growth, the EU is also a pioneer in developing gender policies. Article 8 of the Treaty on the Functioning of the European Union states, "In all its activities, the Community shall aim to eliminate inequalities, and to promote equality, between men and women" (Lombardo & Meier, 2008, p. 104).

Although not explicitly mentioned, the target of ensuring an "inclusive transformation" of blue growth suggests a potential synergy with EU gender policies based on principles of social inclusion and equal opportunity. By setting targeted goals and promising to mainstream gender in all stages of policy design in its Gender Equality Strategy, the European Commission further marks its intention to achieve gender equality (European Commission, 2020). However, as argued by Österblom et al. (2020, p. 1), EU legal frameworks to support equity are not sufficiently developed, and "in practice, ocean policies are largely equity-blind." While the opportunities for women to participate equally in the new jobs provided by the blue economy are not stated, boosting an inclusive transformation could set the basis for advancing gender goals in tandem with economic and environmental targets. By embracing inclusion, the European Commission is arguably harmonizing with the Gender Equality Strategy 2020–2025 (European Commission, 2020 p. 2) and its commitments to "including a gender perspective in all stages of policy design in EU policy areas" and striving for a Union "where women and men, girls and boys, in all their diversity, are equal."

In addition to national and international strategies, the blue economy has promoted its gender equality strategies. Through its small-scale fisheries guidelines, FAO (2015) has highlighted the importance of gender equality and equity in development. The International Maritime Organization (IMO) initiated a gender program in 1988, Women in Maritime (IMO, n.d.). Joint efforts by IMO and the International Labour Organization (ILO, 2024) resulted in the amendment of the ILO Maritime Labour Convention (2006), and the adoption of a list of coordinated recommendations aiming at protecting seafarers from violence and harassment in line with the ILO Violence and Harassment Convention (2019). In addition, these recommendations included new IMO mandatory training for seafarers, additional IMO guidance related to violence and harassment for shipowners, and the launch of a joint IMO and ILO international awareness campaign to combat sexual harassment, bullying, and sexual assault in the maritime sector (ILO, 2024).

There are further strategies within the Nordic countries, where Norway and Iceland have been noted to have come the furthest in their work (Svels et al., 2022). For example, in Norway, the Ocean Strategy recognizes that: "The proportion of female employees is low in several ocean industries, making this an example of a gender-segregated labor market" (Norwegian Ministries, 2019, p. 21). To address this, the Norwegian government has formulated objectives around both expanding the blue economy and promoting gender equality. As a request of the Norwegian parliament to the government, the Gender Equality Strategy for the Maritime Sector was developed by the Ministry of Trade, Industry and Fisheries in 2022 (Norwegian Ministry of Trade, Industry and Fisheries, 2023). The strategy followed the Norwegian government's goal of "increasing diversity in the labor market and improving gender representation in gender-segregated industries" (Norwegian Ministry of Trade, Industry and Fisheries, 2023, p. 37).

2. Method

This study followed a two-step approach, where findings from a purposive review were analyzed and conceptualized by researchers, resulting in this article. A purposive review was used as it affords researchers to reflect more broadly and across disciplines on research themes, building on the authors' own experiences of the field, and facilitating insights that would not be achievable through a systematic review (Cook, 2019). The literature reviewed included peer-reviewed (empirical) studies, reports, policy documents, and statistics within the timespan from the 1980s to the current day.

Preliminary findings from the review, grounded in the researchers' pre-existing knowledge, were clustered into the broader themes (hindered, overlooked, and undervalued). These categories serve as the study's analytical tool and its conceptualization. While the article centers on the Nordic context, the geographical context has been broadened when relevant.

Academic literature addressing gender issues within the Nordic blue economy is limited and availability fluctuates. While there is a rich range of literature from Iceland, with scholars such as Karlsdóttir and Skaptadóttir, and from Norway, where scholars such as Gerrard and Munk-Madsen have been important contributors, literature on gender in the fisheries sector based in other Nordic countries are still scarce. Furthermore, there is a sectorial focus across literature, where literature can be strong in one sector in one country, but not across the blue economy as a whole.

In addition to a limited amount of academic literature, it is worth noting that data needs and gaps persist. Legg et al. (2023) identify the opportunity for self-reporting on gender in questionnaires in order to break from the gender binary and better understand who participates in oceanographic research; similar recognition could be given to the collection of blue economy statistics. Lacking statistics on gender-related demographics connects to failure to collect such data and to increasing data protection and privacy protocols which limit access and prevent retention of such information in publicly available data.

Furthermore, our review risks overlooking non-digitized or unpublished material. As authors, we also have certain language abilities, which encompass English and Scandinavian languages, but exclude Icelandic, Faroese, Greenlandic, and Sámi languages. Our findings nevertheless offer a thorough overview and valuable insight into how gender-related matters are hindered, overlooked, and undervalued in the Nordic blue economy.

3. Hindered, Overlooked, and Undervalued

In the following section, we present gender issues in the Nordic context through the conceptualized categories hindered, overlooked, and undervalued. Overall, the three concepts are in conversation with one another, though there are distinctions in what they represent. Acknowledging the fluidity among these categories, they should not be regarded as absolutes. Nonetheless, we still find the conceptual division insightful.

3.1. Hindered: Women's Greater Participation (Entry and Retention) in the Blue Economy Faces Barriers

A common misconception is that women are new to the maritime industry, but this is not true. Rather, women's participation has largely been ignored in historical narratives (Lloyd's Register, 2022). While the industry has seen some recent initiatives to increase the visibility of women, more can be done. Likewise, while there are women role models in the maritime sector, Narayanan et al. (2023) call on both governmental and private organizations to intensify the work to highlight and promote women's participation in leading and mentoring positions. One example is Rewriting Women into Maritime History, a cross-industry project run by the Lloyd's Register Foundation. Similarly, Willson (2016) highlights how the historical participation of women in fisheries in Iceland has been largely forgotten.

Life at sea is highly institutionalized and characterized by a strong hierarchy where "the captain is king" (Sampson, 2021, p. 90). Onboard, rank is the most visible hierarchical marker. This is manifested through, e.g., uniforms, the size and location of cabins, and on some ships different mess rooms for officers and crew (Knudsen, 2005). Furthermore, Sampson (2021) reports that particularly captains, and sometimes officers in general, often acknowledge the need to maintain a social distance from the rest of the crew. Not only does hierarchy affect onboard work, but it also influences social relationships (Hult, 2012). Seafarers sometimes refrain from taking shore leave together with officers, simply to enjoy "a few brief hours when they feel free of 'surveillance' from managers and supervisors" (Sampson, 2021, p. 94). The onboard hierarchy influences women seafarers. Kitada (2013) describes how two women captains felt more secure as they rose to the highest rank; as the title itself had a legitimating effect, they could relax in their senior roles.

From a linguistic perspective, the frequently used titles "seaman" and "fisherman" (and other similar terms) can be seen as exclusionary for women and non-binary persons. While the terms might seem harmless, children tend to make gender-specific interpretations of job titles, being least likely to attribute strongly marked titles, such as "policeman," to both men and women (Liben et al., 2002). Most of the Nordic countries use the genderless title "fisher," excluding Iceland which only has gendered titles, and Greenland which has both a genderless title and a gendered title "fisherman," but no word for "fisherwoman" (Branch & Kleiber, 2017). Since fisherman and seaman are gendered titles, we argue that they could have a deterring effect on those wishing to enter the blue sector. Consequently, implementing alternative titles could change the perceived suitability of blue sector jobs to a wider workforce; possible gender-neutral alternatives include "seafarer" and "fisher." In 2010, IMO changed its titles from gendered to gender-neutral. Ratings, who had previously been called either seaman or motorman, now became "able seafarer deck" and "able seafarer engine" respectively (IMO, 2010). Albeit small, the change signals the organization's intention to make the maritime industry more gender inclusive.

Maritime transport and fisheries also share many similarities regarding work–life balance and being separated from partner and family is a crucial stress factor for many seafarers (Thomas et al., 2003). According to West

and Hovelsrud (2010), many young people shy away from long periods at sea and irregular hours, while at the same time, lifestyle choices and family dynamics have changed, deterring newcomers to the blue economy. Another similarity entails difficulties in combining work with childcare. There are limited childcare services in fishing communities, especially rural communities (Gerrard & Kleiber, 2019). This, in combination with often long periods of work onboard, increases the seafarer's or fisher's dependency on a partner or other family member for reproductive chores.

Workplace bullying, harassment, and sexual harassment are known risk factors affecting women workers in the blue economy in the Nordic region. While this has been long documented through anecdotal evidence, e.g., in news media, there is now a growing body of scientific literature as well (Mangubhai et al., 2023; Österman & Boström, 2022). Some of the earliest and most influential research on workplace bullying and harassment was done by Scandinavian researchers (Einarsen et al., 2020). A culture of hypermasculinity (Kennerley, 2002), social isolation while being away from home for prolonged periods of time as required for many blue sector jobs, as well as blurred boundaries between work and private life, aggregate these risks (Österman & Boström, 2022).

In summary, the literature on the Nordic blue economy identifies several ways in which women face barriers to greater participation. Barriers include but are not limited to, onboard hierarchy, linguistics, work–life balance, and harassment, and one could argue that these barriers are linked together. Onboard hierarchy might keep women out of leadership roles, which perpetuates the use of gendered titles and norms that marginalize women. Thus, the male-dominated culture and lack of leadership opportunities for women contribute to poor work–life balance, as the industry fails to adapt to the needs of a more diverse workforce. In such a culture, harassment can become normalized, with few consequences for perpetrators. This creates an unsafe and unwelcoming environment for women, hindering the increased participation of women in the blue economy. There is less scientific literature on these barriers in the Nordic countries, although it is growing, such as workplace bullying and sexual harassment. There is no doubt that history, path dependencies, and culture still play a role in women's opportunities to participate in a good working environment at sea in the Nordic countries.

3.2. Overlooked: Women Are not Viewed as a Legitimate Part of the Blue Economy

3.2.1. Implications of Access Privileges/Rights

Individual transferable quotas and other catch-share system variants became the prevalent fisheries management mechanism in the Global North at the end of the 20th century. Their implementation has documented effects on access privileges for women, especially fishers' wives (Gerrard, 2008; Gerrard & Kleiber, 2019; Munk-Madsen, 1997, 1998). Catch share (Bromley & Macinko, 2007) and license limitation (Ginter & Rettig, 1978) systems center on establishing who will be allocated the access privilege, which is often constructed on (historical) participation records of time spent on vessels or at sea. When the scope of what constitutes a fisher—or a "rightful" quota owner—rests on gendered labor divisions in fisheries, then those divisions are carried forward into catch share systems and the accumulation of generated wealth (Munk-Madsen, 1997, 1998). When fishing quotas were formalized, women's fishing contributions were not well acknowledged; women were not granted ownership of rights to access, or control of fish resources (Munk-Madsen, 1998).

Gerrard (2008) notes that few women (2% in 1988 and 1.9% in 2006) were registered as full-time fishers in Norway; consequently, relatively few female boat owners resulted in few female quota owners. Ultimately, women's shore-based fisheries work did not engender access to political, social, and welfare rights and there was no formal recognition of shore-based contributions (Gerrard, 2008; Munk-Madsen, 1997, 1998). Thus, women are overlooked as rightful fishing quota owners because systems that provide flexibility to women's multiple roles then undercut their legitimacy to own quota (Munk-Madsen, 1998). Regarding access to financial capital to buy quota, few policies aim to rectify this gendered financial inequality: "As long as quotas in the closed group are expensive, the criteria for the recruitment quota will mostly benefit men, as no special financing means exist, and most women cannot compete for a quota in this [Norwegian] quota market" (Gerrard & Kleiber, 2019, p. 271). Furthermore, the introduction of catch shares reinforces boats' symbolic and financial capital and their coding as "masculine" or men's domain (Gerrard & Kleiber, 2019; Munk-Madsen, 2000). More recently the Norwegian government has been trying to rectify the disadvantaged position of women fishers through their recruitment quota program where three quota shares will be given to women (under 40), while three quota shares will be given to young men (under 30; Norwegian Ministry of Trade, Industry and Fisheries, 2022). The age limit's gendered difference is justified by research that found that new-entrant women often become fishers later in life (Norwegian Ministry of Trade, Industry and Fisheries, 2021) due to what is seen as an incompatibility between raising small children and a fishing career (Gerrard & Kleiber, 2019).

3.2.2. Aquaculture and Fish Processing

With the symbolic strength of boats—and the men who work on them—so deeply tied to fisheries, the importance and added value of processing—thus women's contribution—to the seafood value chains are often overlooked. Fish processing demonstrates a stark gendered division of labor and a devaluation of such work which underscores racial and ethnic divisions (Yingst & Skaptadóttir, 2018). In addition to large-scale fish processing, Gustavsson (2021) found that women in the UK engage in fish entrepreneurship and fish processing within small family-based fishing businesses—processing the fish caught by family members to add value to their catch and produce additional value as they sell fish products (street food, boiled lobsters at farmer's markets, etc.) to local markets. Flexibility and the multiplicity of roles that women play in coastal communities and families also had implications for reduced participation in aquaculture (Pettersen & Alsos, 2007). Family business composition and industrial change away from such a model tend to disfavor women's participation in more formalized, industrialized blue economy sectors (e.g., fisheries and aquaculture; Pettersen, 2019; Pettersen & Alsos, 2007). With an emphasis on practical experience in addition to formal education, the aquaculture sector tended to overlook women's contributions and the need to sustain their participation, especially in "grow out" production, "the myth of fish farming as best suited for men still remains" (Pettersen & Alsos, 2007, p. 116). Nonetheless, over more than a decade as women serve as professional partners, owners, board members, or managers in the aquaculture sector, there are some documented changes (Pettersen, 2019). Moreover, outside of the Nordic context but in the North Atlantic, evidence suggests that women's participation in aquaculture may increase much more readily than in fisheries (McClenachan & Moulton, 2022). In the same study, while simplified license structures for aquaculture have been shown to benefit women's participation, gender inequality in high-value aquaculture segments remains (McClenachan & Moulton, 2022).

Education trends and greater participation of women in aquaculture and blue biotechnology show the promise of more women coming into the blue economy (Karlsdóttir & Guðmundsdóttir, 2024). Nonetheless, many women have experienced the "surprise" of colleagues and others working in aquaculture when they are present (Karlsdóttir & Guðmundsdóttir, 2024, p. 28):

> When we are having meetings…I am always asked: What is your job? None of the guys in the meeting are asked this: What do you do? It is just that you always have to be explaining yourself. But they do understand that the guys are there…but they howl when I am there. (Managing employee in an aquaculture company N-Iceland)

3.2.3. Equipment and Policy Support for Diverse Seafarers and Their Physiological Needs

A concrete way in which women's participation and thus physical needs are overlooked in the blue economy is the availability of safety equipment, sector-specific work garments, and adequate onboard sleeping and toilet facilities (Johannesen et al., 2022). Legg et al. (2023, p. 16) identify "equipment and facilities not designed for all genders" as one of the obstacles to greater participation and advancement of women and gender minorities in oceanography—a point raised by others (Glüder, 2020; Johannesen et al., 2022). Glüder (2020) explicates the severe safety risks (i.e., death) due to survival suits' sizing and functionality based upon an average male body, which thus fails to ensure the safety of persons smaller, especially in cold water regions such as the Arctic. While these issues could be seen as hindrances, they strike at the deeper issue of women's participation: "The prevalence of ill-fitting personal protection equipment has a second less extreme but more prevalent side effect than drowning: it makes many of us feel that we do not belong" (Glüder, 2020, p. 9). Such feelings of exclusion illustrate the tendency to overlook women's (potential) participation in marine-based sectors where safety gear that fits and functions as intended for a diversity of bodies is essential. Speaking directly about overlooking women in fisheries Gerrard and Kleiber (2019, p. 271) write:

> Women's issues are infrequently considered when making policies, rules and regulations….Some additional regulations stipulate labor exceptions for women who are pregnant or are mothers of children younger than two years, but so far, there are few signs of taking all aspects of women fishers' special biological, cultural and social situation into consideration when policies are established.

Relatedly, impediments and opportunities for women in marine science and in particular oceanography are also still present (Gissi et al., 2018; Legg et al., 2023). Johannesen et al. (2022, p. 21) point to European maritime policy actors overlooking the importance of gender in the next generation of research vessels: "[The European Marine Board's] report makes no specific mention of gender and fails to consider the changing gender demographic of the research workforce."

3.3. Undervalued: Women's Contributions to the Blue Economy Are not Recognized

3.3.1. Invisible Labor

When considering women's participation in the blue economy it is important to acknowledge the context in which the blue economy operates, which means expanding the understanding of what work is and who are blue economy workers. Previous research, on fisheries specifically, has pointed to the continued

undervaluing of the work that women do ashore—be it paid or unpaid, in their role as "shore skippers" (Davis, 1988; e.g., being responsible for the administration of operating a business, or even marketing of fish; see Salmi & Sonck-Rautio, 2018) or as mothers and community members that enable male fishers (and arguably also seafarers) to go to sea (Gustavsson & Riley, 2020). Such roles are often not conceived of as part of the blue economy, arguably so because when failing to view the blue economy in its socio-cultural and broader economic context much of the work women tend to do is unrecognized and undervalued and its broader relevance is omitted. Already Gerrard (1983, p. 226) argues that women's flexible roles in fishing households create a "buffer" to fishing households and the industry more widely, something Szaboova et al. (2022) argue contributes to building resilience across the industry. Echoing Gerrard's thinking, Thorsen (1994) introduces the term "the flexible gender" which addresses how women are seen as helpers, assistants, and seasonal workers when needed. As women's contributions are seen as "help" rather than work (see Zhao et al., 2013) such positions imply a constant undervaluation of the relevance of their contribution. In fisheries in Finland, it has further been noted that women in fisher households often provide a stable paid job in comparison to an uncertain fishing income (Salmi & Sonck-Rautio, 2018). Such incomes—beyond women's unpaid contributions—work towards supporting fishing households by providing resiliency to fishing industries more widely yet its significance is often unrecognized (Szaboova et al., 2022). Willson (2016) shows that modernization and technological intensification may push women out of the boats and fisheries (see Haugen, 1990, for a clear parallel in agriculture). Thus, as society and fisheries become more professionalized, industrialized, and regulated, women's roles expectedly become even less visible, and as previously presented by scholars such as Salmi and Sonck-Rautio (2018) and Szaboova et al. (2022), they may exit from fisheries-related jobs, and then their practical contributions may become even more undervalued. Similar findings have been evident in research on seafarers where, e.g., Slišković and Juranko (2019) point out overload with domestic duties, childcare, and subordination of their job/career done by those who stay ashore to sustain shipping industries. Such sea-shore dynamics are particularly evident in blue economy sectors where workers stay at sea for longer periods of time. The complete absence of sea-based workers from family activities ashore makes the work women have tended to do around childcare even more crucial to enable blue economy sectors to flourish.

3.3.2. Feminized Work Conditions Within the Blue Economy

Evidence from the shipping sector suggests that even when women have paid recognized jobs on board, gender becomes relevant in how responsibilities and roles are organized, and this has implications for how work is valued, or under-valued. After studying the onboard working life of Swedish seafarers, Hult and Österman (2015) discuss the work carried out within catering departments on board passenger ships. Such work is sometimes valued as less significant compared to that performed within the deck or engine department; catering staff can be perceived as less of seafarers, or even "non-seafarers." Since many women seafarers work within the catering department, one can see a feminization of the work that many women do on board which leads to an undervaluing of their work, and arguably a feminization of their work conditions as well.

In the fishing industry, we can see similar gendering of work roles on board, where women are more likely to hold apprenticeship positions, or to be cooks or fish gutters when women do fish on board larger vessels. In aquaculture, we can see that women tend to work in on-shore smolt facilities (Pettersen & Alsos, 2007), roles that do not offer the same economic rewards as sea-based roles. Thus, the roles that the majority of the women who are involved and adopt in the blue economy are economically undervalued.

4. Discussion

While this article has addressed hindering, overlooking, and undervaluing mechanisms separately, it is important to acknowledge that these mechanisms do not act in isolation and that women and girls face several of these mechanisms simultaneously. One tangible place where these mechanisms intersect is onboard vessels where overlooking something as important as safety equipment not only threatens women's safety but also reinforces a notion of not belonging when women's work is concurrently undervalued or "invisible." Such points dovetail with barriers mentioned in the hindered section (Section 3.1) related to (sexual) harassment at sea. Moreover, without the option to lock the cabin door or having only a curtain for privacy demonstrates how the physical working environment at sea overlooks the needs of a diversifying workforce and hinders seafarers' safety. Issues such as these should be addressed through changed practices, e.g., requirements for better facilities onboard ships and safety gear testing on more than the average male body; such efforts would be important steps to prevent women's role in the blue economy being overlooked.

The hindrances for women are evident through the failure to change linguistic terms (e.g., adopting the gender-neutral term "fisher" as compared to "fisherman") could dissuade women from joining—or encourage them to leave—the sector when such hindrances intersect with their work being undervalued. While there have been efforts to change linguistic terms—with the IMO's (2010) and Nordic countries (Branch & Kleiber, 2017) initiatives—little is known of the changes' effectiveness and whether they have gone beyond paper and been adopted into workplaces and social contexts.

Additionally, reproductive or care work is overlooked and undervalued in sectors both within and outside (McDowell, 1999) the blue economy. Traditionally, there has been an acknowledgment within coastal communities of the necessity of this work, and women's flexible contribution to the fishery sector. However, this role in a modern, blue economy context is challenged and changing. Showcasing the fluidity of gendered issues between hindering, overlooking, and undervaluing, we highlight the need for a conversation surrounding possible common foundations of these issues while also acknowledging the need to act on the isolated issues. Gendered barriers extend outside of the blue economy, and while the blue economy sectors have historically been male-dominated, changes to address overarching social barriers could help form a bridge for women's participation in the blue economy.

We recognize, together with other scholars, such as Svels et al. (2022) that there is a need for a cultural and social shift—facilitated by structures. Coastal women being undervalued in male-dominated industries, is one of the implications that necessitates a cultural shift. Informal and flexible structures are often seen as part of the attraction and sense of freedom in rural and coastal communities (Højrup, 1983); however, it may also leave women in an unattractive position and a declining number of young women see a future therein. Generally, being outside the formal economy also has consequences for social security and pensions when retiring. Furthermore, the occupational identity as fishers has been a taken-for-granted aspect (for men; see Gustavsson, 2020), while women's identity linked to their buffer role in fisheries and other economic activities is less articulated, and consequently, also for themselves. Gustavsson and Riley (2020) point out how family, children, fisheries, and related businesses are entangled parts of women's roles and tasks. Women are thus left to negotiate their time between children, family, fisheries, and other incomes. With the increasing globalization of fisheries and aquaculture, international and seasonal migration replaces much of the previous paid buffering

function of women. However, it does not necessarily enhance the future viability of the coastal communities and the blue economy. When women's participation is hindered, overlooked, and undervalued, young women's desire to remain in or return to these communities dwindles, and thus the future reproduction and viability of these communities also dwindles.

Social and cultural constructions of gender and gender roles are on display in the examples made of hindering, overlooking, and undervaluing. The reflections on linguistics and their ability to include and exclude puts this in view. Additionally, the dominance of market-based approaches and the importance placed on the blue economy for regional competitive advantage, tend to overlook and undervalue goals concerning gender inclusion or diverse workforces. As demonstrated in the discussion of fishing quotas, eligibility criteria applied overlook and undervalue certain practices and contributions in the fishery and then hinder the wider participation of women in these sectors. While recognizing that the existing knowledge presented is scattered and thin in certain industries and/or geographic locations, we do consider existing knowledge sufficient to advise a shift from policies to practice, i.e., implementing policies already in place. We believe this may also be an impetus for innovation that may affect the blue economy positively.

4.1. Policies

Policies have so far documented the intentions of inclusion. As mentioned in the introduction, there are several policies in place that address gendered issues in the blue economy. Although there is an unequal distribution of gender policies, during recent years there have been efforts both within the EU and the Nordic region to recognize the importance of gender equality and inclusion within the blue economy. Whether these policies are achieving their goals or not, is difficult to measure; however, efforts to evaluate policy effectiveness and performance are needed. Despite efforts and policy measures, participation and representation of women in the blue economy have lagged. Shortfalls of gender equality have been highlighted by Karlsdóttir and Guðmundsdóttir (2024), who acknowledge that recommendations directed to decision-makers to achieve gender equality are as relevant today as when they were issued at the beginning of the millennia.

As the countries in the Nordic region share commonalities in the welfare state (Bergqvist, 2015; Daly, 2020; Mustosmäki et al., 2021) and blue economy sectors (Sepponen et al., 2021) we argue that there should be less effort to develop national gender blue economy policies and instead further recognize lessons learned from nations with further developed policies, such as the Norwegian policies. Furthermore, we second Svels et al. (2022) argument to look across blue economy sectors that have been studied more thoroughly with a gender lens, such as fisheries, accumulate lessons learned, and direct efforts towards less studied sectors. Wider inputs from blue economy sectors would be an important addition to policymaking. Additionally, to address the challenges presented in this article where women are hindered, overlooked, and undervalued, policymakers must prioritize the implementation and enforcement of existing gender equality initiatives.

4.2. Future Efforts and Research

As the global blue economy grows and continues to be endorsed, it is important that new blue economy sectors show early investments to reduce and prevent gender equality gaps. Novel industries such as the blue bioeconomy have the potential to overlap gender inclusion in STEM and the blue economy, and due to

the novelty of the industry also have the potential to implement policy-advised practices early on. Increased interest of young women to enter blue sectors should be met by investments to keep women in the industry—decreasing hindering, overlooking, and undervaluing mechanisms—to avoid women exiting the blue economy. Research efforts should be directed toward improving practices, investigating policy implications, consequences of labor migration, and the current participation of women and girls in the blue economy. Moreover, strategies to combat sexual harassment are crucial to ensure a safe blue economy for all. The lack of academic literature and statistical data, especially from Greenland and the Faroe Islands, evidences a continued need for effort to decrease and acknowledge gendered issues within the blue economy in the Nordic region. A common gender database shared among the Nordic countries, or by extension the EU, could be useful to map progress and/or persistent challenges for a more gender equal blue economy.

Overall, advocacy and action are needed to ensure that girls and women feel welcome and included in the blue economy. We recommend gender mainstreaming (adhering to the EU vision) of policymaking and recommend blue economy sectors to develop gendered strategies. Such sector-specific gendered strategies could be shared between countries, recognizing the Nordics' similar social and cultural values. Furthermore, as encouraged by Karlsdóttir and Guðmundsdóttir (2024) and Svels et al. (2022), steps should be taken to increase women's access and enrolment to education related to the blue economy, making female role models more visible and avoiding biases concerning career choices to disrupt such hindrances of women's participation in the blue economy. We argue that the benefits of such a change would not be isolated exclusively to women, but also to men, non-binary persons, and society at large.

5. Conclusion

Despite the Nordic region's reputation of having high gender equality ideals, this article has highlighted the hindering, overlooking, and undervaluing of women in the Nordic blue economy. The challenges women and girls face are many affecting their work–life, livelihoods, career paths, and personal safety. Notwithstanding several Nordic and international policies in place that promote a more gender-inclusive blue economy, gender inequalities persist. The authors therefore highlight the urgency to implement policy recommendations into practice building from accumulated knowledge presented in this article. Given the Nordic countries shared social and political values, efforts to increase gender equality in the Nordic blue economy should be a shared effort across the region where the countries not only learn from each other but also cooperate to overcome gender issues. These efforts should be directed towards improving practices, increasing statistical data on women's participation in the Nordic blue economy, and prioritizing gender inclusion early on in novel industries. Finally, societal and cultural changes are needed to secure a gender inclusive blue economy which is beneficial for wider society, regardless of gender identity.

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Transnational Intersectionality at Sea: Gender, Appearance, Ethnicity, Age, and Marine Knowledge Production

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Abstract

Knowledge production is inherently social, as humans interpret their environment. Scientific knowledge production differs from non-scientific production in its systematic data collection for validation, yet both involve a social element shaping our understanding of the world. This article investigates social contestation processes as part of knowledge production processes on a German research vessel and in German and Brazilian marine science institutes, with a particular focus on the social identity markers of gender, ethnicity, and age and how they affect team-based sense-making processes. Methodologically, our research draws on participant observation of marine scientists and associated non-scientists in their daily working routines as well as semi-structured interviews. This took place on a research vessel in 2021 and in marine science institutes from 2022 to 2024. Conceptually, the research follows approaches of the sociology of knowledge and intersectional approaches that integrate transnational experiences across national borders and other (physical) boundaries. Based on this empirical research, we assess transnational intersectional sense-making practices at sea. Our findings show that (sexual) harassment in marine knowledge production processes occurs independent of localities, intersectional discrimination at sea leads either to emancipation processes or to withdrawal, and tensions arise in particular between scientists and non-scientists, which broadens the gap between these social groups and knowledge systems. We conclude by providing recommendations for a more diverse workforce at sea and in marine sciences so that the conduct of research and work at sea can be more inclusive, equal, and safe.

Keywords

blue economy; gender equality; intersectionality; knowledge sociology; marine science

1. Introduction

Among the "transformative ocean science solutions" in the mission of the UN Decade of Ocean Science for Sustainable Development is the aimed-for outcome of "open and equitable access to data, information and technology and innovation" during and after the decade ending in 2030 (Intergovernmental Oceanographic Commission, 2021, p. 8). Empowering women in marine sciences, science policy, and other marine occupations represents a crucial component of these goals (Intergovernmental Oceanographic Commission, 2021). Although the *Global Ocean Science Report* (Intergovernmental Oceanographic Commission, 2020) states that 39% of marine scientists globally are women, women remain underrepresented in decision-making and leadership roles (Shellock et al., 2022, 2023; Sun et al., 2023). Only 1.28% of seafarers globally are women and these mainly work in stereotypical roles in catering and hotel sections of vessels (Kitada, 2022). The maritime industry sector and marine sciences still represent homogenous work environments dominated by men (Giakoumi et al., 2021; Johannesen et al., 2023). Yet, women's contributions are often overlooked, including their socio-ecological linkages to fisheries, maritime industries and blue economy, sustainable development, and marine conservation (Gissi et al., 2018). Besides gender imbalances in marine (science) institutes and organisations such as the International Council for the Exploration of the Sea, and a female gender gap at senior-levels (Johannesen et al., 2023; Shellock et al., 2022), barriers exist to the collection of gender-related data in marine sciences (Kitada et al., 2023). Therefore, collecting disaggregated data on gender in marine sciences on the micro-level (cf. Elliker, 2017) beyond armchair analyses remains crucial and constitutes a research gap we aim to fill. We even take a further step by mapping thus far neglected intersectionality in marine knowledge production processes and analysing the effects of intersectional discrimination in working at sea.

2. Following Seafarers, Marine Scientists, and Technicians: An Ethnography of Work at Sea

Our analysis is based on in-depth ethnographic fieldwork conducted on land and at sea between April 2021 and January 2024. Methods used include participant observation and go-along (Kusenbach, 2003) on a German research vessel and two merchant vessels, as well as in laboratories, meetings, workshops, conferences, and everyday work at offices in five Brazilian and German marine science institutes and universities. The country and interlocutor selections are based on an interdisciplinary joint project of Brazilian and German research institutes that aims to expand marine carbon observations (for more details see Funding). Our primary research interest was the analysis of knowledge production processes in marine carbon observations. We approached the field in an explorative and inductive way and realised that topics of gender, transcultural, and epistemic (in)equalities, as well as (sexual) verbal or physical harassment and discrimination, emerged repeatedly throughout the research. As part of the research, 82 semi-structured interviews with marine scientists and (laboratory) technicians in science institutes, and with seafarers of the German research vessel Maria S. Merian were conducted during a seven-week expedition (for the interview questions, see Supplementary File). We guaranteed the anonymity of the interviewees and audio-recorded and transcribed the interviews. Of the interviews, 30 were conducted in English and 52 in German; 35 interviewees identified as women and 47 as men. No interviewee identified as non-binary. Only one woman, compared to 25 men, worked as a non-scientist, e.g., as a crewmember of the research vessel or as a (laboratory) technician. Out of the 24 crewmembers on the research vessel Maria S. Merian, two were women (one of whom declined the interview request), reflecting the low proportion of female seafarers (cf. Kitada, 2022). Of the interviewees, 34 females and 22 males worked as (marine) scientists.

We aggregated the information on the interviewees through the creation of categories, which makes it easier to put the referenced 82 interviewees into the context of age, gender, and ethnicity (see Table 1). The term "ethnicity" includes nationality as both concepts shape social identities, belonging, and group memberships. In our interviews, these concepts were used interchangeably by the interviewees and reflected their origin, culture, collective identity, and language—both applicable to nationality and ethnicity.

Table 1. Interviewees (scientists and non-scientists) categorised by gender, age group, ethnicity, highest degree, country of work, and interview group.

Gender	Age group	Ethnicity	Highest degree	Country of work	Referred to as	No. of interviewees
Scientists						
female	19–37	Brazilian (5) Colombian (1)	BA (1) MA (3) PhD (2)	Brazil (4) UK (1) Germany (1)	Interview group 1	6
male	19–37	Brazilian (2)	MA (2)	Brazil (1) Germany (1)	Interview group 2	2
female	19–37	German (11) Sweden (1) New Zealander (1)	A-level (3) BA (3) MA (2) PhD (5)	Germany (13)	Interview group 3	13
male	19–37	German (7)	A-level (1) BA (4) MA (1) State examination (1)	Germany (7)	Interview group 4	7
female	38–62	Brazilian (10) Brazilian-German (1) Brazilian-UK (1) Mexican (1)	Post-Doc (3) Professorship (10)	Brazil (12) Germany (1)	Interview group 5	13
male	38–62	Brazilian (5)	Post-Doc (1) Professorship (2) Director (1) Vice Director (1)	Brazil (5)	Interview group 6	5
female	38–62	German (2)	Post-Doc (2)	Germany (2)	Interview group 7	2
male	38–62	German (7) Canadian (1)	Post-Doc (4) Professorship (4)	Germany (7) Canada (1)	Interview group 8	8
Non-scientists						
female	28	German (1)	BA (1)	Germany (1)	Interview 8	1
male	19–37	German (25)	Apprenticeship (5) BA (4)	Germany (25)	Interview group 9	9
	38–65		Apprenticeship (7) medicine (1)* MA (5)** PhD (3)**		Interview group 10	16
						Total: 82

Notes: * Ship's doctor; ** Five interviewees hold an MA degree and three a PhD, but they work as (laboratory) technicians, which does not require such a degree.

Moreover, field notes of everyday working processes and team negotiations, as well as scientific and secondary literature, contributed to the empirical data. Besides the quantification of the categories in Table 1 and the numbers in Section 4, we want to note that we only collected qualitative data and did not aim for a quantification of intersectionality at sea. The number of interviewees (n = 82) and the interview questions (see Supplementary File) support our claim not necessarily to reduce gender inequality, intersectional harassment, and discrimination to quantification (cf. Morley, 2011), but rather to give voice to the affected people through interview quotes.

3. Transnational Intersectionality at Sea: A Research Gap and a Conceptual Framework

Research on diversity, inequality, and discrimination in marine sciences and industry predominately focuses on gender (in)equality and thus on female scientists or seafarers. Kitada (2022, p. 240) researched women working in the maritime sector, where they face (sexual) harassment in their workplace or during their training. She moreover revealed that shipping companies tend to avoid employing women since their bodies are "considered as possible risks at work." Similarly, Grasmeier (2022) reports misogynistic behaviour and masculine work culture in the cargo shipping industry. The male-dominated working culture and (sexual) harassment on a marine research vessel were also observed and documented by Hornidge (2018, 2020). Moreover, studies of early-career researchers found that junior female scientists were more likely to be downgraded from a paper to a poster presentation than male or more senior scientists at an international marine science conference (Johannesen et al., 2023). Giakoumi et al. (2021), Johannesen et al. (2022), and Shellock et al. (2022) pointed to a relative gender balance in early-career stages of ocean-going science, but to a growing gap between the number of women and men represented in senior positions, leadership, funding, and publishing. In European marine science institutes only 13% to 24% of women occupy senior positions in marine sciences and female marine scientists are less likely to be first authors on publications (Giakoumi et al., 2021). Johannesen et al. (2022) cite social norms at sea, gender-insensitive design of marine facilities, lack of security at sea, and imbalances in responsibility for family care duties as some of the reasons. Legg et al. (2023) add further reasons, such as former bans on female involvement in sea-going research, restrictions on women's employment in oceanography, and harassment at sea.

Other studies provide solutions or interventions for more equal (work) opportunities in maritime careers. McLaughlin and Fearon (2022) propose to increase female participation in seafaring by introducing policies on discrimination, raising the awareness of girls and young women of job opportunities in the sector, and promoting career counselling and female role models. Van Stavel et al. (2021) provide suggested solutions for advancing diversity and inclusion in ocean observation through self-assessment by, for example, continuously reassessing our own biases. Giakoumi et al. (2021) argue for mechanisms that promote a more transparent hiring process and shared family responsibilities. Shellock et al. (2023) propose strategies for the empowerment of early-career female marine scientists, such as equitable access to funding, a more inclusive culture, and mentoring opportunities. Hendry et al. (2020), moreover, mention increased awareness of, and training for, chief scientists to support team members during expeditions, the provision of sanitary bins on research vessels for those menstruating, and more inclusive sizes of personal protective equipment for women and smaller people, as well as further measures to create a more inclusive environment for sea-going scientists.

So far, research on issues relating to gender, social class, age, ethnicity, or sexual orientation at sea is fairly limited, and on the issue of intersectionality even more so. Bourabain (2021), for example, studies the intersection of female early-career researchers and their ethnicity in social sciences and humanities. Shellock et al. (2022) found that 28% of interviewed female ocean researchers (n = 34) mention experiencing, in addition to gendered discrimination, racial discrimination and prejudice. Eaton et al. (2020) used an experimental design that showed a gender and racial bias towards the selection of Post-Docs in biology and physics. Hornidge et al. (2023) look at inequalities in the marine science system, especially at the intersection of neglected knowledge systems, such as indigenous and feminist knowledges, and their influence on ocean governance. Yet, a research focus on intersectionality in marine sciences is so far lacking, as is research on the potential effects of intersectional discrimination and (sexual) harassment at sea.

The term intersectionality was first introduced by Crenshaw (1989, p. 139) "to develop a Black feminist criticism because it sets forth a problematic consequence of the tendency to treat race and gender as mutually exclusive categories of experience and analysis." In her framework, she emphasises the multidimensional discrimination women experience due to heritage, social class, sex, race, gender, and ethnicity. In the later work of Crenshaw (1991), she introduces three different forms of intersectionality: (a) structural intersectionality, which highlights the complexity of intersectional marginalisation; (b) political intersectionality, in which intersectionally marginalised individuals experience different treatments from that experienced by white women; and (c) representational intersectionality, which emphasises the non-visibility of intersectional identities in the media.

Although Crenshaw's framework is still influential and valid, we use the term transnational intersectionality coined by Grabe and Else-Quest (2012), which incorporates postcolonial and transboundary experiences of individuals, as well as social hierarchies. We want to note that sexism, racism, white supremacy, socially constructed gender norms, and heteronormativity are still manifested in contemporary societies (cf. Kessel, 2022; Phipps et al., 2018) and that they influence power dynamics and inequalities in marine sciences. Traditional gender norms and stereotypes, historical exclusion of women in marine sciences, opposing cultural narratives, and male-dominated homogenous working environments (Hendry et al., 2020; Legg et al., 2023) still contribute to gender inequality at sea. We, as "WEIRD" (Western, educated, industrialised, rich, democratic; Henrich et al., 2010) female researchers share the critique on mainstream and Western feminist approaches, as well as so-called Third World feminisms as overly essentialist and neo-colonial (Butler, 2002; Mohanty, 2003). By considering an individual's experienced discrimination along diverse intersections, such as gender, sex, ethnicity, social class, social hierarchy, and age, as well as continued cross-border dynamics (cf. Patil, 2013), transnational processes, epistemic inequalities caused by (post-)colonialism, and diverse (national) science systems that may enable or continue path dependencies of, e.g., racism, rape culture, and Western sexism and misogyny (cf. Mercer, 2018), we aim for a comprehensive conceptualisation of transnational intersectionality at sea.

Marine sciences and related sectors, such as shipping companies, still operate in (neo-)colonial and territorial spaces, yet the ocean remains inherently transboundary and transcultural and thus requires transnational marine governance. In line with Tacheva (2022), we argue for a transnational feminist approach, which we aim to extend to a transnational intersectionality approach in marine sciences. In our understanding, such an approach is dynamic, culturally diverse, heterogeneous, and includes different types of knowledge. We are aware of our positionality and embedded micropolitics as Western female social scientists, which can limit

the scope of our research. Yet, by having collected the aforementioned qualitative data on marine knowledge production processes, and by including the voices of, for example, women of colour, diverse age groups, and non-scientific marine staff, we aim to make intersectionality at sea and its effects on structural change in the organisation of work at sea, the blue economy, and marine knowledge production processes visible.

In doing so, we look at the micro-level of knowledge production processes through a sociological lens (Elliker, 2017). By following the scientists and non-scientists in their everyday working routines, and by conducting fieldwork in diverse places and multiple sites of meaning-making on land and at sea, we contribute to an innovative application of Marcus's (1995) multi-sited ethnography (cf. Haegele, 2024). With the help of software-based coding (Atlas.ti), we qualitatively analysed our collected data. During the coding, two groups ("harassment and discrimination" and "intersectionality") each with five sub-codes, evolved, as seen in Figure 1. Patterns emerged as part of the analysis, which we present in Section 4.

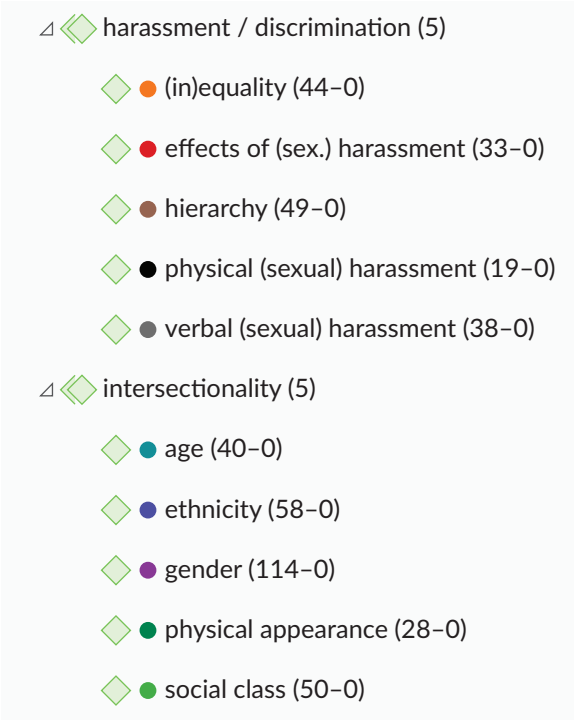

Figure 1. Coding groups and sub-codes in Atlas.ti. Note: The numbers in brackets refer to the number of sub-codes below the coding group and the frequency of the used sub-codes.

4. From Diverse Localities, Emancipation, and Withdrawal to Conflicts in Marine Knowledge Production

Our findings are structured in terms of four outcomes. First, we mapped intersectionality at sea within our empirical sample. Second, we found that (sexual) harassment in marine knowledge production processes occurred independently of the exact locality. Third, the discrimination at sea led either to emancipation processes or to withdrawal and heightened insecurities of the victims. Fourth, tensions between scientists and non-scientists broadened the gap between these knowledge systems, leading to an intersectional dilemma and thus to a potential problem of transferring and implementing marine knowledges and science, as we explain in more depth in the following sections.

4.1. Mapping Intersectionality in Marine Knowledge Production Processes

During the interviews, 26 out of 35 women reported having experienced (sexual) verbal harassment. Nine women out of these 26 had also been victims of physical sexual harassment. The harassment took place on vessels, in the university, especially in laboratories, or at conferences and was always performed by older men such as senior scientists, colleagues, or crewmembers. As one interviewee said:

> We could probably be the daughters of most of them. Someone touched my buttocks, I've been pulled up by the waist…and I don't think that's appropriate….We are the guests here. We're the ones who think five times about whether we really want to go up to the bridge and tell them off because we'd like to come here again. I don't think that's okay….I think that's taking advantage of something: this division of roles between regular crew/guests, younger/older, and those in non-permanent/permanent positions. (interviewee 33, junior female scientist, on older male crewmembers employed by a German company)

Verbal remarks and bullying were of a sexual nature and mostly directed at the physical appearance of women, including their gender, ethnicity, and age. For example, one interviewee reported:

> And this guy, that was the boss of everyone. He said like: "[Her name], you think that you are in the United States, you are not in the United States. We are here [in Germany on a research vessel], we can talk about whatever we want, the way we want. And if you don't want it, you don't have to be here. Hear this, you must be grateful that you haven't been raped—raped in this country." And I just went out, sorry…[interviewee starts to cry]. (interviewee 51, junior international female scientist, employed by a German marine science institute)

The nine physical assaults included unwanted touching of hips, waist, buttocks, hair, and face, or undesired close physical contact, such as hugs, massages, kisses, or the exposure of genitals and masturbating in front of female scientists (interviewee groups 1, 3, and 5). As seen in Figure 2, harassment predominately occurred along the intersection of gender, social class, physical appearance, ethnicity, and age. Other social identity markers, such as disability or religion, were not mentioned by interviewees or observed in the field. Interview group 5 was mainly affected by (sexual) harassment and discrimination; Brazilian female senior scientists between the ages of 38 and 62, mostly based in Brazil, pointing to postcolonial gender norms and Western sexism and misogyny.

Three men out of 47, two junior scientists (interviewee group 4) and one crewmember (interviewee group 9) reported verbal (sexual) harassment due to their gender, age, and physical appearance. The crewmember's harassment was perpetrated by a female senior scientist on a research vessel. He remembers his feeling of discomfort: "When the scientists [came] on board and one of the women pointed to one of the sailors and said, 'all right, you're mine for the next six weeks'" (interviewee 7, male crewmember). The two junior scientists were discriminated by senior male crewmembers along the intersection of their age and physical appearance, as one of them reports, "sometimes I hear someone say that I'm too weak…for a man" (interviewee 32, junior male scientist).

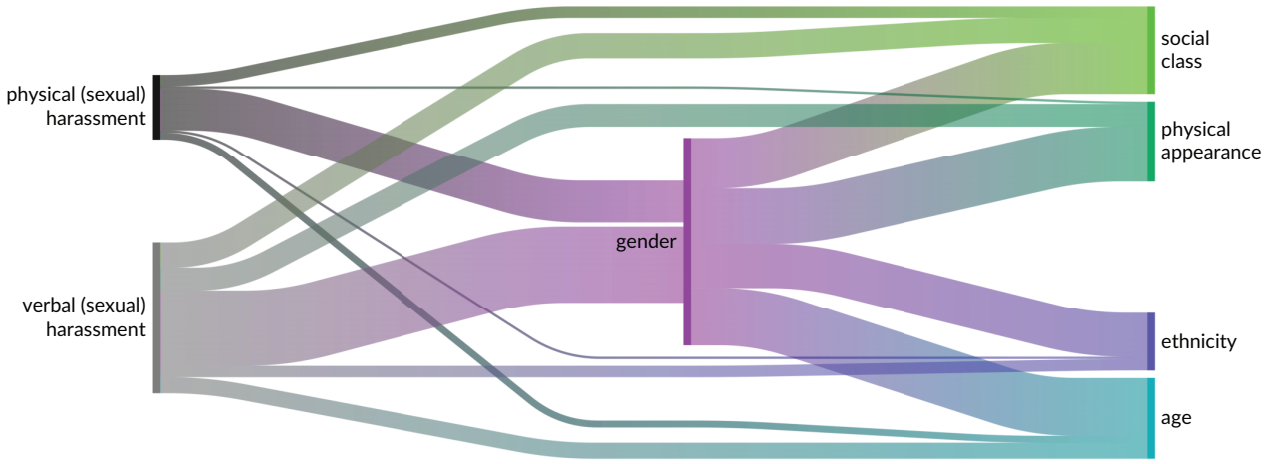

Figure 2. (Sexual) physical and verbal harassment caused by gender, social class, physical appearance, ethnicity, and age displayed in a code-co-occurrence Sankey diagram. Note: The thickness of the lines refers to the frequency of occurrence of the codes, e.g., the highest co-occurrence of codes appeared at the intersection of verbal harassment, gender, and age.

4.2. No Boundaries in Transnational Intersectional Harassment at Sea: The Politics of Localities

Intersectional discrimination appeared in all marine scientific knowledge production sites—on vessels, at the university, in the laboratory, and at workshops and conferences. Thus, marine sciences, and its adjacent localities and workplaces of marine knowledge production, seem to enable an operation of power in the enclosed vicinity of a ship or a laboratory, as well as a spatial structuring of inequality (cf. Certomà et al., 2012). In our analysis, we refer to these localities as physical spaces, although we are well aware that spaces can also be a form of mobility or a distance (see the discussions in political geography on the multidimensionality of space, cf. Delaney & Leitner, 1997; Jessop et al., 2008; Jones & Jessop, 2010). To illustrate this, one of our interviewees said:

> There's a nice saying: What happens on the ship stays on the ship, and there's a reason for that. And we are, I think, at a critical mark of seven weeks. These are really periods of time where perhaps the desire for closeness…continues to grow. (interviewee 6, German male technician)

The data collection on a vessel or in a laboratory requires the collaboration of scientists and non-scientists in very compact and narrow rooms and for a long period, which has led to multiple cases of intersectional discrimination in marine knowledge production processes (interviewee groups 1, 3, 4, 5, 7, and 9). One female interviewee discloses a case:

> He [head of the laboratory] started love bombing, like "oh, you are important. Come to my laboratory. You're perfect, we need you." And then when things didn't feel OK, he started to undermine my qualities and work….It took me a few years to understand there was a lot of moral harassment. (interviewee 79, junior female scientist, based in Brazil)

In an earlier study by Hornidge (2020), she documents the use of the saying "what happens on the ship stays on the ship" on a different German research vessel. She assesses it as a discursive practice, contributing to the construction of an in-group, as opposed to the out-group who are not sharing the experience. Our data

collected beyond the vessel show that (sexual) harassment in marine knowledge production does not stop on land. While 20 cases of (sexual) harassment occurred on vessels, nine happened on land during coastal fieldwork and conferences, as well as at universities and laboratories. Three men were harassed at sea, while 17 women experienced harassment on vessels and nine on land. Interviewees reported verbal (sexual) harassment, bullying, and discrimination due to their gender, ethnicity, and age among colleagues at university or (international) meetings or scientific conferences. As one interviewee reports, "as a female expert, I was pushed by a male expert who said he was now more of an expert than me" (interviewee 59, senior female scientist, based in Germany).

4.3. Building a Wall or Joining Intersectional Forces: Effects of Intersectional Discrimination

The effects of intersectional discrimination and harassment have led to two different outcomes or adaptation strategies: withdrawal and heightened insecurities, or emancipation. Similar to these observed strategies, Hornidge (2020) finds authoritarian, hierarchical, and repressive censorship in a remote Uzbek field station, and open resistance and emancipation against (sexual) harassment on a German research vessel. In the research presented here, 20 of the 29 interviewees who experienced harassment, reacted with withdrawal and heightened insecurities and nine with emancipation as a coping strategy. Yet, it is important to note that these coping strategies do not always follow a linear process. The often lengthy and difficult process can be dynamic and might involve both liberation and withdrawal. For example, an initial emancipation through reporting the (sexual) harassment may be followed by withdrawal and a departure from the marine job sector (cf. interviewee 51). This simultaneity of emancipation and withdrawal was also found in earlier research by Ford et al. (2021). The authors concluded that the resilience of victims decreases after reporting their experiences and when victims decide to leave their employer (Ford et al., 2021):

> Because of that, I built a wall and "No, I'm here for work, I don't interact." Like I would talk and everything, but I would not give any space for misinterpretation or anything. But still, if I can, I prefer not to participate in those cruises anymore. (interviewee 57, junior international female scientist, based in Germany)

Female scientists, especially of interviewee groups 1, 3, and 5, used adaptation strategies, such as changing the way they talk in meetings or presentations (interviewees 59 and 76), the way they dress (interviewees 1 and 3), especially during fieldwork (interviewees 37 and 72), pointing to the intersection of gender and physical appearance—or they felt ashamed and did not report the (sexual) harassment and discrimination (interviewees 1, 8, 24, 32, 39, 51, 59, 69, 70, 73, 79, and 80). Female marine scientists with a different ethnicity from that of the country they worked in were especially likely to have experienced harassment and to have reacted with withdrawal and heightened insecurities. One senior international female scientist based in Germany said, "I learned that I have to step back" (interviewee 60). Another interviewee changed her behaviour on subsequent research cruises after having experienced harassment, resulting in a disadvantage to herself:

> Even when I was the person that had the most expertise on the thing that they were doing, I was never involved….I don't think that has to do with being a woman, but it has to do to [with being] a foreigner….When I was on a vessel again, I was super rude with everyone in the crew, all the time, because I didn't want them to be near to me…because otherwise…you know this self-blaming

> when things happen, so you are at least sure that you did everything to prevent this to happen. (interviewee 51, junior international female scientist, based in Germany)

Another female scientist changed her physical appearance while on board:

> I'm a woman [laughs] so, I don't know, I make sure that my neckline doesn't go all the way down, and I also pay attention to what pants I wear, and I've noticed that people here have already said, yes, do you have to wear leggings so tight that you can see all the details? (interviewee 37, junior female scientist, based in Germany)

In some cases, female researchers decided not to finalise their PhD or to leave academia and their employment (interviewees 39, 51, 59, 79, and 80) due to (sexual) harassment, which can be analysed as the ultimate form of withdrawal. As one interviewee stated, "there are a lot of women, who say "I can't cope with it anymore" and then leave and I think that's an incredible waste of know-how, of knowledge….I think that's super unfortunate" (interviewee 59, senior female scientist, based in Germany, who herself changed from being a marine scientist to a science communicator).

Other female scientists employed similar withdrawal mechanisms, as the following interview quotes show:

> There have been cases of sexual harassment and that's [a] difficult path to walk for everyone and makes it difficult to even want to be there [in academia]. (interviewee 70, senior female scientist, based in Brazil)

> She was a professor at the faculty of Geology at [a Brazilian University], then she had to leave this university because she could not collaborate with the other professors of her own faculty. Really. They refused to cooperate since she was a woman. (interviewee 73, senior female scientist, based in Brazil)

> It was the worst onboard experience of my life because I felt like, if someone hit on me, it will be my fault. It was awful. It's not only people that are on board but also people that are on land and determined. It's awful, so I left the job. (interviewee 79, junior female scientist, based in Brazil)

Another female scientist reported the assaults she experienced, trying to achieve justice and emancipate herself, but then left her job:

> I told my boss; he didn't do anything. And I know that the equal opportunities officer is a marionette. She interrupts speakers to say to us: "Oh, you are a woman. We are trying to succeed in a male-dominated place, we must act like a man"….To be honest it took me like maybe six months to process this and to start to talk about it….After getting depression, I just quit. (interviewee 51, junior international female scientist, based in Germany)

The minority of victims of transnational intersectional discrimination at sea made a stand against their harassers and emancipated themselves. We refer to emancipation as an active resistance by the victim towards his/her/them oppressor and/or employer. During the German research cruise in which 37 of the 82 interviews were conducted, multiple (sexual) verbal and physical harassments were perpetuated by a

male crewmember. Six junior female researchers joined forces, collected the incidents in written form and reported them to the chief scientist, who then went to the captain. The crewmember received a formal warning as a result (interviewee group 3). On a Brazilian navy vessel, which is commonly used for marine research, a female researcher experienced sexual harassment. She "went to the police when the ship arrived back and it was a military guy and there was a complaint" (interviewee 62, senior female scientist, based in Brazil). During a marine field trip, a male crewmember physically harassed a female scientist, who reported the incident (interviewee 81). Afterwards, many other female researchers reported the same and the crewmember was finally fired (interviewee 81). Another Brazilian female researcher reported using the following protective device: "A knife inside my boots, it was normal because we are working the field and I sleep with my knife [under the] cushion" (interviewee 72, senior female scientist, based in Brazil). To be able to stay in academia, one female professor explains the following:

> I balance my feminine side because I'm pretty much facing stereotypes all the time, so, if I can, I present myself just like a man and look like a man and identify myself with men and being very masculine and being very aggressive and talking with my voice more in a male way. But if they know that I have a vagina, it changes everything….We face a lot of stereotypes…a Brazilian woman comes with a burden because people associate Brazil many times with sex. A lot. Regardless of where you are, regardless of what you do, regardless of everything….And then I start the class, and everything changes because I'm not aggressive, but I am very assertive. I'm being more male. I have to do that, otherwise they going to question me. So, my voice, that helps me…because I don't have like a female voice. (interviewee 76, senior female scientist, based in Brazil)

As shown in the previous example, Brazilian female marine scientists who experienced (sexual) harassment specifically pointed to their ethnicity as a major reason for discrimination. In Brazil, the prevalence of the machismo culture, gender-based violence, silencing, and victim blaming are still predominant (Rodrigues, 2024). Yet, in Brazil, a group of female marine scientists joined forces and founded the Women's League for the Oceans (Liga das Mulheres pelo Oceano, 2022), as well as a blog to write about their experiences (interviewees 79, 80, 81, and 82). The group has now more than 2,500 members from marine sciences, politics, and the non-profit and maritime private sectors.

4.4. Beyond Boundaries: Intersectional Discrimination Broadens the Gap Between Knowledge Systems

As the previous section has shown, a pattern of harassment that has also been found by Hornidge (2020) regarding research sites of proximity (a research vessel and an isolated research station), led the victims to join forces and take action against their harassers. In most cases of our research, though, it did lead to further forms of withdrawal and heightened insecurities. Besides gender as a social identity marker, our analysis shows that discrimination mostly occurred due to the intersection of gender, ethnicity, physical appearance, and age, as well as between knowledge systems, for example between scientists and non-scientists. This accumulation of discrimination and (social class) conflicts further increases distrust between science systems and disrupts work at sea:

> Sometimes it really clashes, and then there's…also bullying approaches where you almost think "holy cow! What's going on here?" But you've also noticed that many people try to counteract it, but you can't get a grip on it because nobody can take a weekend at home to…reset….At some point, you see

> them during the day and that's a completely different kind of psychological stress. (interviewee 39, junior female scientist based in Germany about conflicts on research vessels)

We observed a recurring pattern of conflicts that arose from the contact between scientific and non-scientific knowledges by conducting fieldwork on the micro-level (cf. Elliker, 2017). On the vessel, but also in the laboratories and universities, authoritarian expert knowledge clashes with the non-scientific knowledge of technicians and crewmembers. As one interviewee put it: "There are many stories about harassment, especially onboard navy ships, and it is a clash of cultures, so that is not that easy" (interviewee 79, junior female scientist, based in Brazil). Fifty-six of our interviewees were scientists (see Table 1), from which 26 female scientists experienced (sexual) harassment and discrimination during marine knowledge production processes. These incidences were perpetrated by both male scientists and non-scientists fairly evenly (47% by scientists and 53% by non-scientists). Twenty-six of our interviewees were non-scientists, such as crewmembers or technicians. Two out of 26 non-scientists experienced (sexual) harassment in contributing to marine science making. One interviewee was verbally harassed by a scientist and the other by both—a scientist and a non-scientist in two different situations.

As Tessnow-von Wysocki and Vadrot (2022) already pointed out by using the example of intergovernmental negotiations, tensions exist between opposing views on which types of knowledges are considered relevant to the addressing of climate and environmental issues. Our research observed these tensions between scientists and non-scientists, such as technicians in laboratories (interviewees 43, 52, 53, and 54) or crewmembers on the vessels (interviewees 21, 29, and 31), in everyday knowledge production processes and adjacent negotiations. This clash of knowledge and belief systems results in an intersectional dilemma (cf. Bauman, 2012; Giddens, 1991) in which intersectional discrimination occurs while, simultaneously, diverse knowledges are seen as superior. This power is also reflected in the Brazilian cooperation of the navy and marine sciences:

> They have the power because they are [the] navy. I think you must separate things from the marine and things from science. I don't like this system, that you go to the navy. I don't like my students going there….[The navy] are a Machismo….They think that they are there to get women or boys. (interviewee 69, senior female scientist, based in Brazil, who decided to no longer send her students on research cruises, pointing to withdrawal)

Societal power structures, misogyny, and (racial) inequalities are a global phenomenon, which is also reflected in marine sciences and echoes these societal path dependencies. The clash of scientific and non-scientific knowledges mirrors a social class conflict, which condenses along the intersection of hierarchy, gender, and age (cf.Grabe & Else-Quest, 2012):

> When there is a pretty girl…you're very careful, and then you prefer not to go into detail or something. So, if you're sitting in the bar having a drink, and somehow you talk to a scientist, hit on her…and you have a nice evening, and the next day she thinks "what an asshole," she goes to the captain, then you're fired. (interviewee 29, male crewmember, about interaction with female scientists)

> It's still the case, many of the doctoral students I've accompanied here, for whom I've also built devices, have unfortunately lost their grounding. They don't say "hello" anymore. I then say "boy, we built this

> together" and then they don't see you anymore. No, they just look past you and then I just think "what an asshole." (interviewee 54, senior male laboratory technician at a German marine science institute, about male scientists)

Thus, in line with Grabe and Else-Quest (2012) and Patil (2013), we argue that the social class conflict of diverse marine knowledges and knowledge production processes at sea manifest a continuation or even expansion of transnational intersectionality rooted in transboundary social hierarchies, (post-)colonial epistemic inequalities, and science systems that continue path dependencies (Figure 3).

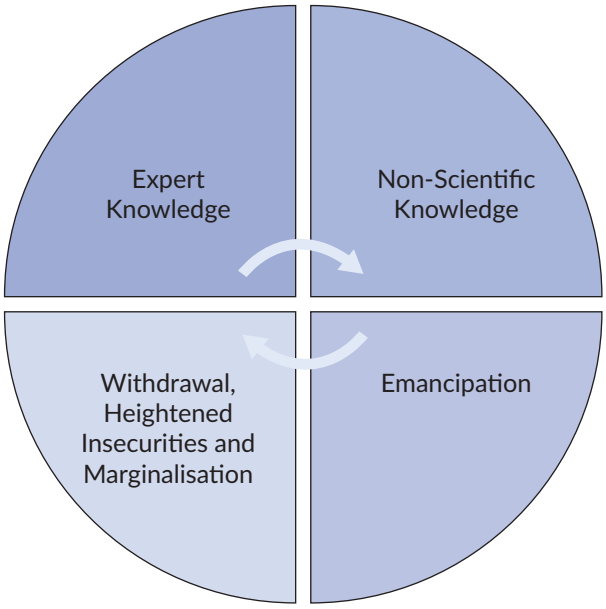

Figure 3. An intersectional dilemma through emancipation and withdrawal and heightened insecurities strategies and the (social class) conflict of scientific and non-scientific knowledges.

Our findings, moreover, point to the diversity of science systems and distrust between them. The observed and reported intersectional discriminations in the marine work sector continue to solidify and narrow expert knowledge. Without the non-scientific knowledge of technicians and crewmembers, experts can neither operationalise nor implement their knowledge. Who has the power and authority? Who remains marginalised? An intersectional dilemma between those with expert scientific knowledge and those with non-scientific knowledge emerges and disrupts urgently needed marine sciences for climate change scenarios and mitigation strategies. Moreover, through transnational intersectional harassment, the knowledge system loses diverse knowledges, emotional intelligence, and socio-cultural competencies through disempowerment and marginalisation.

5. Conclusion

Our research showed a pattern of intersectional discrimination, bullying, and (sexual) harassment that occurred in particular along the lines of gender, age, social class, ethnicity, and physical appearance. Young female scientists with a different ethnicity from that predominant in their working environment were most likely to experience intersectional discrimination. The majority of perpetrators were male crewmembers and

white male scientists, usually in a hierarchically more senior work relationship with the victim. Nine out of 29 intersectional incidents were physical, while the remainder were verbal.

The harassment occurred independently of the precise localities or spatial characteristics of where they took place and led to either emancipation or withdrawal, heightened insecurities, and further marginalisation of the victim. Through these strategies and the conflict of scientific and non-scientific knowledges, an intersectional dilemma emerges in which distrust of gained knowledge develops, and even disrupts urgently needed marine scientific work.

A shift towards intersectionally shared knowledge is needed. Diverse types of knowledge must become part of the collective identity in marine science projects, regardless of the localities in which knowledge production takes place. Scientific knowledge and non-scientific knowledge are of the same value, and only through the combination of both will research for climate change scenarios be successful. (Scientific) employers and shipping companies need to develop training and proactive institutional responses to increase diversity among their employees, especially at the senior-levels, and mitigate and prosecute racist, sexual, and homophobic misconduct.

We do recognise that we still live in a society in which internalised gender norms, misogyny, patriarchal power structures, and rape culture are unfortunately predominant, which also characterises the specific case-study context. Nevertheless, we argue that intersectional and transnational (sexual) harassment and discrimination in marine sciences and the blue economy require increased awareness by (national) science and knowledge systems and by marine employers and employees. The building of an intersectionally equal working environment and the establishment of an institutional framework for a sustainable blue and gender-sensitive future are urgently needed.

Moreover, future research on intersectionality at sea is required. Our qualitative research approach to the micro-level of knowledge production processes in marine sciences gave voice to people who have experienced or are experiencing intersectional discrimination, and our analysis points to the as-yet unrecognised impact of intersectional discrimination on scientific efforts to combat climate change while working at sea. Yet, both contributions need further expansion. A mixed-method approach of a global quantitative survey and qualitative interviews on experienced discrimination and harassment of marine scientists and seafarers would ascertain at which intersections discrimination and harassment occur at an international-level. Thus, an analysis of these findings would allow further and more concrete (policy) recommendations for blue justice and intersectional equality within the blue economy.

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Conflict of Interests

The authors declare no conflict of interests.

Data Availability

Due to the nature of this research and for ethical reasons, detailed interview transcripts will not be shared publicly, so supporting data are not available. The authors guaranteed the anonymity of interviewees. Yet, the authors provided their interview guidelines in the supplementary material.

Supplementary Material

Supplementary material for this article is available online in the format provided by the author (unedited).

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A Gendered Blue Economy? Critical Perspectives Through Women's Participation in Peru

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Abstract

Peru's maritime waters and their natural resources have long been appropriated as part of the country's economic development. While several historical analyses have covered the management and use of marine resources, few have focused on gender relations in these processes. In order to help fill this gap, we use an ethnographic approach, through the qualitative analysis of interviews carried out between 2021 and 2022 with three women involved in Peru's artisanal small-scale fisheries and scallop aquaculture industry. Through their life trajectories, we discuss how these women became key actors within the Peruvian blue economy and the role that concrete and situated gender relations played in that process. We present a critical analysis of women's agency and involvement in the blue economy and how the economic opportunities offered are constrained by gender norms, male dominance, and the precarious nature of (in)formal labor. We suggest a need to shift from a focus on blue growth to a more inclusive concept of blue justice that deals with structural inequalities ingrained in current modes of extractivism and aims to secure fair opportunities for all genders in marine-related activities.

Keywords

aquaculture; blue economy; blue growth; blue justice; gender equity; Peru; small-scale fisheries

1. Introduction

Though there is no consensus on the precise meaning of the terms "blue economy" and "blue growth," both have been used to highlight the need for sustainable development of ocean-based economic activities, such

as aquaculture, fishing, tourism, marine mining, and energy industries (Vierros & De Fontaubert, 2017; Voyer et al., 2018). In light of the vast empirical evidence of the vulnerability of marine resources, some scholars and policy circles question the compatibility of marine economic development and sustainability (Axon & Collier, 2023; Barange et al., 2018; Brent et al., 2020; Das, 2023; Eikeset et al., 2018; Niner et al., 2022). Some authors also note that developing economic activities under the label of blue growth without transforming the uneven distribution of gains and losses can negatively impact already marginalized groups, such as participants in small-scale fisheries (Cohen et al., 2019). In recent literature, some discourses surrounding the blue economy have been cautiously optimistic. Critiques maintain that blue justice is "the recognition, meaningful involvement and fair treatment of all coastal people with respect to how ocean and coastal resources are accessed, used, managed and enjoyed" (Blythe et al., 2023, p. 3), and incorporating analyses of power relations, are more urgent to prioritize in policy and research circles (Bennett et al., 2021; Gustavsson et al., 2021).

Historically, the blue economy was viewed as male-dominated, and women's important roles were overlooked. This notion has been challenged since the 1970s (Knott & Gustavsson, 2022) and contemporary literature describes women's contributions to the blue economy (FAO, 2020a), as well as the challenges of accurately representing those contributions (Kleiber et al., 2015) and of achieving gender equality (Gopal et al., 2020; Soliman, 2022; Williams, 2023). If blue growth initiatives are to foster just economic transitions, they must promote the increased and more equitable participation of women (Bennett et al., 2021; Soliman, 2022; Williams, 2023) and address how power relations manifest in ocean governance (Gustavsson et al., 2021). Within this growing field, we focus on the blue economy of Peru, a country with a remarkable history of marine resource exploitation, and consider women's engagement with the blue economy and how they have exploited the opportunities and confronted the restrictions of such engagement.

Peru's leading position in global seafood markets stems from a deeply rooted history of capital accumulation: the 19th century and early 20th century's "Guano Age" (Cushman, 2005, 2013), the Second World War canning industry (Félix & Porras, 2011), the "fishmeal revolution" that began in the 1960s (Wintersteen, 2021), the developments in scallop aquaculture since the 1980s (Kluger et al., 2019), and the increase in frozen fishery and aquaculture exports since the 1990s (Guevara, 2021). Despite what some call an astonishing "blue revolution" (Bailey, 1985) that has generated more than 200,000 jobs in the fisheries sector (Christensen et al., 2014), many coastal communities continue to live in poverty (Instituto Nacional de Estadística e Informática [INEI], 2020), and small-scale fishers face insecure working conditions. The further sustainable development of fisheries has been promoted as crucial to tackling food insecurity in Peru (FAO, 2016). The growing integration of artisanal fisheries in global markets, combined with other factors (e.g., environmental change affecting species size and distribution), has triggered a critical situation for this sector, which is marked by high rates of informality (e.g., Palacios, 2016), conflicts (e.g., Paredes, 2012), and growing impoverishment (De la Puente et al., 2020). Artisanal fisheries in Peru have become a focus for NGO and state projects (e.g., FAO, 2015, 2016, 2021; Figueroa et al., 2019; Programa de las Naciones Unidas para el Desarrollo [PNUD], 2022; Vaccaro, 2023) aimed at formalization (Pescaformal.pe, n.d.) and sometimes gender equity in the sector, as women are identified as key actors (Figueroa et al., 2019, p. 41) who are increasingly involved in leadership and decision-making (e.g., "Día Internacional de la Mujer," 2024; WWF Peru, 2019). Programs explicitly promoting blue growth in Peru have been limited (McKinley et al., 2019; World Bank, 2021). This analysis focuses on how the opportunities and constraints in Peru's artisanal fisheries and scallop aquaculture have influenced and been influenced by local gendered power relations.

Women have always participated in artisanal fishing activities in Peru (e.g., de Grys, 1988; A. García, 2001; Hammel & Haase, 1962). Their roles are diverse and span the entire fishing process: before fishing (e.g., collecting bait, fixing fishing equipment, and purchasing necessary supplies; Figueroa et al., 2019, pp. 40–41; A. García, 2000, p. 46), during (e.g., collecting and transmitting economic and environmental information; Ocampo-Raeder, 2011), and after fishing (e.g., commercialization, processing; Ayala Galdós, 2000). Despite these contributions, women's labor is still seen as secondary and as support for what men do. Additionally, fishermen rely on the unpaid and unrecognized work of women maintaining households and communities (Delgado-Gustavson, 2011). The transformation of Peru's blue economy—driven by industrialization and the increased access to international markets—created new spaces for women's involvement. In recent decades, the increased export of seafood has expanded the demand for female labor in primary and freezing processing plants. In these plants, women are now the primary workforce and endure exploitative conditions not unlike those reported in studies of the 1970s and 1980s sardine canning industry (Barrig et al., 1985), often facing temporary employment and unjust working environments (Pejerrey Piedra, 2008). Beyond factory work, some women also occupy other roles within the scallop aquaculture value chain, including ownership of aquaculture concession rights, representatives of producers' associations, administrative roles, and, in the case of more highly educated women, advanced technical jobs.

Despite women's long-standing participation in the Peruvian blue economy, their recent demands for recognition, and increased level of organization (L. Mendoza, 2024), institutionalized gender equality remains limited. Although Peru has committed to implementing the FAO's Voluntary Guidelines for Small-Scale Fisheries (FAO, 2020b), which explicitly mentions gender equality, no specific legislation addressing gender in its blue economy has been enacted (Harper et al., 2017). Women's roles in small-scale fisheries in Peru remain poorly documented and in need of research (World Bank, 2021). Data on the numbers of small-scale fishers is limited and outdated (INEI, 2012). Even less is known about the exact number of women engaged either directly or indirectly through fishing, sale, and processing of fishery products, as well as the extent of their participation in decision-making processes (Harper et al., 2017).

This study aims to highlight women's experiences in Peru's coastal blue economy and complement existing theoretical and policy-driven research. In the analysis of our three case studies, we ask the following questions: (a) What processes within Peru's blue economy and its historical development have determined women's roles and contributions? (b) How do women make use of their agency to leverage opportunities within marine and coastal resource exploitation, and how are their experiences shaped or limited by the structural constraints? We ask these questions in the hope of providing a concrete basis for the ongoing attempts to create a situated blue justice that recognizes the specific needs of women within the complex processes of blue resource accumulation.

2. Conceptual Framing

Gender relations, understood as situated social and cultural constructs (West & Zimmerman, 1987), seek to assign people to economic, political, and social roles in the public and private spheres. Because these characteristics and roles are organized hierarchically in society, they often form the basis of structural inequalities that intersect with other forms of inequality, such as class, race, and ethnicity (Axelrod et al., 2022; Crenshaw, 2013). Almost every organization, including the organization of work in the fishing sector, contains gender-based inequality regimes (Acker, 2006). These underpin, for example, the systems of skills

valuation, and forms of workload distribution and recognition, creating macro and micro advantages for men over women. In Peru, gender relations are reproduced within patriarchal institutional, political, legal, and economic structures, and local cultural ideals and practices that emphasize men's domination over subordinate women, as well as entanglements within racial and class hierarchies (Van Vleet, 2019). Women and girls are positioned in charge of reproduction, care work, and household resources, although not all communities' experiences align neatly with these ideals. As Van Vleet notes (2019, p. 38), practices of gender are additionally embedded in global developments in media and exchanges in commodities and values. Economic changes are accompanied by sociocultural changes that reshape gender roles and relations, and, in turn, gender interacts locally with international and historical trends, positioning women in specific situations within the blue economy.

We frame our analysis of the blue economy in Peru within academic discussions of blue justice. Following environmental justice scholars, Bennett et al. (2021) understand blue justice as a three-fold (recognitional, procedural, and distributive) critique of the management of marine resources. Considering the many examples of social and environmental injustices in marine spaces (e.g., Ertör, 2023), blue justice highlights the gap between the projected benefits of blue economies and the reality for vulnerable and marginalized people (e.g., Indigenous peoples, women, small-scale fishers, and people living in poverty), as well the resistance of said groups to the injustices they face (Blythe et al., 2023). Findings underline the need to address historical injustices at multiple scales (from local to international) and to redefine researchers' and policymakers' approaches to transformations and development, including challenging questions about the nature of these injustices (Bennett et al., 2021; Yuan et al., 2024), while acknowledging understandings of justice are diverse and ever-changing (Gurney et al., 2021). Specifically, for the case of gender, Gustavsson et al. (2021) point out that institutions tend to reproduce gendered injustices even as they attempt to recognize women, as they avoid engaging with the particular place-based gendered power relations and women's needs are often still unaccounted for. Therefore, research still has to systematically consider and include how women's participation in the blue economy is nuanced, and constrained, by gender norms and power relations (Gustavsson et al., 2021). Inspired by these works, we set off particularly from the recognition aspects of blue justice to discuss some of these local specificities for women in coastal Peru.

3. Methods

We followed an ethnographic approach common in anthropology and political ecology. Each author conducted independent fieldwork from which the three case studies presented in this article arise. The first case study emerged from research with various artisanal fishing organizations to analyze the informal dynamics of the sector; the second one examined the development of the scallop aquaculture industry through a gender-sensitive approach from the 1980s until now; and the third one researched everyday resistance and power dynamics in women's lives in extractive landscapes at the coast. The ethnographic research took place in two coastal provinces known for their significant fishing and aquaculture activity (Section 4.1). The data presented in this article was collected between 2021 and 2022. Interviews were conducted in person or via phone due to Covid-19 restrictions, ensuring participation was voluntary and following standard ethical guidelines. In all case studies, names of people, and in the third case study, additionally names of places and companies, have been substituted by pseudonyms to respect the participants' anonymity. We complemented the interview data with field notes and observations collected

during the fieldwork for each project and analyzed the historical economic and political developments in coastal and marine economies in Peru. We transcribed, coded, and organized the interview data according to occupation, opportunities and challenges present in the interviewee's life, people or institutions that have helped the interviewee, personal qualities that have played a role in the interviewee's trajectory, and further contextual demographic information.

In selecting the case studies, we considered women involved in various ways in the fishing and aquaculture sectors. The cases were selected following a diversity criterion based on factors such as the level of political participation (e.g., participation and membership in grassroots organizations), socio-economic situation (workers, assemblers, etc.), and life stage (age and family responsibilities). We followed an intersectional approach, which recognizes that categories such as age, class, and educational level, among others, intersect with gender, influencing women's experiences and life trajectories (Prins, 2006). This approach was therefore used first to identify case studies within those available in each fieldwork, to ensure that the three women selected reflected diverse experiences shaped by factors relevant to the approach.

We collected information in the form of life histories, which allows us to understand women's agency (i.e., their capacity to make choices) while recognizing the structural limitations that shape their actions (e.g., gendered power relations or economic precarity; Tomassini, 2014, p. 68). Life histories center the voice of the social actors in their interpretation of events that marked their trajectory (Laslett & Thorne, 1997). In doing so, we situate women within their relational environment and social and economic contexts. We recognize the importance of analyzing their interactions with other actors—such as family members, employers, and governmental institutions. These relationships significantly impact women's opportunities and constraints (Atkinson, 1998). By drawing on the concepts of agency and structure, based on Ribot and Peluso (2003) and Crossley's (2022) work, we understand the social structure as a network of interaction of social actors that form political-economic conditions and set the terms (e.g., access to resources). This presents opportunities and constraints and affects processes in differential ways for different actors, determined by the positionality and the power this positionality entails for each actor within a given context (Foucault, 1978).

4. The Peruvian Context and Case Study Sites

The integration of Peru into the world economy has been closely tied to exploiting marine resources, which have contributed significantly to the country's economic growth. The prioritization of marine resource exploitation for export to global markets has often resulted in boom and bust dynamics accompanied by detrimental effects on the environment (e.g., resource exhaustion) and unequal socioeconomic development (e.g., Clarke, 2022). Throughout the 20th century, state action was concentrated on facilitating investments based on the exploitation of resources for large-scale exports. However, the neoliberal extractivist development model also offered many promises for small and medium-scale fishers. Since the 1980s, the Peruvian government sought to support the inclusion of these fisheries while grappling with the persistent informality of the sector (Damonte et al., 2023; Gozzer-Wuest et al., 2022). This informality has significant implications, including challenging working conditions of fishery workers (Lozano et al., 2024), the exponential increase of the fleet (De la Puente et al., 2020), and the lack of compliance with fishing regulations (Palacios, 2016).

The current neo-liberal structure in Peru is also characterized by an unequal division of labor and responsibilities between men and women (Hays-Mitchell, 2002, p. 74) and the assumption that women's work should be readily available, as it is essentialized as a natural feature of womanhood (Moser, 1989, p. 1801). Despite some progress in promoting gender equality, such as closing the gender gap in education or increasing female participation in politics (Trelles, 2020), inequality and oppression persist within the home and in the public sphere. There are high rates of gender violence, teen pregnancies, and wage inequalities, and it is estimated that, on average, women are responsible for 80% of unpaid domestic work, which impacts women's ability to insert themselves into economic activities (W. Mendoza & Subiría, 2013; Miró Quesada & Ñopo, 2022).

The changes experienced in recent decades have impacted the economic and gender dynamics of fishing villages, as is the case of our two study areas: San Andrés and Bahía Encanto.

4.1. San Andrés

Our first two case studies take place in San Andrés (Figure 1), a coastal district located about 250 km south of Lima, where the majority of the population depends on artisanal fishing as the primary subsistence activity. Historically a fishing village, the economic context shifted significantly with the development of two marine resource exploitation activities: anchoveta (*Engraulis ringens*) fishing and scallop (*Argopecten purpuratus*) aquaculture.

Traditionally, regulations in Peru have established artisanal fisheries catches be intended for direct human consumption (i.e., fresh, canned, cured, and frozen products), while industrial catches are allowed to be processed for indirect human consumption (i.e., fishmeal and fish oil). Fishmeal production from artisanal catch, while it does exist, is allowed only as a secondary activity to utilize discards and waste. Artisanal anchoveta fishing gained momentum in San Andrés during the 1990s with catches primarily destined for canned and cured products, supported by international demand from Italy, Spain, and the US. However, from 2015 onwards, declining anchoveta sizes led processing plants for direct human consumption to leave San Andrés in favor of more productive bays. Simultaneously, prices of fishmeal rose, incentivizing clandestine fishmeal production from artisanal fisheries catches. Today, despite the de jure exclusion of artisanal fisheries in anchoveta fishmeal value chains and ongoing regulatory efforts by the state, this fishery continues to be an important source of income in the district.

In the 1980s and 1990s, the scallop industry significantly transformed San Andrés. An extraordinary El Niño event in the early 1980s caused a significant increase in scallop biomass, leading to a surge in scallop harvesting, fueled by rising exports to the US. To counter the decline of wild scallop biomass after the El Niño, actors such as the state, fishers, and capitalists, promoted the transition to aquaculture, facilitated by the intensive use of cheap (female and male) labor. Today, over 11,000 tons of scallops are exported annually (Guevara, 2021, p. 12) with processing plants and aquaculture concessions nationwide. The promotion of the industry was partially done by aligning the discourse with the mainstream narrative that aquaculture is a great opportunity for women and a livelihood opportunity for impoverished communities (N.E, personal communication, May 2022).

The development of the anchoveta fishery and scallop aquaculture has also significantly introduced job opportunities for women in the community. Most adult men in San Andrés are fishers, while women are employed in processing in local plants and retail and wholesale fish trade, as has been historically observed in southern Peru (Hammel & Haase, 1962). Women also carry out administrative tasks: they keep the accounts of the catches, distribute profits at the dock, and are responsible for household income management. Some are also vessel owners. In recent years, some women have been elected to positions of authority in public institutions (the district mayor's office) and trade unions (fishermen's social organizations). The relatively equal economic and political participation of men and women, compared to other fishing villages, is striking even for fishermen from other localities. However, despite this reported influence of women in San Andrés, patriarchal relations and machismo persist throughout the Pisco province, and experiences of women in rural agrarian areas continue to be marked by violence (Section 6.2).

4.2. Bahía Encanto

The third case study is located in Bahía Encanto, a small coastal community in northern Peru (Figure 1) recognized as a hamlet by its regional government in 2008 after the first families began settling (D. García, 2018). With a population of 307 people according to the 2017 census (City Population, n.d.), it lacks basic essential services such as electricity, running water, a health post, and a secondary school. Most heads of family engage in small-scale fishing. The fact that the small population is comprised of 65.5% men and 34.5% women (City Population, n.d.) reflects the recent history of the settlement: originally an informal fisher wharf, it was temporarily inhabited only by fishermen from the surrounding areas and settlements

Figure 1. Map of Peru and location of study sites.

from the interior, where families rely on agriculture. In the last 30 years, whole families began migrating to the coast and settling there, looking for alternative livelihoods in difficult times, slowly building houses and small businesses that benefit from local tourism in the summer months. Now, families in Bahía Encanto rely heavily on small-scale fisheries, the products of which they land on their beach or in neighboring towns, where they are sold to intermediaries that ship the fish to the interior. Women's roles in the community are mostly as mothers and housewives, although many keep a second informal job with which they complement the family's income. Some send the fish their husbands or family collect to distant family members in the interior, some own small shops or restaurants, do animal farming, and some are informally involved in scallop aquaculture.

Besides these dynamics, Bahía Encanto is located near the activities of large companies, in particular those of the mining company, Salla Tanka, which regularly conducts corporate social responsibility programs and projects together with local enterprises and the local, regional, and national governments, to offer capacity building workshops, donations, health awareness campaigns, etc.

5. Women in the Peruvian Blue Economy

5.1. Sandra: Leadership and Ownership in San Andrés

Sandra, 50, is a vessel owner, mother of three children, and vice-president of an organization of artisanal fishers in San Andrés. She was born in 1973 into a family where all male family members were artisanal fishers. When she finished school, she decided on a career as a healthcare technician. At the same time, she worked as a fish filleter at the San Andrés artisanal landing site to pay for her studies and contribute to the family economy. Her education was interrupted when, at 19, she became pregnant by her partner, a landing site worker. This event led her to reorganize her priorities and focus on her new family's economic consolidation. Working in the fishing sector appeared to be a more economically efficient option than pursuing a career in the health sector and also, a more flexible option to reconcile paid work with family care: working at the landing site would give her immediate money to buy her own place and help support her new family; and, once her son was born, she could take him to the landing site when needed, which would be impossible if she worked in a healthcare facility.

It was during this time that she decided to make her first investment in a boat. It was a difficult decision for the young couple to make, but they had the guidance of her grandfather-in-law, a boat owner. He convinced Sandra that this would be the way to a more relaxed life: a boat would allow her to have a better income and less time and effort to make ends meet. Sandra's determination to take the risk and embark on this journey was fundamental, and after convincing her more risk-averse husband, the vessel was bought.

The couple began to work intensively. From her pregnancy until after giving birth, Sandra migrated temporarily to Pucusana, following the crew for which her husband worked. She dedicated herself to fileting and selling fish, working up to 12 hours daily. Even without the support of her family and community, she was able to quickly integrate into work and complete her long hours thanks to her access to the Wawa Wasi program—a system of community daycare centers, co-managed with the state, created in 1993 and aimed at people living in poverty or extreme poverty (Cueto et al., 2009).

During the 1990s, and especially since 2000, Sandra benefited from the increasing articulation of local artisanal fisheries with international trade circuits. In particular, there was an increase in demand for anchoveta, used in the production of canned and cured fish for export to the European and US markets. During this period, her family's income grew significantly, allowing them to make greater investments in fishing equipment, but also in her family: for Sandra, one of the most important accomplishments of her work has been to provide higher education for her three children.

Over the course of 15 years, Sandra became the owner of five fishing boats of different tonnage. However, this period of boom in anchoveta fishing for human consumption began declining in the mid-2010s. Since then, fish size has decreased, making it unsuitable for the canning process. To not lose their investment during this time, artisanal fishers began to redirect their catch to the illegal production of fishmeal. Since then, Sandra's situation, like that of other anchoveta fishers from San Andrés, has become precarious. On the one hand, the market for illegal fishmeal production allowed her to continue working and earning an income. On the other hand, the selling prices were much lower than those offered by the legal processing plants for direct human consumption. Additionally, Sandra became increasingly vulnerable to sanctions such as fines and seizures and even risked losing her fishing permit, nets, and vessels.

Nonetheless, Sandra managed to become an important economic agent in the region, gaining recognition from her peers and even reaching representation positions. Currently serving as the vice-president of a social organization for artisanal fishermen, she shares her journey of becoming a leader. She started in roles traditionally associated with women, such as being elected as a representative of the parents' association at her children's school. She then transitioned into leadership within the fishing sector, beginning as the treasurer of a fishermen's organization, a common position for women who are included in such associations. These early experiences provided her with a platform to demonstrate her leadership qualities and gain the support of her colleagues for more influential positions. For example, during her time as treasurer, she exposed the mismanagement of the organization's resources by its leaders, establishing herself as an honest, determined, and transparent individual. As a result, she was later chosen by a group of fishermen who had departed from this organization to become their vice-president.

Sandra explains that her leadership is based on her peers' recognition of some number of intrinsic personal qualities, including her initiative, courage, and sense of responsibility and justice. As a vessel owner, she has faced many situations where she has had to defend fishers from unfair treatment by unscrupulous traders, larger-scale fishermen, or abusive authorities. On these occasions, Sandra did not hesitate to stand up for the fishermen, to demand what she believed to be fair, and to mobilize people to achieve their goals, despite the risks and reprisals that might ensue.

She believes that being a woman poses several difficulties but also offers several opportunities to maintain her leadership position. The typical gender division of labor in fishing tends to generate criticism from those who see an incompatibility between representing fishers without being directly involved in the extraction of fish. As a result, Sandra finds it necessary to constantly emphasize her knowledge of navigation, fish species, and the management of fishing operations. But, at the same time, she feels that it is precisely by staying ashore that she can keep track of the unpredictable administrative and/or political processes that her organization is involved in. Sandra also believes that being a woman has given her a set of skills that make her better suited to lead her organization than her male counterparts. According to her, women are more

orderly and rigorous, and these qualities have allowed her to successfully navigate the bureaucratic processes to maintain her association formalized, thus facilitating its dialogue processes with the state. Sandra believes that her gender has given her a different way of managing interests, where dialogue is preferred to confrontation, leading to her being able to build an important network of contacts in the centers of power of public institutions dedicated to the management of fishery resources.

5.2. Eva: A Lifelong Journey in Scallop Processing

Eva, 55, works in artisanal primary processing factories of seafood products in San Andrés and Pisco and is the mother of four children. Born in 1969 in the city of Pisco, she is the third of eleven siblings. Her large family was involved in artisanal fishing and agriculture, as her father was a diver, and they also owned a small farm, where Eva worked as a kid. Like other women, Eva started seafood processing as a child (11 years old) in *peladeros* (informal sites for peeling and processing seafood) during the 1980s scallop boom. *Peladeros* hired many female workers, as they were the available labor force on land. This type of work offered a higher income amidst growing poverty, and a flexible option for women, who could bring their children to help with tasks such as washing the peeled scallops, making the workday more manageable, and reconciling reproductive and productive work.

Eva's family was experiencing economic difficulties due to agricultural droughts, which led her mother to consider new opportunities. Drawn by the employment options created by the scallop boom, she decided to move to San Andrés and Eva followed. The move, however, was difficult as they initially had no place to live. Fortunately, through a personal connection with the mayor, they were granted a lot to build a house. For Eva, the move represented a chance to pursue something she had long been denied: an education. Unlike her brothers, her father had forbidden her from studying, but Eva was determined. Despite his constant threats, she managed to finish secondary school and dreamed of pursuing a career and getting her mother out of violence. This panorama of machismo and gender violence illustrates the rural context of that time and the perceived contrast with gender roles in San Andrés. Indeed, Eva remembers her mother's personality as weak when it came to her relationship with her husband, comparing her to what is expected of women from San Andrés.

Eva continued working with her mother to support her and her siblings until she got married at the age of 25 when she stopped working. Her husband at that time did not want her to work and his income was sufficient to maintain the growing family. Some years later, in the early 2000s, her husband suffered a work accident in a fishmeal factory. He fell six meters and entered into a vegetative state that left him with after-effects. Eva quickly reintegrated into the processing labor market as she had to provide for her four children and cover the health care costs for her husband, who was hospitalized with no insurance coverage. She was able to reconcile the return to work at the processing factories as some of her family members could take care of her children while she worked day and night. She feels proud of having been able to provide a better future for them:

> I thought if I had brought them into the world, it was to give them something better, not for them to go through what I went through, so….I don't know, I wanted them to study, to become professionals….But in any case, I feel happy because at least they are good kids, I raised them alone, but there they are. (Eva, phone interview, December 7, 2021)

Throughout the years and thanks to the network built since her first experiences, Eva has been able to find employment in the processing factories of the former owner of the original *peladero* and others. Her career follows the transition from *peladeros* to formal processing plants due to the increasing implementation of sanitary norms, certifications, and the need to adapt to different export opportunities. Eva and her peers learned to process multiple species throughout the years and are seen as skilled workers by their employers. Their work in the processing factories is characterized by a lack of stability. Although factories function almost all year round, workers are kept temporarily, rotating between different processing plants, and in cases like Eva's even in different regions of the country. In August 2007, Pisco suffered the consequences of a big earthquake; nothing was left, and Eva's children were still studying. She was told that there was work in processing scallops in the north of the country, so she temporarily migrated to Sullana in Piura, leaving her children with her brother. She stayed there for two years and visited her family every month. There, she worked Monday through Friday, up to 16 hours a day primarily processing scallops.

When she returned to San Andrés after living in Piura, Eva also worked in bigger factories in the area (i.e., industrial processing plants). Finally, she was formally hired. At the moment of the interview, Eva kept on working, although in a more relaxed manner, as she no longer has children's responsibilities and has a home of her own. However, she cannot stop working. She still provides some financial help to her studying children, and, as she lacks the possibility to join a pension scheme, she must save money with the hopes of retiring one day.

5.3. Dafne: Contributions and Nuances Hidden in Plain Sight

Dafne, in her 30s, occasionally runs a small sandwich cart, sometimes works at sea in scallop aquaculture concessions, is part of a women's fisher's association, and is a mother of two. Dafne's family life is intertwined with small-scale fisheries: her brothers are divers, her mother and sister own small restaurants that sell the local fish specialty Bahía Encanto is known for, and her husband occasionally works as a diver and day laborer for some scallop aquaculture concessions. At the same time, Dafne's mother sends fresh fish and other marine products to the rest of their family in their town of origin, almost 60 km away.

Dafne was not born by the coast. In the early 2000s, she migrated with her family to Bahía Encanto from the interior, where their small farm faced dire times. During her childhood, she was one of the few whose family could afford to send her to secondary school, traveling back and forth to the larger town in the area, Algarrobos. This was costly and time-consuming, but thanks to family connections, Dafne could stay with friends of the family in Algarrobos for weeks at a time until she successfully finished her studies. Dafne points to her education during these years when discussing her family planning: being familiar with contraception and sexual education in general, she was able to plan with her husband for their only child at the time and carefully plan when to have their second, in contrast to other women in Bahía Encanto.

The same family connections that facilitated her secondary studies offered her the opportunity to be one of the few women working as a day laborer in aquaculture concessions in the bay. In the concessions, she carries out several tasks before the scallop seeds are placed on the bottom floor or in the suspended culture systems, such as size classification and cleaning and caring for the equipment. She recalls feeling surprised the job was easy:

> For me, it was something new because I had never done it before. Then I said, "Is this what the men do?" [laughs] Interviewer: What? Why? What do you mean by that? Dafne: [laughs] That it's easy. Interviewer: Ah, you thought what men do was hard?....Dafne: Hm-mh, if I had known it a long time ago, I would have helped my father. (Dafne, interview, August 24, 2022)

Since that first day, she has been irregularly called to work. She enjoys being out at sea with her friends and husband, but she realizes she is being paid less than the job would pay biologists or fisheries engineers. Dafne is also one of the few women in the region who is part of a fisherwoman association. When the locally based mining company Salla Tanka, along with INNOTEC, a state center for fisheries innovation and technological transfer, offered the opportunity, Dafne was included in a small group of women to be formalized in line with the state's fishing formalization objectives for the artisanal fishing sector. The women (only three of whom had any previous fishing experience) were accompanied to Algarrobos to complete the necessary procedures, and in the following year, attended multiple capacity-building workshops regarding sustainable artisanal fishing practices such as fish sizes and seasonal closures. They also engaged in an innovative blue development initiative: fish aquaculture of Chalapo clinid, the local specialty fish.

When the first author interviewed Dafne, the women in the association seemed defeated, as the aquaculture attempt had failed, some speaking of broken nets being the reason fish had escaped and some speaking of theft. The association had hit a roadblock applying for a land concession and wanted Salla Tanka and INNOTEC to support them with land aquaculture or moving away from fisheries altogether to do animal rearing. This was a point of contention because they had been formalized as an artisanal fisher association, and INNOTEC could not support them in endeavors unrelated to fishing. Additionally, interviews with Dafne and other association members revealed difficulties obtaining financial support for setting up a fish processing for their husbands' catch—one of the main hurdles being the lack of fisher licenses—as well as deep challenges in the interpersonal relationships within the association, including discussions of who was "a real fisherwoman," and who was part of the association for opportunistic reasons and not pulling her weight.

6. Discussion

Sandra, Eva, and Dafne's cases offer several starting points for discussing the opportunities and challenges women face in the blue economy in Peru and how these are directly related to local reproductions of gender relations. These women have seen great changes in the local economies throughout their lifetimes. All three have come across opportunities to complement the family income and thus crucially sustain the family's economy in times of crisis (escaping gender violence, coping with health issues, and dealing with economic and environmental distress). In turn, this has led to achievements that the women are proud of, in particular, being able to offer their children an education.

We explore general themes present in women's lives across the Peruvian coast, linking the specific life events to national and local history and contexts. We argue that Sandra, Eva, and Dafne's agency in participating in the blue economy has been constrained by structural issues that frame these opportunities and challenges, such as the gendered division of labor, the burden of care work, (under)valuation of women's work, gender violence and male dominance, and the precarity of the general market and (in)formal economy.

6.1. Gendered Division of Labor and Care Work

Sandra, Eva, and Dafne's abilities to participate in different kinds of work throughout their lives have hinged on the compatibility of the care work of their children or other dependent people with their working hours. Three general tactics become clear: finding income alternatives that allow children in the workspace, leaving the children with a trusted person, or using public services such as the national program Wawa Wasi. In Sandra's case, becoming pregnant at 19 led her to decide on a career in the fisheries sector over her preferred path in healthcare. Dafne has had to compensate for the lack of resources around her by relying on family members and carefully planning her family life so as not to interfere with their financial needs, something uncommon and only possible through her completing her education. Sometimes, family care still conflicts with opportunities for her and her colleagues within the association. When offered the opportunity to join a seafood trap-making workshop in the nearby town, Dafne and the other women from the association voiced concerns about the long schedules and the lack of childcare options. When no solution was presented—INNOTEC representatives stated their role was as a fisheries organization, not a childcare provider—the women quickly signed up for the workshop while planning for their husbands or other family members to attend instead. Eva's first experiences in the *peladeros* were directly related to the activity where children could accompany their mothers. This is no longer possible since the formalization of processing plants and few factories offer childcare.

Fisheries and aquaculture can be hard physical work, regardless of gender. In our case studies, we have seen that without the possibility to offload care work, women's double burden skyrockets (Rivero Reyes, 2002), which takes a toll on workers' bodies. Many women, as in Eva's case, remember their mothers as extremely fatigued, which often triggered their desire to help them. Furthermore, the differences in how these women have been able to cope with challenges in motherhood and work in spite of their desires for their own careers and personal advancement are strongly framed by the kind of work available. Sandra had to abandon the idea of studying in order to sustain her family. However, she successfully became a vessel owner. Similarly, Eva always worked to sustain her family and managed to raise her children even though she could not advance in her career—most probably due to the lack of training opportunities. This places Eva in a different situation of precarity, she still needs to work a hard physical job in which age becomes a critical factor. These case studies highlight the dynamics of households at the coast: Women do engage in work, usually when men embark on economic activities that require them to be absent for extended periods of time, such as fishing, or when economic times are difficult, and men's income cannot sustain the family. Unsurprisingly, the impossibility of lessening the burden of care work strongly limits women's types of participation in economic activities, a phenomenon amply reported in fisheries and other economic activities in Peru (Armbruster et al., 2019; PNUD, 2022; Rivero Reyes, 2002; Tobin & Castellanos, 2021).

6.2. Machismo, Male Dominance, and Gender Violence: Questions of Personal Freedom, Valuation of Work, and Self-Worth

Opportunities for women at the coast intersect with male dominance, machismo, and gender violence, which are critical issues in both study areas (INEI, 2023; PNUD, 2022; Vaccaro, 2023, p. 43). We highlight three main areas where women have been affected by this: the ability to make choices about one's own life and have personal freedom, the differential valuation of skills among men and women, and issues of gender violence.

Personal freedom, or the lack thereof, has directly impacted women's access to opportunities. Moving away from her home allowed Eva and her mother to escape a controlling and violent father and husband so that Eva could receive an education and a certain degree of economic freedom. This freedom was then curtailed by her husband, and it was only after his accident that Eva regained control of her working hours and finances. Sandras' proactiveness, as shown by her investments and leadership, was facilitated by her husband's support, and while Sandra managed to overcome her husband's skepticism, sometimes machismo at home is more limiting. Dafne discusses having to convince the husbands of her association members to allow the women to attend workshops.

Machismo additionally leads society to overlook and undervalue the skills and knowledge that women contribute to their work and influences how women perceive their abilities and worth. This pattern is evident in Sandra's frequent need to defend her knowledge and legitimacy. The assumption that women, who traditionally stay on land, cannot know about fishing out at sea undermines Sandra's deep understanding of the sector, which she has acquired throughout her whole life growing up in a fishing family. Eva's case further illustrates this issue. In the processing plants, women are traditionally associated with simple manual work with kitchen utensils. Tasks that require more strength-related physical effort, such as lifting and placing the seafood on the work table and pouring ice into the water, are reserved for men. Women's jobs are still physically demanding, and many report physical pain and other health consequences. However, all women's tasks in processing plants fall into a broader category: easy or unskilled. While women themselves may have internalized this perception, employers recognize their skills—especially as processing plants face increasing pressure to secure the number of skilled workers that minimize the amount of wasted product. Managers of processing plants pay close attention during the recruitment process and recruit women who will be highly skilled and, at the same time, knowledgeable of the ever-increasing sanitary requirements placed by the export market. However, the benefits of these skills are not translated into improved working conditions, and this type of work is generally lowly valued by society. Overall, the social rules passed on and reproduced by women can conflict with their own experiences of self-value: one example is Dafne's genuine surprise to learn she was perfectly capable of doing men's work in the scallop concessions, at the same time internalizing the belief that, because she is woman, she is better suited than men for doing specifically more dexterous work.

Regardless of recent advances, women are still embedded in violent households, and violence and assault are an unfortunate reality for many women on the Peruvian coast. While accounts of experiences of gender violence shared by Sandra and Dafne are limited, other women in and around Bahía Encanto describe the violent struggles between women and their husbands to access the money the husbands have when they return from fishing. More than half of Peruvian women are estimated to have suffered physical, sexual, and/or psychological abuse (INEI, 2023), leading in many cases to teen pregnancies (Castañeda Paredes & Santa-Cruz-Espinoza, 2021). These reports of violence are presumed, as in many other places of the world, to be an underestimation of actual numbers (Van Vleet, 2019). Women on the coast are sometimes unfamiliar with what can constitute violence or abuse (e.g., emotional or financial abuse) or with the mechanisms to report and obtain help for gender violence (PNUD, 2022), and prosecution of sexual violence is still difficult because of legal hurdles and stigmatization (Van Vleet, 2019).

Thus, even though the blue economy can open up opportunities for women to engage in different financial activities or political representation, this occurs within the constraints of what is appropriate and

non-transgressive for women to do, while still attending to the gender roles they are socialized in, and still being subject to inequalities that permeate the whole society. Gender roles within fisheries can be port-specific (A. García, 2001), and this was reflected in stories of women in command situations in public and private spaces being more present in San Andrés than in Bahía Encanto. It is worth noting, however, that even in these cases, there are still different demands and values placed on men and women, and even in more urbanized areas where women have relatively more employment options and higher chances of having personal freedom and financial autonomy, opportunities remain precarious (PNUD, 2022).

6.3. Precarious Labor: Attempting to Escape Poverty, at Least for the Moment

The work opportunities discussed in this article are embedded in larger contexts beyond the coast: both Dafne and Eva's families have moved from agricultural sites, as many others, escaping poverty and looking for livelihood options related to fisheries. Migration strategies within small-scale fisheries and aquaculture have been discussed as a strategy to cope with environmental disasters and distress (Kluger et al., 2020).

The cases of Sandra, Eva, and Dafne show a clear tension between the economic opportunities available to them and the precarious economic landscape (i.e., boom-bust dynamics, the temporality of employment, lack of social protection, and informal work). While these work opportunities have provided some improvements in their lives, they remain precarious. Sandra's trajectory illustrates how boom periods of international demand allowed her to invest and position herself in a somewhat privileged situation. However, as the economic panorama changed due to the falling anchoveta sizes, industry relocation, and legal exclusion, Sandra had to make the difficult decision to engage in illegal fishmeal production. Sandra's work is embedded in a volatile economy. Her ability to secure her family life investments remains uncertain. At any moment, she risks losing everything—boats, fishing permits, etc. Eva's case further illustrates how the dynamics of international markets have shaped her work in seafood processing. Over the years, she has adapted to market shifts by learning to process a variety of marine species, from scallops during the 1980s to other seafood products that have gained prominence since. The high demand for products destined for international markets creates economic opportunities but simultaneously exposes workers to the volatility of market trends, as the work is often temporary and comes without basic protections such as pensions, retirement schemes, and health insurance. Dafne's inclusion in a formal fisherwoman association for over a year does little to secure her ability to provide for her family, while she and her peers find informal ways to be inserted as day laborers at scallop aquaculture concessions. Her experience in aquaculture concessions also highlights the temporary and unstable nature of work. She has had chances to work at sea, but these are sporadic, resulting in unpredictable income. This type of employment impedes workers from stabilizing their family economies and improving their working and life conditions in a sustainable, long-term manner.

The experiences of Sandra, Eva, and Dafne show that the line between formal and informal work is not always clear-cut in terms of stability and precarity. Informal work often amplifies instability, but even formal employment in industries influenced by market fluctuations and seasonal demands can leave workers vulnerable. This adds another layer to the discussion of labor precarity in the blue economy. The need for informal jobs in Peru has increased even as economic growth has remained strong (Van Vleet, 2019), and artisanal fisheries, in particular, has been a sector that has been the subject of multiple failed attempts of formalization (Carrere, 2021). Due to the neo-liberalization of the country's economy, social responsibility

tasks have been relegated from governmental institutions to NGOs, leaving marginal populations to rely on financial support that follows global trends of humanitarian organization priorities (Boesten, 2010). Therefore, while specific working opportunities do develop within blue economy activities, women (and men) cannot reliably put down roots and safeguard their livelihoods or families in the face of economic uncertainty: the fragility of the economic system on which these women and their families rely cannot insulate them from possible future crises.

7. Conclusions

To date, the tangible opportunities offered by changing economies, and taken to different degrees by individual women, are constrained by local gender relations and other structural issues and can prevent women from sustainably transforming their standing in society or working towards gender equality and wellbeing.

As exemplified by the third case study, attempts to include women in parts of the blue economy can fail when overlooking the socioeconomic context and structural challenges in which these women are embedded, their needs, and their motivations. Our informants, and many others, have been surrounded by the result of longer processes of resource extraction, global markets intersecting with local ones, and slow shifts in governmental and corporate discourses to increase focus on gender equality in a landscape where much is not yet known about women's roles. Therefore, while we acknowledge the possibilities of marine-related activities to generate both objective improvements in women's lives (being able to educate one's children) and subjective improvements (self-perception of well-being and self-esteem), we argue that challenges women face are so deeply structural that merely rebranding economic endeavors under the banner of the blue economy or blue growth alone will do little to empower and better women's life in Peru.

This article is by no means an exhaustive account of what types of challenges can exist and intertwine for women on the Peruvian coast, much work can still be done to understand women's lived experiences, their needs, and all the ways in which they express agency in different fisheries, ocean-based industries, and other coastal settings. As Williams (2023, p. 26) maintains, the blue economies must be "gender responsive and ultimately gender transformative." This requires complex, deep transformations that will likely generate resistance from those currently involved in decision-making processes. We argue in favor of moving away from using terminology like the blue economy and blue growth in agenda-setting and towards a more explicit understanding of blue justice that directly aims to address not only gendered power imbalances across different scales but also the inherent inequalities that accompany the status quo of marine-related activities under current extractive regimes. We maintain that blue justice for women in Peru cannot occur without taking into account these structural issues of the gendered division of labor, male dominance and gendered violence, and the precarious nature of work at the coast.

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Conflict of Interests

The authors declare no conflicts of interests.

Data Availability

The data that supports the findings of this article is available through the authors upon request.

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ARTICLE

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Incentives for Skills Supply in a Socially Sustainable Shipping

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Abstract

While global demand for shipping continues to grow, the maritime industry is concerned by the impending shortage of skilled seafarers. The challenge is twofold: there is a need to attract and recruit new talent, and to retain, upskill, and reskill existing personnel. This study aims to investigate what motivates students to enrol in and complete a maritime education, and to stay in the profession. A register-based follow-up study, a survey questionnaire, and interviews were conducted with former and current students at a maritime upper secondary school in Sweden. Results show that motives include an interest in shipping or boating, or seeking a practical occupation. It has not been possible to identify any major differences between women's and men's motives. However, women complete their educations to a greater extent than men. Pivotal for seafarers' decision to stay in a seafaring profession is having reasonable working and employment conditions, varied work tasks, and a sense of professional pride. Experiences of good companionship and togetherness are important driving forces. Conversely, social exclusion, harassment, and poor working environments influence the decision to leave the maritime industry. Even though women are at increased risk of being exposed to unwelcome behaviour, they choose to stay at sea to a greater extent than their male colleagues. A sustainable skills supply requires a holistic perspective. Satisfied employees who are allowed to grow in their professional role are likely to act as excellent ambassadors and thereby contribute to the continued recruitment of seafarers.

Keywords

gender equality; job satisfaction; maritime education; occupational commitment; seafarers; social sustainability; upskilling; work environment

1. Introduction

1.1. Gendered Supply of Maritime Skills

Maritime transport has grown steadily over time. In 2023, the global shipping industry consisted of approximately 105,500 merchant ships of at least 100 gross tonnage (UN Trade and Development, 2023), crewed by an estimated 1.89 million seafarers (International Chamber of Shipping & BIMCO, 2021). Forecasts predict that the need for maritime transportation will continue to grow with the global fleet becoming more technologically sophisticated. This will result in an increased demand for highly skilled seafarers across the industry. In this regard, the gender imbalance in the maritime industry represents a particular challenge in ensuring the availability of a skilled workforce. The maritime industry remains male-dominated and masculine-coded (Kitada, 2021), and despite a cautiously positive trend in gender distribution, there is still a long way to go. The estimated 24,000 women currently working at sea represent just over one per cent of all seafarers. Most of these women are working in crew positions on cruise ships (International Chamber of Shipping & BIMCO, 2021). The segregated labour market and lack of gender diversity demonstrate that women are an untapped resource. It is no longer enough to have "all men on deck," as men constitute only half of the recruitment base. Several campaigns have been launched over the years to encourage women to pursue a career at sea. Already in 1988, the International Maritime Organization (IMO) initiated a programme to integrate more women into the global shipping sector (IMO, 2013). The programme aimed to improve women's access to maritime education and employment, and ultimately to increase the proportion of women at senior management levels. The premise is that a position on board is often a stepping stone to a career ashore. It is uncertain whether a comprehensive assessment of the programme's efficacy has been conducted. Nevertheless, a recent survey indicates that, three decades later, senior roles in high-status departments on board remain predominantly occupied by men. Similarly, shore-based senior management is largely male, while administrative staff tend to be dominated by women (Nastali & Bartlett, 2022). In what is often described as a "leaky pipeline," there is a continuous loss of women at successive career stages (Mackenzie, 2015). An analysis of data from 13 education and training institutions in Europe, South America, and Africa from 2009 to 2018 shows that more women than men leave their seafaring careers before reaching senior positions (Barahona-Fuentes et al., 2020). This trend reduces the representation of women in leadership roles, creating a cycle that discourages future women from staying or advancing. Departing women also take with them institutional knowledge that is essential for both operational and mentoring continuity. Addressing this issue is therefore critical to inclusive skills retention.

In a joint effort to create attractive workplaces in shipping, the European Community Shipowners' Association, together with the European Transport Workers' Federation, has developed guidelines for shipping companies (European Community Shipowners' Association & European Transport Workers' Federation, 2013) that aim to raise awareness of the link between health and safety, social workplace conditions, and attractive jobs. The parties have further committed to increasing the proportion of women in European shipping (European Community Shipowners' Association, 2018), through campaigns using women role models, developing policies and training programmes that promote gender equality and discourage bullying and harassment, and ensuring woman-friendly facilities on board ships. However, previous research has shown that many initiatives to increase the number of women in the industry have not had the desired effect (Kitada, 2021). One reason, as explained by Österman and Boström (2022), is that initiatives based on

a binary and quantitative understanding of gender equality in terms of number of men and women tend to fail if they do not consider the structural and contextual factors that reproduce inequality and increase the risk of vulnerability in the workplace or school environment. It is simply not enough to just add women and stir. Women in male-dominated environments that value traditionally masculine qualities often face a culture with norms and jargon that can make them feel out of place, unwelcome, or tokenized, leading to disengagement. For example, Kitada (2021) reports how women seafarers feel compelled to conform to masculine norms to meet stereotypical expectations and become part of the team, trying to hide their feminine characteristics or using profanity to better fit in with their male colleagues. As women in minority disrupt the male order, they are also at increased risk of pervasive unwelcome behaviour and instances of direct sexual harassment (Bergman & Henning, 2008; Vogt et al., 2007).

1.2. Impact of Working Conditions on Work Motivation and Skills Retention

The problem of skills supply in shipping can be divided into the need to recruit new personnel and the need to retain, upskill, and reskill existing personnel. In the search for economic efficiency in crewing, shipping companies largely utilise flexible employment practices, often through outsourcing recruitment to third-party agencies (Bloor & Sampson, 2009). These employment and recruitment strategies have led to changes in the demographics and origins of the seafarers and today most ships are crewed by nationalities from the global south (International Chamber of Shipping & BIMCO, 2021). This has impacted the upkeep of standards in education and training with employers being reluctant to invest in upskilling and reskilling of a crew that might not return to the same ship, or even the same shipping company (Sampson & Tang, 2016). The flagging out of entire national fleets and the development of new financial markets have resulted in weak psychological contracts between shipowners and their crews (Fei et al., 2009). Essentially, commitment to stay in an occupation depends on perceptions of the intrinsic characteristics of that occupation. In this respect, the prospect of a satisfactory income is undoubtedly an important motivational factor, but there are also qualitative and emotional drivers, such as developing a sense of social status and identity (Lee et al., 2000). Previous studies have shown how physical, organisational, and social working conditions affect employees' organisational commitment and thus their desire to remain in the profession. Organisational commitment can be said to reflect employees' degree of loyalty to their employer and their willingness to contribute in a meaningful way to the achievement of the organisation's goals (Mottaz, 1988; L. W. Porter et al., 1974). A general sense of belonging to the organisation is crucial not only for the inclusion of women but also for other marginalised groups. Employees who feel undervalued and excluded will eventually leave the organisation (Bridges et al., 2021), whereas employees with high organisational commitment are willing to go the extra mile and are more likely to remain with the company.

The link between working conditions and seafarers' health and attitudes towards work has been investigated by Larsen et al. (2012), who identify three key factors for job satisfaction and organisational commitment among cruise ship crews: the respect and fair treatment from supervisors; the social working environment, both concerning colleagues and guests; and the standard of food and accommodation facilities. Similarly, Sandberg et al. (2020) report a strong relationship between organisational commitment and job satisfaction in their studies in the Swedish shipping industry. Their findings show that senior officers are more satisfied than junior officers and ratings, and that seafarers who feel they have reached a career dead end, with limited development and career opportunities, have weaker organisational commitment and are therefore more likely to leave their jobs within the next two years. In Österman et al. (2020), four factors

were identified as positively correlated with both motivations to work at sea and organisational commitment to a particular shipping company: the experience of sufficient manning on board, time to relax, a manager who addresses problems, and good relations between different departments on board.

While socially sustainable values such as good working conditions, gender equality, and equity are fundamentally a question of human rights, they also create long-term business value (M. E. Porter & Kramer, 2019). A meta-analysis covering more than 60,000 companies shows a robust relationship between employee job satisfaction and business performance (Harter et al., 2020). One challenge is the fragmented approach to social sustainability and the lack of an agreed definition of what social sustainability is. There is no commonly agreed "social dioxide" that can be measured and compared in the same way as greenhouse gas emissions and energy consumption. Social sustainability is often said to be primarily about human rights and the physical and mental needs and well-being of individuals. Weingaertner and Moberg (2014) highlight social capital, human capital, and well-being as three key themes on which to build. Based on an extensive review of scientific literature and policy documents, Murphy (2012) suggests that social sustainability is based on the underlying concepts of equity, sustainability awareness, participation, and social cohesion. The safe and efficient operation of international shipping depends on the competence and well-being of seafarers. Building on this, we understand the objectives of socially sustainable shipping as creating safe and attractive workplaces to facilitate recruitment and retention, where seafarers are allowed to grow and achieve their full potential.

1.3. Study Context: The Swedish Perspective

This study was conducted from a Swedish perspective, with data collected from Swedish students and seafarers. Consequently, in addition to the resolutions and circulars issued by IMO, employment and work on board Swedish-flagged ships is covered by Swedish legislation, which is generally stricter than international requirements. Swedish employers have an obligation to have a preventive work environment management system and to take active measures against discrimination and to promote gender equality. These active measures should aim to reduce the pay gap, increase women's participation in the labour market, and encourage men to take parental leave. Following the Parental Leave Act (Svensk författningssamling, 1995), parents are entitled to 480 days of parental leave, which can be shared between them. The employment is protected during the parental leave, giving the parent the right to return to their job after the leave.

The entire Swedish maritime sector, which includes land-based employees of shipping companies, ports, shipbrokers, marine engineering companies, authorities, academia, and research institutes, is estimated to employ around 160,000 people. Furthermore, shipping is crucial for infrastructure, competitiveness, and tourism. Swedish ports handle almost 90% of Sweden's total imports and exports (Lighthouse, 2021). However, in terms of the number of vessels and employees, Swedish shipping is relatively small. In 2021, around 10,600 people were contracted on Swedish ships, including temporary agency personnel from non-European Economic Area countries, mainly the Philippines (Sweship, 2023). Of these, 8,000 work as ratings. Women make up 25% of the seafarers, which is a considerably larger share than globally. However, this is mainly because Sweden has many ferries where most women seafarers (71%) work in service professions on board, often associated with lower social status.

Today, the only way to become a seafarer in Sweden is through a designated maritime training programme. After having completed compulsory school, most young people attend a three-year upper secondary education to prepare for either work or future studies. In total, there are 18 national programmes, of which 12 are vocational and 6 are preparatory for higher education (Skolverket, 2024). A vocational programme prepares students for immediate entry into the workforce by providing professional skills, while also offering the option to gain eligibility for higher education. In addition, there are six national recruiting programmes, the maritime programme being one of them. A national recruiting programme means that students from anywhere in Sweden can apply, regardless of geographical location. Unlike most other upper secondary school programmes, which primarily admit students from the local or nearby regions, nationally recruiting programmes accept applicants from across the entire country without any regional restrictions. After successfully completing the maritime programme, graduates can work as ordinary seafarers, either on deck or in engine. There is also the possibility of applying to a maritime college, regardless of whether the applicant has attended a maritime programme at an upper secondary school or not. After completing a maritime education, most Swedish seafarers work in a 1:1 rotation. The length of service depends on trade and collective bargaining agreement, from one to four weeks in short sea shipping to two to three months on ocean-going vessels, followed by the same time off duty.

1.4. Purpose and Aim

The purpose of this study is to identify the incentives at individual, organisational, and industry levels for skills provision in socially sustainable shipping and explore how these can be put into practice. Specifically, the aim is to systematically and from a holistic perspective investigate:

- What motivates people to enrol in and complete maritime secondary education and are there gender differences?
- What motivates people to stay in the maritime profession and are there gender differences?
- What incentives can be put in place at the organisational and industry level to ensure the supply of skills for socially sustainable shipping?

The overall objective is to identify recommendations to the maritime industry on measures to increase interest in maritime education among a wider target group and create favourable conditions for a sustainable working life in shipping.

2. Research Design and Methods for Data Collection and Analysis

This study was carried out in the setting of the Swedish shipping industry. The research activities can be divided into the following sub-activities:

(a) Register-based follow-up study of upper secondary school students at a maritime school.
(b) Survey questionnaire to former students graduating from a maritime school between 2010 and 2020.
(c) Interviews with upper secondary school students at two maritime schools.

The results of the research activities were analysed, discussed, synthesised, and developed into recommendations.

2.1. Register-Based Follow-Up Study of Upper Secondary School Students at a Maritime School

A time-series study was conducted in 2022 to follow a cohort of students who graduated in 2010 from the three-year upper secondary maritime programme at a maritime school in Sweden, to see how many were still working at sea and how many had decided to pursue higher education to become officers. The reason for choosing the year 2010 was that this cohort completed their education before the Swedish upper secondary school was reformed (Gy2011). These students thus became eligible to apply for a higher maritime degree programme after their graduation. Gy2011 aimed to make students in upper secondary vocational programmes better prepared for working life. It tightened the eligibility requirements for upper secondary education, increased the emphasis on vocational subjects, and made it optional to take the college preparatory courses that were part of the core subjects of vocational programmes.

The maritime programme offers common courses in areas such as safety, environment, electrical and workshop practice, cargo handling, and passenger safety. The students can choose to specialise in either deck or engine to work as an able seafarer deck or able seafarer engine. Based on the school's register of former students, an excerpt of seafaring service was requested from the Swedish Transport Agency's register of seafarers for the years 2010 to 2020. The analysis included a follow-up of the students' performance: upper secondary school leaving certificate, number of active years at sea from graduation in 2010 to 2020, highest certificate of competency obtained, the date of last enrolment at sea, and the extent to which students have pursued higher education in shipping in Sweden.

2.2. Survey Questionnaire to Former Students Graduating Between the Years 2010 to 2020

The main purpose of the survey questionnaire was to investigate the extent to which students were still working on board, within shipping, or if they had left the industry altogether. The aim was also to identify what factors were important in the decision to enrol in maritime education, such as influence from family and friends, as well as what factors were important in the decision to remain or leave the shipping industry. These factors include, for example, experience of induction programmes, employment conditions including salary and rotation, and the possibility of influencing working conditions. Further, the respondents were asked whether they would recommend others to choose a maritime education. The questions were multiple choice with the possibility to add free-text comments. For students who graduated before 2016, a manual search for current postal addresses was carried out. For students who graduated after 2016, information could be retrieved from the Swedish Transport Agency's register of seafarers. The survey questionnaire was distributed in 2022 by mail to a total of 252 people, of which eight letters were returned with an unknown address. After a reminder, 58 people responded, giving a response rate of 23%.

2.3. Interviews With Upper Secondary School Students

The research interviews aimed to investigate what motivated upper secondary school students to choose a maritime education, what they considered to be important factors for the successful completion of their education, and how they thought about their future career choices. Four focus group interviews (Krueger & Casey, 2009) with between three and six students in each group, and nine individual interviews were conducted during 2021 at two different maritime schools in Sweden. In total, 28 students were interviewed. After written consent was obtained from all participants, the interviews were recorded on video and audio.

The focus groups and the individual interviews followed the same semi-structured interview guide, based on five themes. All students were asked about their motives for applying to a maritime school and their thoughts about future career choices. Students who had conducted onboard training were also asked questions regarding their experiences of onboarding, working hours and workload, and victimisation. All five themes were covered in all interviews, but students were given considerable freedom to bring up ideas that they felt were relevant, allowing flexibility for in-depth discussions. Additional questions were asked during the interviews and responses were explored on an individual basis. All interviews were transcribed verbatim and collated, categorised, analysed, and interpreted by the authors.

2.4. Research Ethics

Under the European Code of Conduct for Research Integrity (All European Academies, 2023), the research activities aimed to strike a reasonable balance between the researchers' quest for knowledge and the participants' right to integrity. Since shipping is a relatively small industry in Sweden, the participants' demographic information is described so that no one can be identified against their will. We have also strived for transparency and clarity for all participants involved. Written invitations sent to participants included a description of the purpose, objectives and procedures, how the collected information was to be managed, and that the participants could notify us at any time if they no longer wished to participate. One week before the visits to the schools, a short video recording was sent out in which the researchers introduced themselves and the project, and provided the same information verbally, giving the students time to reflect on their willingness to participate.

3. Results

3.1. Register-Based Follow-Up Study of Upper Secondary School Students

A total of 40 students (8 women and 32 men) graduated from the studied maritime school in 2010. Out of these, 33 students received their final grades qualifying them for higher education at universities. Among these 33 students, one woman and four men pursued higher maritime education in Sweden. This represents about 15% of both genders of those who were eligible to do so. It is not clear if any of the students pursued higher education in other fields or further maritime education abroad.

Figure 1 illustrates the number of students who continued to work on board in various capacities during the ten-year period after graduation. As shown in the figure, over 62% of all students (25 out of 40) chose to work at sea immediately after school. The sharp initial drop represents those students who did not complete their studies or decided not to pursue a career at sea. It should be noted that the relative drop is larger among the men compared to the women. Over time, more and more opted for land-based careers, and by 2020, only seven of the former students still worked on board, four men and three women. Relative to the number of men and women who graduated in 2010, this equates to 37.5% of the women and 12.5% of the men continuing in a seafaring profession.

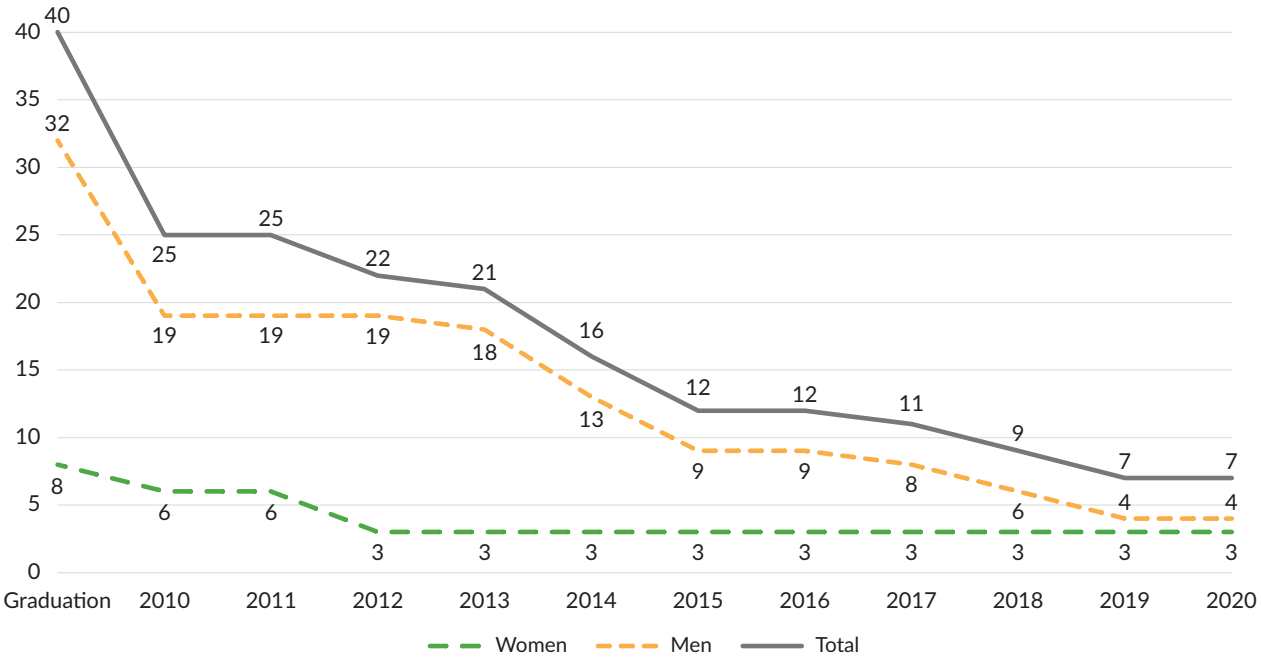

Figure 1. The remaining number of former students working at sea, year by year.

3.2. Survey Questionnaire to Graduates Between 2010 and 2020

The survey was answered by 58 people who completed upper secondary education at the maritime school between 2010 and 2020. Of the respondents, 83% are men and evenly distributed across the graduation years, with slightly fewer from the class of 2019 and no responses from the class of 2020. Of these 58 people, 26 still work on board, five work ashore in a maritime-related occupation, and 27 have left shipping altogether as of 2022 when the survey was taken. None reports working in education/research or being unemployed. Combined, this means that 53% of the respondents (31 out of 58) still work within the maritime industry. However, Figure 2 shows that, in relation to their total number, 88% of women remain within the maritime industry, while only 50% of the men do. In Figure 2, two individuals who did not disclose their sex have been omitted.

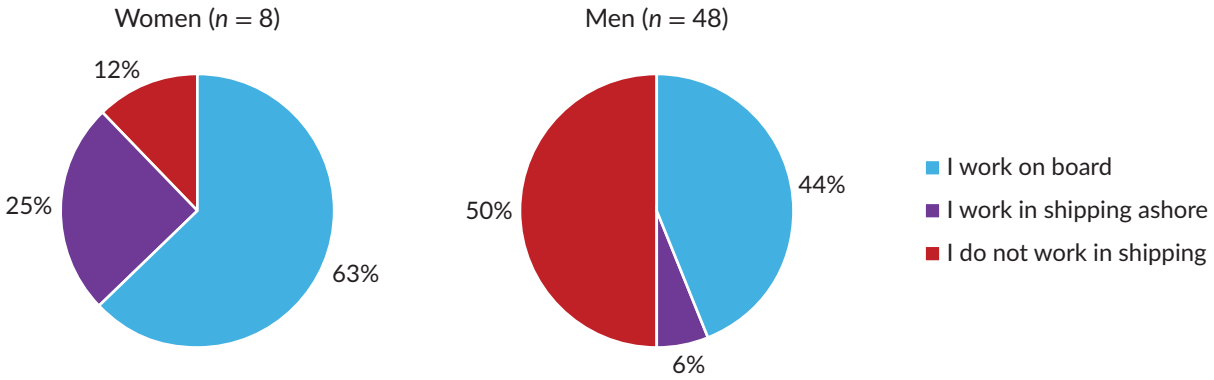

Figure 2. Number of respondents working at sea.

The driving factor behind the decision to enrol in a maritime education is largely that the expectations of the seafaring profession, and to some extent of shipping as an industry, match the aspirations for a future working life. Family or relatives who work or have worked at sea have a major influence. So does an interest in recreational boating and travel. The perception that "the maritime profession would suit me" is particularly true for respondents still working on board or in another maritime occupation. This is largely consistent with the perception of shipping as an attractive industry.

Those still working on board state that the decisive factors in their decision to stay at sea are largely related to the fact that they enjoy their work and their colleagues and that they have a relief system that fits their private life and interests. Almost 80% state that they are proud to be seafarers. On the other hand, several respondents believe that there is potential for improvement in terms of salary development, the possibility to influence their work situation, their work tasks and professional development, and the possibility of staying connected with family and friends while on board. These are factors that further strengthen organisational commitment and a sense of belonging.

Only half of the respondents report that they were well cared for when they first came on board as newcomers. Given the strong research support for the importance of good induction and mentoring for new recruits, particularly those new to the profession, this is a finding that would need to be addressed specifically within the industry. The open-ended responses provide several examples of the importance of the social working environment on board:

> What I like most is that when we are on board, we become our own little dysfunctional family. The community is the most important and best part of working at sea. I was most attracted to this career choice to escape life on land.

> Great colleagues on board and long holidays. When you are free, you are free, you never have to take your work home with you. Another thing is that you get to see and discover beautiful places in the world.

Of the 27 respondents who had left the maritime sector, 18 provided their alternative reasons for leaving, in addition to the fixed responses provided. The main reason for leaving is that they were offered a more attractive job elsewhere. However, the answers to the survey's open questions show that several chose another occupation after leaving school, either because they could not find work at sea at all or because they were not offered a secure employment contract and therefore had to look for other alternatives. Some express an interest in returning to the industry when jobs become available, but the need to renew and pay to update certificates is seen as a barrier. Five respondents stated that they were either not well treated on board or that they were ostracised, bullied, or harassed. This has affected both their willingness to remain at sea and their perception of the industry: "The workplace was full of sexism and racism, the atmosphere on board felt unhealthy and the romantic idea I had before quickly died."

The respondents were asked whether they would recommend family or friends to choose a maritime education today. This is a variation of a classic question used in many surveys to assess the loyalty and commitment of employees or customers. The options given in the questionnaire were "yes," "no," and "I don't know." There was also an option for free-text answers. The question was answered by all 58 respondents and 28 also commented

with their own words, indicating an interest in the question. Of all respondents, 62% (36 people) say they would recommend someone close to them to choose a maritime education today. 17% (10 people) would not and 21% (12 people) are unsure. Of those who have left shipping, more than half (59%) would consider recommending maritime training to others. Several free-text comments provided by those who answered "yes" concern positive factors such as the variety of tasks and long periods off work. Those who reply "no" or state that they are reluctant to recommend others, refer to difficulties in entering the industry without personal contacts, finding permanent employment, dissatisfaction with salary development, lack of personnel policy, and difficulties in staying connected with family and friends while on board.

3.3. Interviews With Upper Secondary School Students

The reasons given during the interviews for why the students had applied for a maritime education can be divided into three categories: a personal relationship with the sea, an interest in practical training, and coincidence. With few exceptions, these categories form a whole. One group of respondents have a previous relationship with the sea or shipping, for example, relatives who work or have worked at sea. This relationship can be close and long-standing when people come from a maritime family. For some, an older sibling or friend has recently trained to become a seafarer, and this has inspired them. The relationship may also be more distant, such as "a great-grandmother was a shipowner." Although this may be considered history, the memory lives on and has an influence. However, the relationship with the sea is not necessarily linked to commercial shipping. Several respondents have a general interest in the sea, such as having a pleasure boat or having grown up in the archipelago. Some experience a strong interest in the sea or boating without being able to pinpoint the exact origin of the interest. For other respondents, practical elements play a central role, both in the educational programme and in their future profession. This is expressed as a wish to work practically or with one's hands, or as having a general interest in engines. For those valuing vocational education, this is often linked to school fatigue or that the person does not see themselves as theoretically inclined. For some it is more a statement of what they do not want to do, as expressed by a student: "I realised in seventh grade that when I finish primary school, I'm not going to be an office slave." On-the-job training is also seen as a quicker route to a job, particularly attractive to those who are tired of school. Finally, for a relatively large group of students, the decision to apply to a maritime education is more random. These students have no prior knowledge of the industry. The decision can be based on an information leaflet, talking to someone at an upper secondary school fair, or an open day. It can also be a single event that triggers the interest, like being invited on a cruise. These events are often serendipitous, where the decision to choose an education stems from a sudden realisation of the existence of an entire industry, as the following quote shows: "I was visiting the Naval Museum, and I thought 'damn, I'm going to work on a boat.'" Surprisingly, many students are unaware of the career opportunities available in shipping until shortly before choosing a course of study. Several students also testify to the ignorance of many study and career advisers. In some cases, adults close to the student express reluctance or their own opinions and try to dissuade the student from going to sea.

The results of the interviews further highlight two main motives for students wanting to complete the training and pursue a maritime career. The first set of drivers represents the traditional image of the life of a seafarer. Salary, time off, and a chance to see the world are recurring drivers cited by respondents, with time off being the most prominent one. The ability to work on a relief system where a working shift is followed by an equal amount of time off is crucial for many. Another, more diffuse aspect of the traditional seafarer's life is the

sense of freedom, as expressed by one student: "Just the thought of going out on a big ship in the middle of nowhere makes me happy." Being somewhat isolated from the outside world can be a form of relaxation, and experiencing this feeling can be an incentive to complete maritime school and start working on board. The other main incentive is a desire to work in a practical and varied way, where no two days are the same. This stands in stark contrast with an office job ashore, that some students consider unthinkable. Here, a sense of professional pride in choosing a maritime career is observed. This pride is expressed in terms of doing something out of the ordinary, as well as being a part of the backbone of global trade. Despite this strong sense of pride, working at sea can be perceived as a working-class job. The image of the profession and the lower status associated with it may discourage prospective students, as their guardians may see further higher education as a matter of course.

One of the most important components for how the students perceive their education and welcome the industry is the onboard training that is part of the programme and particularly the supervision received during the time on board. Much of the discussion about shipboard placements revolved around this, and respondents shared many positive, as well as negative examples. Positive experiences include being allowed to try new tasks, receiving constructive feedback, and feeling included and welcomed into the social life on board. On the other hand, other examples include students feeling like unpaid labour, being afraid to ask questions, and being subjected to bullying and harassment, as well as outright racism:

> I felt deterred from my first ship. I was absolutely not welcome there, there was no commitment from the crew. I was given no work schedule, nothing, no organisation. I didn't learn anything special, it was just sour faces and words that you don't want to hear as a student.

Finally, although many students report being treated well, for others negative experiences are a deal breaker causing students to leave the ship early or decide not to pursue a career at sea.

4. Discussion

The research activities show a high degree of consistency in terms of incentives for enrolment and completion of maritime education. For some students, it is either an interest in and previous experience of shipping or a desire for an education that leads to a varied and practical occupation. Similar to previous Swedish studies, the presence of family or relatives who work or have worked at sea is a driving factor (Hult, 2012). This effect is metaphorically known as career inheritance (Inkson, 2004). In Hult and Österman (2016), the effect of having a relative working or having worked at sea was statistically significant for men, but not for women. Furthermore, this effect was said to be mainly emotional and not particularly influenced by the actual nature of the work. In the present study, we do not see any major differences between the motivations of women and men to apply for and complete a maritime programme. From the open-ended responses, growing up in the archipelago and having an interest in recreational boating and travelling were also highlighted as factors influencing the decision. For others, the decision is more serendipitous, and for these, the choice to enrol is often made close to the start of school.

As seen in Figure 1, women students are more likely to complete their maritime studies than men. This is similar to the findings of Barahona-Fuentes et al. (2020), where women students in equivalent maritime programmes were more likely to complete their entire education to graduation. In the follow-up of a cohort

of upper secondary school students, 15% of both sexes chose to continue their education. Women who chose to go to sea after upper secondary education were more likely than men to stay at sea. Although 80% of the graduates were men, about the same number of women as men were active ten years later. If this cohort is representative, it shows that it is worth investing in women seafarers. Although the studied group is small, we conclude that the women in this cohort both chose to work at sea and have remained at sea to a greater extent than their male classmates. It is often implied that women seafarers find it difficult to combine work and family life and hence would leave an onboard position during childbearing years. As seen in Hult and Österman (2016), women seafarers with young children at home have a strong occupational commitment. This suggests that working at sea may serve as a coping mechanism for navigating the challenges of a dual role trying to balance family and career. However, this positive effect was dependent on the level of satisfaction with the job content.

The decision to remain working at sea is predominantly influenced by securing a job that offers a suitable work–life balance and aligns with personal interests and aspirations. It is also important to have a variety of tasks, to be able to develop oneself and to have professional pride. The experience of a good sense of community and belonging is an important driver for staying at sea. The possibility to influence one's work situation, work tasks, and professional development, and the possibility to stay connected with family and friends while on board are factors that further strengthen organisational commitment and a sense of belonging. This link between perceived occupational pride and an employee's satisfaction with their working conditions and social support is well-known from previous research (Mas-Machuca et al., 2016; Welander et al., 2017). Conversely, social exclusion, harassment, and poor working conditions are barriers to retention. Half of the respondents stated that they were not well looked after when they were new on board. For some, this was a deciding factor in leaving the industry, as seen also in Kitada (2021). The organisational and social working environment is particularly important in the early stages of a new career, especially for new employees coming directly from a training programme (Bauer et al., 2007). It is often a transformative period when the employee is expected to settle in and understand their role both professionally and socially in the short term. To address new employees' experiences of uncertainty and stress, thoughtful induction policies and on-the-job training are needed (Frögéli et al., 2023). This may include, for example, counselling, mentoring, and a gradual escalation of work tasks (Österman & Boström, 2022).

There are undoubtedly considerable differences in the global working and living conditions of seafarers. Although this study is based on a Swedish perspective, its findings may have implications also for the international maritime industry. An increased focus on seafarers' health, gender equality, and social (in)justice is likely to make progress towards a more equitable level playing field over time. In addition, increasing societal demand for sustainable practices and the pursuit of the Sustainable Development Goals will hopefully push the industry towards fairer competition based on fundamental human and labour rights. As a result, these findings are relevant from a global perspective.

5. Recommendations

Building on the individual motives that emerged from the results, we see an opportunity to operationalise these into incentives that can be put in place at the organisational and industry level to ensure the long-term supply of skills for socially sustainable shipping. We see incentives as something that encourages an individual to act in a certain way to achieve an intended outcome. Incentives can be implemented at the

organisation level, such as an individual shipping company introducing an induction programme, or at the industry level, such as an industry-wide mentoring programme. Our proposed recommendations are presented here as links in a chain, consisting of attract, recruit, retain, and grow. The rationale is that the whole can never be stronger than the weakest link. There is an obvious risk of sub-optimisations if decisions are made and measures are taken unilaterally, rather than adopting a wider perspective. Maritime employers need to address both recruitment and the development of working conditions. This can be done in different ways, but the work needs to be long-term and involve employees at different levels.

5.1. Attract

To attract more people to apply for maritime education and careers, the industry needs to increase its visibility, especially outside the maritime community where knowledge already exists. This can be done, for example, by shipping companies reaching out to interest groups representing under-represented target groups. The image of the industry needs to be modernised and broadened to better reflect contemporary professions and work tasks. This image must be based on diversity so that more people can see themselves in a future career at sea. This applies not only to the production of marketing material, but to all forms of representation, such as guest lectures and industry councils in schools, presentations at conferences, and panel discussions. Role models need to represent a wide range of professions and different career stages. It is not enough to show the top executive at the end of the line, but also other opportunities along the way and what it takes to get there.

Communication and marketing of maritime education must be targeted at both students and their guardians and include information about what the programmes can lead to in the future. Strategic partnerships between companies and schools at the secondary and tertiary levels can increase the visibility of shipping. This can be done by, for example, company representatives visiting schools or holding webinars where employees talk about their jobs and career opportunities; offering scholarships, internships, summer jobs, job shadowing, mentoring programmes, and workplace visits for students; or offering graduates and young professionals trainee programmes to try different jobs.

5.2. Recruit

Recruitment includes both getting people to apply for a maritime education or job and ensuring a good induction. During the recruitment process, students and job seekers need to be made aware of both positive and negative aspects of their future careers. Relevant and detailed information, as well as a good induction, plays a significant role in the decision to complete the studies and remain in the industry. With clear and inclusive recruitment processes, an organisation can ensure that all vacancies are widely advertised and all applications welcome, regardless of the socio-demographic characteristics of the applicant. This can be done by setting targets for recruitment, hiring and promotion, and developing procedures such as anonymised recruitment so that hiring decisions are made based on set targets. In addition to the legal requirements for familiarisation of all newcomers to a ship, an induction programme may include:

- A short introductory film in which the company, before the first day of work, sends a welcome message from key people, presents its activities and values, and provides information about personnel procedures.
- Details of how to get to the ship and whom to contact.
- Ensuring the availability of appropriate working clothes, tools, and personal protective equipment.

- Information on working and eating hours on board.
- A welcome reception with a guided tour and an opportunity to meet colleagues.
- A plan for gradual escalation of work tasks.
- A follow-up of the induction programme. A good way to follow up is through personal contact after a certain period of employment or at the end of an internship.

5.3. Retain

The decision to stay with an employer depends firstly on the possibility of being offered a relevant job with reasonable employment conditions and a relief system that the employee finds compatible with personal life. Having satisfactory physical, organisational, and social working conditions is also crucial. This includes having tasks that feel fulfilling, a safe working environment, and good cooperation with managers and colleagues. As the salary is partly determined by factors beyond the control of individual employers, it is even more important to find ways, other than purely monetary, of providing value to seafarers. Examples of measures to retain satisfied employees include:

- Implement a family-friendly personnel policy that provides support for parental leave and a degree of flexibility, for example, in terms of working hours or shore leave.
- Set short and long-term targets for actions to achieve gender balance in all occupations and at all levels of the organisation.
- Ensure continuity in ship crews so that the same people return to the same ship as much as possible. This promotes mutual learning, social interaction, and increases retention.
- Plan for women seafarers to serve on the same ship at the same time to avoid being the only woman on board. This empowers women, develops the team socially and professionally, and reduces the risk of victimisation.
- Provide managers and supervisors with time, knowledge, and tools to improve the working environment.
- Increase security for positions and work situations where there is a high likelihood of employees being exposed to threats and harassment.

What is perceived as attractive work conditions will be valued differently throughout a working life. To maintain competence, maritime employers need to provide opportunities to meet different needs as far as possible. The course of a working life is rarely straightforward.

5.4. Grow

Skills are not static. Skills vary from person to person and need to be maintained and updated over time to remain relevant. Employees' needs and expectations of work change with age. Young people are generally less interested in seafaring as a lifestyle job and more likely to be driven by factors such as job satisfaction, that the work is stimulating, and that it can contribute to achieving other important goals outside work. Organisational structures must allow employees to thrive, develop, and grow according to the needs of the different working-life stages. An individual employee's development may be in a different direction, into a new role, or by deepening their current position. Whatever the direction, the development will strengthen the employee's attachment to the organisation.

The traditional career path at sea is hierarchical and more clearly manifested compared to other workplaces through, for example, uniforms and the size and location of the cabin on board. Career planning needs to be a dialogue between employer and employee, with a thorough understanding of mutual expectations and what is required to take the next step. For those who do not want or cannot be given the opportunity to pursue a traditional career, this dialogue should involve other paths—at sea and ashore—and include a plan on how to get there. It should also be made clear to what extent a proposed skills development can be expected to affect salary progression. Of course, competency planning should cover all employees. Even in job categories where there is no clear career path, such as crew positions, this planning is essential to help people grow as individuals.

There is an inherent conflict between the traditional view of what initially attracts people to a life at sea and what subsequently leads seafarers to seek work ashore. Those initially attracted by seeing the world and having long, uninterrupted holidays may find the same things limiting later in life because they also mean being away from home. Similarly, the sense of adventure may fade, resulting in the worker moving on to new ventures. Therefore, promoting onboard work as adventurous might be unwise. A better marketing strategy would be to showcase the variety of tasks and the wide range of possible career paths. It must be made clear that choosing a career at sea is not a dead end; on the contrary, it is a decision that can open many doors. For some, the possibility of a temporary position ashore during the early years of starting a family may be a good solution. Others may prefer to continue working on board, but on a part-time basis, for example by sharing a position. This may suit parents as well as other seafarers who wish to combine work at sea with other interests. There are also older seafarers who do not want to work full-time but are not ready to go ashore completely. Still, others may wish to continue working in the maritime cluster but long for new challenges. The point here is that the many and varied opportunities for development may be at least as important a selling point as pay and time off, especially given that almost none of the respondents thought it likely that they would work at sea for their entire careers.

6. Conclusions

This study has identified incentives for skills supply in socially sustainable shipping and explored how these can be put into practice. The overall objective was to recommend measures that could, in the long term, increase interest in maritime education among a wider target group and create good conditions for a sustainable working life in shipping. The research activities of the study show a high degree of consistency in the motives for applying for and completing a maritime education. For most, it is an established interest in shipping or boating or a desire for a hands-on career. For others, the decision is more serendipitous. No major differences were found between the motivations of women and men. However, women are more likely than men to complete their studies. Crucial to the decision to stay at sea is having a job with reasonable working and employment conditions and a functioning support system. It is also important to have varied work, to be able to develop and to feel professional pride. Experiencing social cohesion is an important driver for staying at sea. Conversely, social exclusion, harassment, and poor working conditions can be barriers to retention. Women are at increased risk of discrimination and unwelcome behaviour. However, it is noted that although women are considerably fewer in number, they are more likely to remain at sea.

Ensuring a sustainable skills supply requires a holistic approach that includes ways to attract and recruit new people to the industry, as well as efforts to retain and develop those already working in shipping. If the

shipping industry can retain people who are allowed to grow in their professional roles, they will act as good ambassadors and contribute to the continued recruitment of seafarers. The visibility of seafaring also needs to be increased, especially among groups that are currently in the minority in maritime programmes. A better understanding of the importance of seafaring and the breadth of possible careers will create favourable conditions for family and friends to support those who wish to go to sea. Effective and welcoming onboarding and induction of students and new recruits is essential. A welcoming induction is a strong incentive for students to complete the programme and increases the willingness to continue in their chosen career path. Conversely, poor experiences can bring a career to an abrupt end. Feeling unseen or unwelcome, harsh jargon or hostile attitudes cause some students to drop out. One of the most important components for a student to have a rewarding internship on board is supportive supervision. In addition to the pedagogical perspective, organisational conditions need to be in place that provide clarity about onboard supervision and who is expected to do what. Supervisors must be given time and recognition for this task. After leaving school, a job with reasonable conditions is a prerequisite for entering the labour market. Later in working life, adjustments may need to be made to facilitate career progression, for example through flexible working hours to allow people to start families or through targeted career development for promotion. There is no single solution that will fit all seafarers throughout their careers. Employers and the industry need to meet seafarers at different stages of their working lives to help them grow.

Shipping is a highly regulated industry, including minimum manning requirements and working hours. However, it is a matter of priorities. Employers need to look at what they can offer to make the job and the workplace more attractive and to encourage people to stay and go the extra mile. Efforts to retain loyal, highly skilled staff should be seen as an investment rather than a cost.

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Conflict of Interests

In this article, editorial decisions were undertaken by Kristina Svels (Natural Resources Institute Finland), Milena Schreiber (University of Santiago de Compostela), and Kristen Ounanian (Aalborg University).

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The Multifaceted Seafarer: An Explorative Discourse Analysis of Seafarers' Portrayals in Swedish Maritime Magazines

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Abstract

Seafaring is a highly male-dominated occupation. Within the industry, there is an ambition to increase the proportion of women working in maritime professions. In this endeavor, it is relevant to examine how seafarers are portrayed in various contexts. This study aimed to explore the image of seafarers as presented in Swedish maritime magazines: How are seafarers described, and can these descriptions be seen as performative in shaping a professional identity? To meet this aim, a discourse analysis was performed, based on 20 texts from two maritime magazines, representing both rating and officer seafarers. Overall, six subject positions inhabited by seafarers were identified, with several overlapping characteristics. For example, traits of the traditional seafarer were also found in the masculine seafarer and the flexible seafarer. Furthermore, it is argued that several of the subject positions are difficult to combine with what is referred to as the gender-equal seafarer, mainly due to challenges in balancing family life with extended periods at sea. The study shows that today's seafarers, according to how they are depicted in Swedish maritime magazines, have considerable agency in shaping their own professional identity without being forced to conform to a hegemonic masculinity. Finally, it is suggested that the term "seafarer" be used instead of "seaman" in both print and everyday conversations, for increased inclusiveness and representation.

Keywords

equality; gender; hegemonic masculinity; performativity; seafarer; seaman

1. Introduction

The global shipping industry suffers from a shortage of skilled personnel, and by 2026, there is a projected shortfall of 89,510 seafarers (International Chamber of Shipping & Baltic and International Maritime Council,

2021). Working at sea is a profession that differs from many others; the most significant difference is that the vessel functions as both a workplace and a home, where seafarers live and socialize for periods that can range from a few weeks to several months. Being away from home, far away from one's home environment, can be challenging and poses difficulties in recruiting individuals for onboard positions.

Seafaring is a highly male-dominated occupation. From a global perspective, women seafarers constitute only 1.2% of the workforce (International Chamber of Shipping & Baltic and International Maritime Council, 2021). In Sweden, the figure is significantly higher, partly due to the large number of ferries. However, it should be noted that the onboard occupational roles are segregated, with a large share of women seafarers holding positions within the service department, while relatively few are involved in vessel operations (Eldh, 2005). Since the service department is considerably larger on ferries and cruise ships compared to other commercial ships, having a high proportion of ferries increases the percentage of women seafarers in Sweden. In a time when the shipping industry is facing a shortage of skilled seafarers, the first step should be to not limit the recruitment base to just half of the population. Everyone, regardless of sex or gender, must feel welcome within the maritime industry. However, to feel welcome in a profession, individuals must be able to identify with the professional community. Equally important is that already employed maritime professionals can see themselves fit within the overall portrayal of the profession.

Creating a professional identity is a dynamic and complex process in which a person's knowledge and skills are interwoven with individual personal traits. A challenge for underrepresented groups in this process is the lack of role models with similar backgrounds. Trevino and Poitevien (2021, p. 4) state that "without the representation of others with shared personal identity features…trainees may struggle in the process as that path is less travelled." In other words, the absence of role models can make it more difficult to integrate professional identity with personal identity. Representation is also important for those who are already employed in their respective professions. Dixon et al. (2019) highlight the significance of the visible representation of individuals with similar backgrounds. In a profession with gender imbalance, role models and mentors of the underrepresented sex become crucial for career advancement. In other words, if women seafarers are to see themselves entering and advancing in the male-dominated seafaring occupation, they need to see representations of other women in various positions.

Since the present study explores portrayals of seafarers, an understanding of how meaning and representations are formed is important. Hall (2013, p. 5) argues that meaning is not something given or natural, but rather something created through communication and social interaction: "Representation is the production of the meaning of the concepts in our minds through language." People attribute meaning to various phenomena and experiences by using symbols and language which are largely arbitrary. These symbols and languages are shaped and transformed over time in an ongoing process (Hall, 2013). One way to explain how representation works is through a constructionist perspective. Central to this explanatory model is the understanding that even though we can acknowledge the existence of something, it is through everyday action that meaning is constructed. Hall (2013) uses the example of traffic lights, where the colors themselves have no inherent meaning. However, people have constructed a system in which the sequence and color of the lights have been given a meaning that regulates traffic. A similar example can be drawn from seafaring. Uniforms and epaulets signal rank among crew members. While the stripes themselves have no inherent meaning, in their social context they denote hierarchy and tell us something about onboard life.

Representation and belonging within a professional community thus become important factors in feeling welcome. Even though the International Maritime Organization has introduced gender-neutral titles, for example, seafarer instead of seaman, one of the most common Swedish terms used to describe a person working at sea is still *sjöman* (seaman), a word that carries a clear masculine connotation. In other areas of society, there is an ambition to strive for gender-neutral terminology, such as using "chair" or "chairperson" instead of "chairman" (Peck et al., 2020) or norm-critical alternatives instead of "man" (Milles, 2019). However, such efforts have not been made within the Swedish maritime industry, where the term seaman is used as a general description regardless of gender. Nevertheless, it is worth considering how this seemingly male-oriented term may affect the sense of recognition for individuals who do not identify as men, especially when the number of women and non-binary individuals in the industry is very low. There is a risk that this terminology reinforces an existing feeling of exclusion.

The purpose of this study is to explore the portrayal of seafarers as presented in two Swedish maritime magazines: *Sjöbefälen* and *Sjömannen*. More specifically, the following research questions will be examined: How are seafarers described in Swedish maritime magazines in terms of gender, stereotypical gender roles, and gender equality? How can descriptions of seafarers be understood in performatively shaping individuals' roles within a professional community?

2. Background

2.1. Masculine-Coded Occupations

Seafaring is a male-dominated profession in terms of the highly uneven gender distribution, both globally and in Sweden. However, the profession is also masculine-coded, as both work and life at sea are characterized by masculine values and norms (Kitada, 2013). The maritime industry has traditionally been characterized by strong professionalism and a hierarchical culture that values practical experience: onboard socialization through hard work, verbal and physical reprimands, and sometimes even outright bullying have been common (Kennerley, 2002). Some of the masculine-coded traits of the past are still valued today. According to Eldh (2005, p. 131), there is an informal yet clear hierarchy on passenger vessels, where men who work with the operation of the ship are seen as "the normal seamen," while men working in service roles and all women, regardless of their position, are seen as deviants. The male-dominated culture has also led to behaviors that would generally be perceived as harassment ashore being dismissed, contributing to the image of the "rough seaman" (Eldh, 2005, p. 133). However, the maritime profession is far from the only one being distinctly masculine-coded; the rescue services and forestry industries are two other examples.

The Swedish Rescue Services share many similarities with the maritime industry, especially in terms of the proportion of women. Grip (2015) conducted a large-scale survey to examine the conditions for gender equality within the fire and rescue services. Regarding professional identity, the traditional image of a firefighter creates ambivalence concerning the factors perceived as crucial for the profession. Physical capacity is often emphasized as the primary attribute of a firefighter. However, while this is an important ability, knowledge, empathy, and the ability to take initiative are generally ranked higher (Grip, 2015). Consequently, it can be concluded that the fire and rescue services can be regarded as masculine-coded, similar to the maritime industry, but that there is a discrepancy between this image and the actual qualities required. Grip (2015) also notes that when it comes to issues related to inadequate physical fitness, the

declining physical abilities of older firefighters are of greater concern, rather than the inadequacy of women. This suggests that age may need to be problematized rather than gender.

In the forestry industry, men dominate as well, with only 11.6% of the workforce consisting of women (Lidestav & Sjölander, 2007). Through discourse analysis, Lidestav and Sjölander (2007) demonstrate that the image of the ideal forest worker is a hardworking man who masters nature. This hegemonic masculinity is embodied through a male rural ideal and a strong interest in hunting and the wilderness.

2.2. Women Within a Male-Dominated Industry

Gender equality is crucial within any industry wanting to address issues of recruitment and supply of competence since companies and organizations simply cannot afford to exclude half of the potential workforce. However, research shows that being a woman in a male-dominated profession poses challenges and risks affecting one's professional identity as well as the profession's discourse.

Globally, female seafarers and maritime students often must adapt to their environment. In their minority position, they often have to sacrifice their identity and conform to prevailing male norms. Guo and Liang (2012, p. 200) express this as a process in which they "undo" their gender to gain acceptance from male colleagues. In the forestry industry, a recurring claim is that "gender does not matter." This is repeated by both men and women representatives in interviews and magazine articles and is often used to emphasize everyone's equal opportunities within the profession. Lidestav and Sjölander (2007) interpret this reluctance to address differences as a mechanism to avoid a feminist stigma. However, this principle of equality is contradicted by the fact that women foresters often gain legitimacy through a man, such as a father or husband. The following quote illustrates this ambivalence:

> [Female name] is another forestry professional whose position is considered "rather logical, in spite of gender." She has the right provenance, as her father works at the County Board of Forestry and her mother at a forest plant nursery. (Lidestav & Sjölander, 2007, p. 359)

In this case, the parents, who are already established in the industry, legitimize the woman's professional identity.

As minorities, women are often forced to shoulder a dual responsibility: They are expected to take responsibility for their situation, but also expected to pave the way for future generations of women. Striving for equal gender distribution is often desirable, but solely focusing on numbers without reflection might lead to unexpected consequences. For example, if the lack of women in rescue services is seen as a problem, focusing on women currently not working in the industry and how to encourage them might be a logical remedy. Grip et al. (2016) argue that these women, indirectly through their absence, may be blamed for the existing gender inequality. Furthermore, these women are also expected to complement the organization through their femininity. Thus, they are perceived both as the problem and the solution, and female employees in the rescue services bear a significant responsibility not only for their situation but also for the opportunities of future colleagues. This can be compared to Guo and Liang (2012) who also argue that the prospects for future female seafarers to enter maritime professions depend on how today's women succeed in changing the industry. However, to achieve this, the women need to compromise their identity to

some extent, such as adapting to the prevailing masculine work environment on board. In conclusion, it can be stated that women in male-dominated professions find themselves in a paradoxical position with high expectations:

> Women are expected to be similar, but not too similar, to men, different but not too different, and are expected to work on the same terms as men, at the same time as they are expected to add something new to the organization which men cannot contribute. (Grip et al., 2016, p. 105)

The previous quote highlights that women sometimes face unreasonable expectations in male-dominated occupations when they are expected to provide a specific female perspective while still conforming to the male norm.

As this section has shown, women face a complex set of challenges in having to conform to male norms, while simultaneously providing an added value based on their gender. At the same time, their actions today might affect future generations of women seafarers. With a large array of conflicting demands, it is relevant to study how women are portrayed in images and writing: Are similarities or differences highlighted? And what effect does this have on an individual's identity?

2.3. Inclusive Language

Even though Sweden has no formal gender-based restrictions for work life and all occupations are open to everyone regardless of gender, many occupations are gender segregated. In essence, there are factors that affect our choice of occupation. Language is a factor that can limit our options. However, language can also be used to facilitate discursive change, and within an industry with a shortage of personnel, an awareness of gendered and inclusive language could have an impact on how seafarers are portrayed. In short, using language to one's advantage could increase the available talent pool by attracting women and other minorities.

Already at a young age, children perceive what is considered masculine and feminine. Studies have shown how children's perceptions of the suitability of occupations for girls and boys reflect gender stereotypes in society. For example, Liben et al. (2002) examined how children aged 6–11 perceive job titles and whether they can be used by both men and women. The titles presented were either linguistically unmarked for gender (e.g., doctor), weakly marked (e.g., postmaster), or strongly marked (e.g., policeman/policewoman). When asked if a job title can be used by both men and women, strongly marked masculine titles received the lowest responses, indicating that children saw it as unlikely for a woman to fit into a male job title. However, a weakly marked masculine title was considered acceptable for both genders to a much greater extent. Regarding female job titles, the same difference between strongly and weakly marked titles was not observed. Overall, the results show that children are influenced by whether a job title is gender-coded, and this influence increases with age (Liben et al., 2002). This could decrease the likelihood of a girl considering a masculine-coded profession.

Milles (2019) describes how norm-critical language can be seen as a form of feminist discursive work: conscious attempts to change a discourse. This work takes place simultaneously on several levels: First, the linguistic change itself enables increased inclusiveness; second, discussions about the choice of words themselves contribute to additional change (Milles, 2019). However, language can also contribute to the

creation of a social identity, such as a feminist subject position, for example by using inclusive pronouns. This operates at both the individual and organizational levels. The use of a particular pronoun can be seen as an individual stance, but on a larger scale, an organization can position itself as progressive (Milles, 2019). An example of this could be the use of the term seafarer instead of seaman, which includes more individuals but also functions as a progressive signal. Such a stance might attract not necessarily more, but at least a different target audience.

3. Theoretical Concepts: Poststructuralism, Performativity, and Masculinity

In this section, three theoretical concepts are described which are deemed central for this study. Adopting a poststructuralist perspective becomes natural in this study due to the use of discourse analysis. Similarly, performativity plays an important role, where the discursive function of language is crucial. What is more, since the study is situated within a strongly male-dominated domain, masculinity also constitutes a key concept.

Within poststructuralism, language plays an important role in understanding the way society is socially and culturally constructed. Language functions as a "meaning-making system" and serves a performative function; our understanding of categories depends on language, and power is created through language (Scott, 1988, p. 34). Furthermore, deconstruction is useful in the analysis of language, for example by questioning normative and social understandings of concepts, text, and narratives (Leavy, 2007; Scott, 1988). Through reversal and displacement of binary oppositions, power structures can be made visible and changed (Scott, 1988). For instance, the word "seaman" could be deconstructed to reveal underlying assumptions that form the basis of the word: who has been included or excluded, and how are hierarchies and power relations formed. Furthermore, a deliberate use of the term "seafarer" could be seen as a shift in power, challenging traditional norms and creating new social and cultural constructions.

Questions of gender and sexuality are central within feminist poststructuralism. The heterosexual matrix imposes a coherence between sex, gender, and sexuality. Through heteronormativity, normative sexuality reinforces gender norms (Butler, 2006), while also prescribing a "right" way of being. Butler (2006) argues that identities and categories are not predetermined but performatively created and reproduced through repeated practices and language use. To illustrate, performativity can be applied to domestic housework as a mechanism that reproduces gender. While men as a group have increased their relative contribution to household chores, women still perform significantly more cleaning. Unlike other household tasks such as renovation or cooking, which can be seen as linear activities resulting in something concrete, cleaning is a repetitive and unproductive task that only restores something to its original state (Ambjörnsson, 2018). Cleaning thus becomes an ongoing activity, and since it is often perceived as feminine, it contributes to the performative creation of a feminine gender. As will be shown in the analysis, both women and men on board perform tasks that resemble household chores, not only those in the service department. However, there is a distinction between two sets of tasks: some are easily observable, like painting a wall, while others often go unnoticed, like cleaning common areas on board, and these tasks contribute to forming various subject positions.

Hegemonic masculinity represents the most accepted and desirable form of masculinity in society and sets the norm for male behavior. These norms are often linked to social status and power and can be used to exclude or marginalize individuals who do not meet them, such as non-heterosexual men, men with disabilities, men

from non-Western cultures, or women, and allow men as a group to maintain power over women (Connell & Messerschmidt, 2005). Furthermore, occupations are often associated with a specific gender, known as gender labeling. While caring and nurturing tasks are seen as feminine, technical and physical tasks are often seen as masculine. However, there is also a risk that women are assigned jobs that are considered easier, thus maintaining the gendered divide (Ericson, 2011). According to Ericson (2011), certain attributes, such as being technical, proactive, or worldly, are more often associated with male-dominated professions; thus, masculinity can be said to contribute to the formation of one's professional identity. In a maritime context, female seafarers are sometimes known to adjust their behavior in relation to their male colleagues (Guo & Liang, 2012). In pursuit of a professional identity, hegemonic masculinity is likely favored over other forms of masculinity.

4. Material and Method

In this section, the material is presented, along with a rationale for its suitability. The discourse analysis is then described, both the theoretical basis for the analysis and the procedure for conducting the analysis.

4.1. Material

The data consists of articles from two Swedish shipping magazines: *Sjöbefälen* and *Sjömannen*. The magazines represent union members working in different hierarchical positions on commercial vessels. In each issue of the respective magazine, there is a longer feature article that in some way describes individuals working within the maritime industry. The feature depicts daily life on board, and the reader gets to follow one or more seafarers. The article might describe a specific vessel, or a crew category, or showcase innovative or clever solutions to challenging issues. The feature articles are abundantly illustrated with color photographs. The 10 most recent features from each magazine were analyzed, which means that the material is from the period 2021–2023 and thus reflects a portrayal of contemporary seafarers. Both magazines are similar in terms of content and edition size. Even though the magazines are primarily distributed to the respective union members, they reach a broader readership as they are also distributed to union clubs as well as ships and their crews.

To explore the portrayal of seafarers, the material was deemed suitable for several reasons. First, since the magazines focus on the daily lives and experiences of individuals working in the maritime industry, the material provides rich, detailed, and diverse narratives about seafarers. Feature articles, by their nature, provide in-depth stories and detailed accounts, which are ideal for discourse analysis. Furthermore, by using recently published texts, the study is grounded in contemporary issues and trends within the maritime sector. Finally, the articles are freely available, which enabled swift data collection, as well as provides interested parties an opportunity to study the material themselves.

4.2. Discourse Analysis

A discourse analysis was used to examine the portrayal of seafarers in maritime magazines and to observe how identities are constructed, defined, negotiated, and transformed through language and discourse in society. A discourse revolves around language but beyond the mere structure of meaning (Sunderland & Litosseliti, 2002). A discourse can be seen as a coherent structure of linguistic expressions, ideas, concepts, and norms

used to create meaning, understanding, and interpretation of the world. Moreover, discourses can be viewed as both representative and constitutive, meaning that they both reveal our understanding of a phenomenon and shape it (Hall, 2013; Sunderland & Litosseliti, 2002).

By employing discourse analysis, language is understood as something that creates individual agency, which in turn makes gender multifaceted and subject to linguistic change. Portraying gender as something variable reflects a poststructuralist perspective, where both social and individual influences play a crucial role (Sunderland & Litosseliti, 2002). Thus, a central task in this study was to describe the subject positions of the discourses, i.e., the positions or roles that individuals can occupy within a discourse (Baker & Ellece, 2011; Jørgensen & Phillips, 2002). These positions are influenced or controlled by language use and other practices, creating certain expectations for individuals within the different subject positions. Similarly, exclusions are also relevant, and an awareness of what lies outside of a discourse can be as revealing as what is included. By excluding certain perspectives or aspects, one can influence how something is perceived and understood.

However, it is important to acknowledge the limitations of discourse analysis. One significant limitation is its interpretative nature, which can lead to subjective conclusions. There is also the challenge of generalizing findings across different contexts.

Initially, the selected texts were read in their entirety. Subsequently, various subject positions were identified through a close reading guided by the research questions. The questions aimed to identify the categories of people that are figured in the texts, how they are portrayed, and how the relationships between people are categorized. The identified subject positions were then compared to see if any patterns or differences relating to gender or different forms of masculinity and femininity could be identified, and whether any differences between the two magazines could be discerned. During the discourse analysis, it was crucial to regularly take a step back to ensure that the texts were interpreted within their societal context, i.e., to consider the broader social and cultural context in which the texts are produced and used. In a maritime context, this includes historical considerations, for example, how norms and values at sea have changed over time, as well as political and societal circumstances, such as the direction in which the maritime industry aims to progress.

5. Analysis

In this section, the results of the discourse analysis are presented and discussed, with illustrative descriptions and quotes from the analyzed texts. To reduce the risk of individuals being identified, pseudonyms are used and quotes have been slightly rephrased.

5.1. The Multifaceted Seafarer

Six subject positions were identified through the discourse analysis of two maritime magazines. To some degree, these subject positions overlap, hence it is difficult to state where one position ends, and another begins. It is also important to note that on an individual level, a person can embody multiple subject positions, depending on the context in which the person is situated.

5.1.1. The Traditional Seafarer

The data offers numerous examples of what can be termed as "the traditional seafarer." This is a person seeking adventure and excitement, who has turned to seafaring to "see the world." Living a traditional seafarer's life appears carefree at first glance. Here, carefree should be understood as being free of worries or responsibilities; the traditional seafarer chooses jobs that appeal at the moment and may settle down in exotic places. Being away from home for extended periods, sometimes for several months, is not a problem but rather an opportunity. One seafarer describes it: "You become like a family on board. You have like two families, two worlds." However, within this discourse, there is also a presence of the unspoken. The carefree seafarer's life also assumes a detachment from other people. Therefore, it is not uncommon for the traditional seafarer to be represented either by a younger person or by an older person reminiscing a long and varied career.

The traditional seafarer has often felt a yearning for the sea and the maritime profession from a young age. Magnus, who is a seafarer, remembers his childhood trips to the archipelago:

> Back then, I thought to myself that I wanted to work on these boats. I've always wanted to do this. I remember thinking it looked exciting, they seemed to have fun at work. Quite a few people working here today spent their childhood in the archipelago. My dad was a marine police officer, and he was at sea when he was younger, and sometimes I accompanied him to work. It probably could have influenced me.

Here, family ties and kinship are used to create legitimacy for the profession, something that can be related to the forestry industry. But, what is observed by Lidestav and Sjölander (2007) is that kinship legitimizes the individual in question, rather than the profession itself. However, that women seafarers would need to gain legitimacy through a man or a family member cannot be observed in the studied material.

Despite the seemingly carefree attitude, there are problematic aspects of traditional seafaring life in the form of initialization and bullying, similar to what is described by Kennerley (2002). Sture, who is retired but still takes jobs for enjoyment, remembers his early seafaring days as being tough. As a novice, he had to do a lot of cleaning, and the rest of the crew often teased him: "Once, they got me to hoist the gangway because the tide was coming. I didn't realize that the boat, of course, would rise with the water." The article does not indicate how Sture views the situation in hindsight, and the journalist does not address the incident critically, potentially contributing to the normalization of such behavior.

5.1.2. The Masculine Seafarer

Even though the overall safety at sea is described as high, certain tasks are portrayed as risky, something "the masculine seafarer" does not shy away from. One seafarer remarks that the ship's gym is frequently used because "to endure the work we do, one must work out." Even when the work is not dangerous, it is often heavy. The texts depict work as physically demanding and concrete, cleaning, painting, and disposing of waste ashore, and during meals, the seafarer eats "like a real man." Another seafarer testifies that he often visits a physiotherapist and sometimes is on sick leave due to numerous and heavy lifts. He bluntly states, "This isn't a job you can handle throughout a whole career." This association between physical labor and masculinity is a clear example of gendered job tasks (Ericson, 2011).

The masculine seafarer does not necessarily appear as a carrier of hegemonic masculinity (Connell & Messerschmidt, 2005), and is neither portrayed as an ideal; it rather acknowledges that some of the seafarer's tasks are physical and characterized by masculine traits. Nowhere is it implied that female seafarers are less suited for these physical tasks. Compared to the fire department where physical strength is considered one of the firefighter's primary attributes (Grip, 2015) there is no equivalent attitude within the analyzed texts. Still, it is predominantly men who are presented as masculine seafarers in the texts.

5.1.3. The Feminine Seafarer

"The feminine seafarer" has nothing to do with the sex of the seafarer; it relates to the tasks performed on board and how these tasks are talked about. Philip is a seafarer on a small vessel. Due to the small crew, he has also taken on the role of cook and messman and is the one who cleans, fixes, and takes care of things. To him this is natural: "The boat is our home half the time. Of course, it should be neat and tidy." Compared to the concrete tasks performed by the masculine seafarer, these chores can be seen as restoring or "taking care of the deteriorated" (Ambjörnsson, 2018, p. 206).

There are more examples of a caring touch, both from men and women. Both Chief Engineer Anton and Captain Kajsa take pride in their sparkling clean engine rooms. However, the way they express this differs. Kajsa takes pride in keeping an older vessel in good condition. For Anton, the main reason is that it makes it easier to detect oil leaks in a clean engine room. This latter attitude towards cleanliness borders the pragmatic attitude of the masculine seafarer, in contrast to Kajsa's nurturing approach. But even the way Anton's care for the ship is described shows elements of femininity: "He carries a cloth and polishes here and there while showing the engine room, almost a bit affectionately," writes the journalist. As noted earlier, it is possible to personify several subject positions.

5.1.4. The Gender-Equal Seafarer

"The gender-equal seafarer" stands in stark contrast to the carefree attitude of the traditional seafarer. The texts reveal that many seafarers appreciate working on vessels that allow them to be close to their families. However, this proximity is relative. In the archipelago, some return home every evening, while for others, a short work period away from their families might last for "only" two weeks. There are several examples of seafarers who have shifted from ships that undertake long journeys to shorter ones, especially after becoming parents, to take on a greater parenting role. This transition can be seen as individuals moving from one subject position to another. Despite this, it is still worth considering how gender-equal such families are. Magnus acknowledges that absolute gender equality can never be achieved with one parent working at sea:

> The worst thing about this profession is probably being away, you can't help out at home. Everything that comes with having children, you can't contribute. You would have to be at home more. But that doesn't really work, does it?

Those expressing these thoughts of inadequacy are predominantly men. The opposite can be observed in female seafarers. Johanna also wanted more time with her family but solved this by having her partner make a change instead: "I got my boyfriend ashore, who also worked at sea, so that we could spend more time

together. He likes his new job, and we've gotten more time together." When it comes to gender equality for women seafarers, there is another aspect that differs from men. Captain Linnéa wishes her partner, who works ashore, could be pregnant in her place to reduce the worries that come with working on board during pregnancy. Both examples could be seen as expressions of gender equality, where women are allowed the same professional roles as men. However, it could also be understood as a situation where a woman has embodied the image of the traditional seafarer who is able to spend time away from home. Consequently, there are two ways to interpret these couples, either as being highly gender-equal or as representations of the traditional seafarer's need for freedom and adventure.

5.1.5. The Flexible Seafarer

The material shows several examples of "the flexible seafarer." This is not necessarily a seafarer without a regular contract. Instead, the flexibility might stem from a frequent restructuring of a company, like the sale and acquisition of vessels. A seafarer working in the archipelago describes the situation as particularly challenging when employers and company procedures can change quickly, which requires adaptability. Despite this anxiety, it is comforting that the onboard operations only can be carried out in certain ways: "We have a specific task, which makes this job so good." This statement about specific tasks, for example operating a small boat on a regular route, can be seen as an expression of a traditional division of labor, where men often engage in linear tasks while women take responsibility for repetitive and restorative work (Ambjörnsson, 2018). This subject position thus borders the masculine seafarer.

But there are also examples of flexibility resulting from temporary employment, manifested as an obligation to cater to the needs of employers and colleagues. On short notice, seafarers must change their plans, quickly pack their bags, and go on board. This is problematic for those who share parental responsibilities or are single parents. Furthermore, there is a risk that flexibility, combined with part-time employment, has economic consequences. An example is seafarer Lotta, who cannot get a full-time position and therefore sometimes must find extra work ashore. Since this chiefly affects those working in service positions, it primarily affects women seafarers. In conclusion, the flexible seafarer can be seen to clash with the gender-equal seafarer.

5.1.6. The Romantic Seafarer

In one text, the term "occupational romanticism" is used to describe the sense of freedom expressed by "the romantic seafarer." It involves being one with nature, something that can be likened to wilderness life in the forest, but not with the same distinct masculinity (Lidestav & Sjölander, 2007). For Janne, it all comes down to an affection for the sea. He believes there are few other professions where you can watch the sun's path across the sky and all the changes in the weather. When asked if there is anything else he could imagine doing, his answer is no: "I've thought about what else I could do but come to the conclusion that nothing can compare to having the sea as my workplace." This subject position borders on the traditional seafarer's view of adventure and freedom.

5.1.7. Beyond the Magazines' Portrayals

As the account of the six subject positions shows, there is not one, but multiple, portrayals of seafarers in the studied magazines. If seafaring is to be viewed as either a lifestyle or a profession, the traditional seafarer can

be seen as a representation of the former, while the gender-equal seafarer represents the latter. Yet, other subject positions capture additional and sometimes overlapping characteristics of seafaring.

However, two important points must be stressed. First, the production of these portrayals is influenced by Swedish life and culture. The fact that Sweden ranks high on the gender equality index (European Institute for Gender Equality, 2024) is a reflection of Swedish society, which affects the portrayed seafarers, reporters, and researchers alike. A similar study using non-Swedish magazines would likely yield additional or contrasting results. For example, albeit not a comparable study, common representations of Filipino seafarers include heroic seafarers and seafarers as breadwinners who provide for their families (McKay, 2007; McKay & Lucero-Prisno, 2011), images that could not be found in this material. Second, since a magazine article can be regarded as a somewhat arranged picture, other types of ethnographic methods, such as interviews or onboard observations, might produce other results that depict everyday life differently. However, if the aim is to attract more women and other minorities to a male-dominated occupation, studying seafarers' portrayals in magazines is useful.

5.2. Heading Towards Equality

The gender-equal seafarer is an example of how a subject position can be negotiated in relation to a normative society. However, the analysis shows that the equality discourse is more than just words; it transforms into collective actions, for example, the union's struggle for improved economic conditions for pregnant workers and parents. Despite this, there is a clear conflict between work and family. This conflict is barely mentioned, yet it is omnipresent. The unspoken implication, however, is that combining traditional seafaring life with family life is challenging.

Salary and other financial compensations are aspects of the maritime gender equality discourse, and the absence of additional parental benefits is a matter engaging both women and men. However, different views can be sensed in terms of underlying motivation. In one of the analyzed articles, the discourse centers around salary, benefits, and pensions. Concern is expressed that such compensations are at risk during organizational restructuring, but also that the economic compensation is too low compared to the responsibilities of the profession. The unspoken implication is that the seafarer is underpaid and deserves higher wages. In the texts, it is predominantly men who express these viewpoints, which could mirror the traditional image of a male breadwinner.

Some of the women seafarers have a different view on salary and benefits. A pregnant employee with physically demanding work or exposure to other risks can be sent home with pregnancy benefits if there is no possibility of reassignment. However, this results in a significant loss of income. During her pregnancy, Linnéa found this highly stressful, even if everything worked out in the end. She gives voice to the injustice of possibly having to choose between the fetus's health and keeping her home. If she were to become pregnant again, she believes she would change jobs just to avoid this stress. Thus, salary is important for both men and women but the attitude towards other benefits, such as parental pay, varies. Therese, who is a captain on a smaller vessel, wisely notes that "the other benefits you might not think about until you need them." So, while many seafarers consider the issue of parental pay central in contract negotiations, men argue that the financial supplement is justified by their responsibility and competence, while women see it as a safeguard for their right to their bodies.

Another aspect of gender equality is sexual harassment, a discourse that does not appear much in the data but when it does, it has a clear female focus. A young woman seafarer describes problems on board a ferry. When she used to patrol the ship during nighttime, she would sometimes be followed by persistent truck drivers. When she brought this to the attention of the company, she received good support, and the solution was a changed schedule so that she now only works during the day. This solved the issue of harassment but highlights an attitude where symptoms are addressed rather than the underlying causes. In the same text, the woman notes that her male colleagues never experience the same behavior from the drivers. Here, it becomes clear that the discourse on harassment is linked to women seafarers and their obligations towards future generations of seafarers (Guo & Liang, 2012). It also affects the image of women seafarers and the space they are given in the magazines.

In conclusion, although the data show no difference in how women and men are expected to perform different tasks, there is a distinct hierarchy on board. However, this hierarchy is linked to position rather than gender. The hierarchy is subtle, but noticeable for instance when the deckhand makes coffee for the captain, or in the description of the "deckhand's *small* office adjacent to the passenger areas" (emphasis added). While the emphasis on the size of the office might not be intentional, it can influence the perception of the task and its performer. But there are also more direct signs of hierarchies, in the difference between those who work with the operation of the ship and those who work with passenger service:

> I used to work in the hotel section on board, but soon I felt that I wanted to be on deck. It feels more like real maritime life in a way. In the cleaning department, it's the same all the time, here it's more varied. I like it.

Here, a hierarchy between different tasks and professions on board is visible, where some seafarers' duties are seen as more desirable and linked to status, something resembling what has been described by Eldh (2005). This can be interpreted as the hierarchy on board being primarily linked to onboard position rather than gender. However, the absence of gender differences could also stem from the low number of women on board.

5.3. Performativity and Professional Identity

The analysis shows a wide array of subject positions that seafarers can inhabit. However, the idea that the seafarer would be a "seafaring rascal" who is allowed to behave in ways that would not be accepted ashore (Eldh, 2005, p. 133) cannot be confirmed by the material. Seafarers rather appear as helpful and cooperative, as individuals with a strong work ethic who support both colleagues and employers, even if this might negatively affect relationships ashore.

Based on previous descriptions of what can be considered male and female tasks (Ambjörnsson, 2018; Ericson, 2011), it can be concluded that the examined discourses do not dictate a strict gender marking of various tasks at sea. There are examples of women captains and seafarers who carry significant responsibilities and perform concrete and sometimes physical tasks. At the same time, there are plenty of examples of male seafarers who clean, create a homely environment, and provide services. In terms of numbers, men performing traditionally female tasks are considerably more numerous than the opposite, likely reflecting the fact that the industry is largely male-dominated. Even though individuals' sexualities are unknown, there are many examples where the alignment between sex and gender roles does not adhere to societal norms and expectations. According to

Butler (2006), the actions of these individuals could be seen as subversive and deviating from the heterosexual matrix. Maybe they could even be viewed as norm-breaking "queer seafarers."

Ambjörnsson (2018) discusses how those who deviate from norms can be perceived. As an example, she mentions how a heterosexual woman is expected to do a "moderate" amount of cleaning, while a woman in a same-sex relationship may be seen as progressive if she does not want to clean. In Ambjörnsson's case, it is the non-conforming sexuality that creates acceptance for the norm-breaking behavior. Regarding seafarers, one can argue that it is rather the non-conforming gender that legitimizes cross-gender tasks—it is simply "allowed" for men to engage in caregiving. Since seafaring historically always has been male-dominated, it is reasonable to assume that the image of what in this study is referred to as the feminine seafarer has always existed, and this position has often been held by men. Over time, this position has been maintained through repeated performative actions. Thus, men populating this subject position have been considered natural. When it comes to women choosing to work at sea, the image is not as unproblematic. Especially mothers who deviate from normative notions of motherhood challenge the heterosexual matrix. There are no indications in the material that this would be seen as deviant by the maritime industry; however, the discourse around pregnant women and mothers at sea highlights issues that male seafarers do not have to endure, such as concerns about the child's health or their own.

In the analyzed material, there also does not seem to be any desirable hegemonic masculinity that is valued higher than other forms of masculinity or femininity (Connell & Messerschmidt, 2005). If this perception was to be shared by seafarers themselves, it can be concluded that they are granted significant agency in shaping their own professional identity.

The fact that maritime magazines present a diversity of different types of seafarers is a good first step towards broadening the maritime industry's recruitment base by showcasing several distinct subject positions (Trevino & Poitevien, 2021). For those already active in the field, it is encouraging that seafarers are also visible in positions that do not adhere to traditional gender patterns (Dixon et al., 2019). But even though visible representation is positive, work is likely needed on multiple fronts to break the performative power of language, as meaning and understanding are formed through communication and interaction (Hall, 2013). At the same time, there is a gendered language within the maritime industry. Except for the use of specific occupational titles, such as *befälhavare* (captain) or *kockstuert* (chief cook), the term seaman is commonly used to describe a person working at sea. Although the term today encompasses all individuals regardless of gender, historically, seaman has almost exclusively referred to a person of male sex. The fact that the word is formed by the noun "man" makes it difficult to disregard the masculine connotation, regardless of the speaker's intention. This is problematic because Liben et al. (2002) show that a strongly gendered job title decreases the likelihood that someone of a different sex would see themselves fitting within the profession. But there is hope. According to Milles (2019), a gender-neutral and norm-critical language can serve several functions: It can be ideological, inclusive, and identity-forming. If shipping companies and magazines alike aim to reinforce their commitment to increased gender equality, inclusive language usage could be one step towards greater equality. The introduction of the term seafarer signals a modern maritime discourse with progressive and forward-thinking attitudes. It also promotes the normalization of diverse gender identities within the industry, potentially diversifying the recruitment base. Seeing and meeting a more diverse set of seafarers affects representation both on board and in maritime magazines, thus changing the discourse itself. Both Butler (2006) and Scott (1988) mention the performative

power of language and the importance of deconstruction for creating change. But before change can occur, an awareness of the problem is necessary. Therefore, it is crucial to make visible how language and representation actually appear, a goal to which this study contributes.

6. Conclusions

The purpose of this study has been to explore the image of seafarers as presented in two Swedish maritime magazines. The study has examined how seafarers are described and whether these descriptions can be seen as a performative creation of a professional identity. The rationale for conducting the study has been the maritime industry's uneven gender distribution. Both nationally and globally, there is an ambition to increase the proportion of women entering and working in the maritime profession. In this context, it is relevant to examine how the seafarer is portrayed to facilitate the creation of a professional identity.

A total of six subject positions were identified. Among the observed subject positions, several intersect with each other. This primarily involves a cluster around the traditional seafarer, where similar characteristics are found in the masculine seafarer and the flexible seafarer. However, at the same time, several of the mentioned subject positions are difficult to reconcile with the notion of the gender-equal seafarer. This is simply due to the challenge of combining a gender-equal family life with extended periods away from home.

Concerning the presented subject positions, the study reveals that today's seafarers are provided considerable freedom to shape their own professional identity. A clear hegemonic masculinity has not been observed, as both women and men are offered the opportunity to occupy various subject positions. This means that men can embody the role that, in this article, has been termed the feminine seafarer, something that has been made possible as men have occupied that role in the past. Likewise, even though mainly men seem to be representatives of the masculine seafarer, there is nothing to indicate that women seafarers are discouraged from filling that subject position as well. Equally important is that both women and men are allowed to be visible in magazines—with broad representation and gender-neutral terms for seafarers, a discursive change is possible. This, in turn, could increase the recruitment base, mitigating the shortage of skilled seafarers.

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Conflict of Interests

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