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**Expanding Frontiers -  
Challenges and Opportunities in Maritime Education and Training**

**Recruitment and Retention of Women  
in the Maritime Industry**

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**Abstract:** While women maintain a permanent presence in the maritime industry, their numbers have not paralleled the increasing proportion of women in other formerly male-dominated fields, especially medicine and law. These fields now boast even gender representation, at least on the entry levels. And although the armed services share a defining male ethos with the sailing professions, proportionately more women choose to attend military academies than enroll in Coast Guard licensing programs at maritime colleges. Through the oral testimony of mariners, including midshipmen at the U.S. Merchant Marine Academy, and the author's synthesis of conversations, this paper offers a three-pronged approach to enhancing the recruitment and retention of women in the industry. Although based on the history of the integration of women in the United States, its recommendations should have international application. The paper is premised on the belief that diversity is inherently enriching to any field, and anecdotal observations suggest that women bring value to MET institutions and shipping and maritime businesses. Recruitment and retention of more women at all levels of the industry is good business. Change will come by concerted efforts led by industry and government agencies to increase public awareness of the attractiveness of maritime professions and to reach out to young women well before college. Maritime educators today must understand the history of what best facilitated female integration into academies and remain vigilant and ready to adopt policies that further that end. Shipping companies and shoreside businesses must know the value that diversity brings to their operations and hence ensure that their culture and policies are welcoming and supportive to women.

**Keywords:** Maritime industry, training academies, diversity, women, gender demographics

"I am a free-spirited person and . . . that's why sailing is so appealing. There is nothing that can compare to a sunset out at sea, especially when you see the green flash on the horizon. . . . And the different kinds of weather and the different natural phenomena. [You go to] places that most people never get to see in their lifetimes." Midshipman Jessica Wiley, KP 2013

"As a 17 year old, recruitment based on saying you will become a professional mariner would have meant nothing. But saying that I could work and still pursue my passions, get a half a year off and make a large enough salary to

afford to do what I want – that would have gotten me in the door.” Midshipman  
Bernard Underwood, KP 2012

While some join shoreside businesses without earning professional credentials as ship’s officers, this paper focuses on bringing more women into the industry via maritime academies, engaging them as ship’s officers, and later retaining them and their expertise in shoreside businesses. It has evolved through conversations with midshipmen at the U.S. Merchant Marine Academy [USMMA] and with men and women working at sea and ashore, and although it is based on the U.S. experience, the conclusions apply equally to international MET institutions and maritime businesses. The paper is premised on the belief that it is worthwhile to enhance enrollment of women in the industry, but not because women bring fixed gender-based differences. Instead, diversity is inherently enriching to any field, and anecdotal observations suggest that this remains true for shipping and maritime business. Providing equal opportunities for men and women is certainly fair and equitable; it is also good business.

Success in recruiting and retaining more women as officers in the merchant marine continues to elude maritime educators.<sup>1</sup> Since the 1970s, when maritime colleges in the United States opened their doors to women,<sup>2</sup> the traditional shipboard hierarchy between the sexes has been jolted. But rocking the boat has not equated with transforming the profession. While women maintain a permanent presence in the maritime industry, their numbers have not paralleled the increasing proportion of women in other formerly male-dominated fields, especially medicine and the law. These fields have now closed the gender gap, at least at the entry level. (The STEM professions – the sciences, technology, engineering, and mathematics – continue to struggle with attracting and advancing women, but the proportion of women there nonetheless exceeds women’s presence in maritime jobs.) And although the armed services share a defining male ethos with the sailing professions, U.S. military academies attract proportionately more women than maritime colleges.<sup>3</sup> Eager to increase female enrollment, maritime colleges have wrestled with recruitment issues, experimenting with varied ideas for bringing in more women. Yet enrollment remains stubbornly and persistently low.

Change will come only from a unified effort that involves industry and government promotion, attention to the education of women mariners, and deliberate efforts by the shipping industry and shore-side businesses to enhance gender mix by articulating the value that diversity brings to industry performance.

## **1. Get the Word Out**

If female recruitment is to increase, the merchant marine and the reasons why a young person should aspire to become a ship’s officer must become part of national (and international) conversation. Unlike in the days of packet ships, clippers, whalers, or steamers, with the ubiquitous understanding that shipping was the lifeline of nations, and with diminished recognition of the heroic role of the merchant marine in World War II, today most citizens know little or nothing about an industry still responsible for carrying over 90 percent of world trade and maintaining the logistical pipeline in international crises. Contemporary news of piracy at sea may provide some vague public awareness of the merchant marine, but the image is not encouraging. “People don’t directly interact with the merchant marine the way they do with planes or trains, even though every day the goods they get and use . . . are delivered though the merchant marine. . . . [T]he key lies in showing how much the industry aids and affects everyone on a

daily basis – that most things they buy have been shipped – and also the second message is how useful it is during a time of war.”<sup>4</sup> Altering public perceptions is a necessary first step.

Through posters and movie trailers, the Marine Corps and the Coast Guard recruit young people by appealing to their idealism, desire to serve the country, and quest for adventure and travel. All of this can be said about the merchant marine (indeed, with a dramatically lower threshold of danger), but it is not. Jessica Wiley, a junior at the USMMA, noted that “the maritime industry might boast a bit. It’s a lucrative career.”<sup>5</sup> In general, the “romance” must be restored to the sea. As a young captain put it, we should emphasize “the responsibility and leadership aspect in much the way the Army or Navy might – profile a young officer [who] has just brought an \$800 million ship through the Singapore Straits in a way that combines ‘cool’ with leadership.”<sup>6</sup>

In the United States, the Military Sealift Command advertises, but primarily in military or maritime journals, to people who already have made professional commitments.<sup>7</sup> Outreach to women should start as early as the middle school years by identifying the maritime profession as a STEM career. Advocates for increasing the number of women in STEM areas know that the time to promote must start when young girls begin imagining independent lives for themselves and before they make decisive course commitments in high school.<sup>8</sup> Early intervention that allows young women to conceptualize themselves as ship’s officers promises more deliberate and informed decisions to attend maritime academies.<sup>9</sup>

Young people with technical bents should be exposed to these ideas:

- For Captain Ben Lyons, serving as a ship’s officer “has been an immensely satisfying career choice. . . . The appeal is based on many things: travel, of course. The job of not working in an office, sitting in front of a computer all day. The wonderful aspects of developing a ‘ship family’. . . . The pay and ability to save money quickly. The satisfaction in gaining actual talents that you can apply and use – and the challenges that you face on the job, and the satisfaction you get from accomplishing them. The job is actually doing something – you are able to sign off every four hours and say, ‘I accomplished this’ and that isn’t true in an office job. . . . You can see results.”<sup>10</sup>
- Ship’s Master Susan Orsini, an officer for 22 years, says, “if anything has influenced my career, it has been my desire to appreciate the world. Other people, other customs.”<sup>11</sup>
- For Midshipman Kristin Bell, “there is something about being in control of a 900 foot ship . . . up there driving.”<sup>12</sup>
- Third Mate Eric Mueller feels privileged: “I don’t know anyone, besides a mariner, who has gone from the Roman Coliseum to the Tokyo Imperial Palace or who has seen the sunsets and starry nights that I have witnessed.”<sup>13</sup>
- Connie Buhl, who retired after 22 years at sea, including as Chief Engineer, says that sailing was “cool . . . the best part-time job ever,” where she experienced every “food group” that engineering presents.<sup>14</sup>
- Asked about the attractions of a maritime career, Jacqueline Twomey replied, “Travel opportunities. Good pay. Not being tied to a desk. New/changing technologies. Interesting people. Making a difference in the worldwide national and regional economies.”<sup>15</sup>
- For Chief Mate Russell Horton: “I know that I could NOT do an ‘8-to-5’ desk job and keep my sanity. . . . Sailing’s appeal lies “with a 2-month-on, 2-month-off schedule. . . . Everyone . . . is ALWAYS jealous of the fact that I have two months at home to do anything I please. . . . When I was single, I played golf . . . took multiple

backpacking trips to Europe, and long trips to visit old friends. With a family, we focus on the time I'm at home: I get to be 'Mr. Mom' and be the primary care giver to my kids."<sup>16</sup>

- Chief Mate Terrie Bailey considered becoming a pilot, but "after sailing, literally all over the world, I find that is what I like. I enjoy interacting with people all over the world. I love that I have celebrated Eid with my Kuwaiti friends, that I've spent 5 and a half months living in Dubai. I've visited the Massei Tribe in Mombassa, ridden a camel down the beach along the Indian Ocean."<sup>17</sup>

Pre-college students need to know that upon becoming a ship's officer, a freshly-minted college graduate serving as a third mate or third assistant engineer moves immediately into a supervisory position. What other college graduate enjoys a 22-step commute to work (the bridge), has few papers to push, and makes decisions that are critical? To be a ship's officer, "you are it."<sup>18</sup> In contrast to an office job, sailing confers "independence" and "a sense of mastery of an ancient art. It felt rewarding to know how to navigate a massive vessel safely from one side of the world to the other."<sup>19</sup> This message, if it gets out, should resonate.

## 2. Maritime Educators

But recruitment does not ensure retention. Following the admission of women in the 1970s, U.S. academies struggled to hold female students, who, notwithstanding strong academic predictors, too often disenrolled.<sup>20</sup> Some early graduates of maritime schools likened their stays to "Lord of the Flies" experiences.<sup>21</sup> One sensed that "the school really did not want women in 1979 but they had to accept us."<sup>22</sup> Even after achieving a successful maritime career, more than thirty years after graduation a ship's officer broke down as she recalled her exclusion by classmates.<sup>23</sup>

Academies began to reverse high female attrition with the recognition that equality is not synonymous with sameness. One early 1980s graduate of the USMMA remarked that "the academy's approach to a mixed-gendered culture was to treat all students equally, without regard to gender. The difficulties arose because the fact is that men and women ARE different."<sup>24</sup> Increasingly, academies recognized that an equal education required some special programming for the female minority. With dramatically lopsided gender ratios, ensuring equality meant establishing arenas in which women might overcome their isolation and share strategies for navigating a shockingly new culture.<sup>25</sup>

Academies, including the Department of Defense schools, moved toward policies that were designed specifically to make schools more welcoming to their female minority.<sup>26</sup> At the USMMA, to stem female attrition, equalize the playing field, and neutralize the pernicious power of numbers, the administration adopted "conscious" policies that recognized that an equal education depended on acknowledging the divergent experiences of men and women. If women students were not to be silenced, if they were to be considered successfully-integrated full citizens of the student body, special programs were essential. Today, it remains pertinent for maritime educators to review these early efforts, prompted in part by studies of women's status on college campuses, to make maritime education truly coeducational.<sup>27</sup>

New USMMA academic scheduling, placing at least three women in each section, changed class dynamics and enhanced the quality of education for both men and women, as it improved female retention. Faculty and staff training increased awareness of possible inadvertent behavior that underscored women's sense of isolation and reinforced stereotypes about female capabilities.<sup>28</sup> Pairing women cadets aboard merchant vessels for their training and debriefing them

on their return improved the quality of the cadet experience by flagging hostile ships and crew members. Matching first-year female midshipmen with upper-class mentors reduced mistakes seemingly repeated by each incoming class of women and ending female exclusion from high leadership positions provided role models for underclass women.

Two other changes at the USMMA helped reverse the loss of women students. A female advisor, who coordinated a substantial program, provided women students with forums or “safe places” for discussion, individual advisement, and opportunities to hear from accomplished women in the field. These programs often came under criticism as “special privileges” and sometimes were attacked by women themselves for spotlighting them and seemingly exacerbating male animosity.<sup>29</sup> Nonetheless, surveys and correspondence reveal that this decade-long program at the USMMA enhanced women’s confidence and resulted in happier campus lives and more informed career choices. One 1989 graduate remembered a program in which a woman pilot spoke to the female midshipmen: “She was very impressive, very professional, but very down to earth. She shared with us that she was momentarily terrified during her first maneuver situation and then she remembered, ‘Rules – go right!’ It was very encouraging and I’ve never forgotten it. Many times through the years when I’ve been unsure, I’ve remembered that she also felt unsure at times and that she persevered and that has encouraged me.”<sup>30</sup> Speaking about the female advisor, another 1989 graduate wrote: “We always knew that we had at least one person at that place that cared about the women and tried to help us.”<sup>31</sup>

Second, adding more women’s team sports proved essential to the recruitment and retention of women, giving them (beyond the inherent reward of playing a cherished sport) a sanctioned space to bond, share support, and bolster confidence. Athletic teams are perhaps the only arena at academies where women can simply be themselves. As derivatives of participation in a team sport, in addition to learning team unity (critical for success aboard ship or in the military or corporate world) women on the Kings Point Varsity Basketball team described their acquisition of leadership and time management skills and the abilities to deal with stress and adversity. But mostly, they spoke about the distinct function of women’s teams in a school where men significantly outnumber women. For Rebecca, “you’re free here. You’re free to be who you want to be, how you want to be it, and you just play basketball.” Katie offered: “This sounds kind of . . . corny. But . . . we’re like a big family. And I know that whether it’s on the court or off the court, I can depend on these girls. I can go to them with anything.” Allison likened her experience on the basketball team to “a sorority at a normal college. Like a family of girls that you can rely on.”<sup>32</sup>

Even with progress, until women represent a “critical mass” (20 to 25%) in the student body, skewed gender demographics demand that maritime educators create programmatic counterweights that help to ensure equal educations for the “token” group.<sup>33</sup> While the passage of years and more human relations training has mitigated group behavior at the USMMA, separate meetings for women remain important instruments for female confidence and problem solving. What accommodations must women students make to an atmosphere dominated by men, and where do you draw boundaries? Speaking in an all-women’s group, Casey acknowledged that in “an all male environment, you just have to let [certain] things slide. You have to learn to cope . . . because you are going to sea. . . . [But] if you are not comfortable, you need to speak up and say something. They will listen.” Lauren shared that while she was a cadet on her last ship, she had a female engineer. “She would give it right back to the men. It’s really nice to see; I really enjoyed it.” What works best for a woman cadet in the ship’s engine room for the first time? Casey asserted, “you go down [to the engine room] every morning with a smile on your face. . . . And if you can prove to them that you’re trying, you’re asking questions, you’re interested, then they’re going to give you more jobs. . . . They’ll respect you.”<sup>34</sup>

And there needs to be discussion of the historical resistance to women's presence aboard ships and the difficulties that have arisen from that: "There needs to be a place to talk about things that have gone wrong for women and how they have handled them. These are difficult things to talk about, but . . . as long as we continue to gloss over them, or ignore them . . . women will be doomed to repeat the mistakes of others."<sup>35</sup>

Women's cadet experience must still be monitored; as it was forty years ago, the apprenticeship is decisive to a woman's choice of career path. "Upon graduation, I really thought about sailing. But the reality was that on the four ships I sailed on as a cadet, two were awesome experiences, and two ships were a living hell (crew morale, fear of sexual assault, etc.). I wasn't truly confident that the 50% track record was compelling enough to take my chances on a ship. What if I got another bad vessel?"<sup>36</sup> And, like on other college campuses, incidents of sexual harassment and assault must be met with strong policy that provides safety for victims.<sup>37</sup> Finally, campus culture must be tracked with climate surveys, the results of which cannot be left fallow. New policies to further women's integration must be adopted with the confidence that in reducing gender inequity, the overall educational experience of male students is enhanced.

### **3. The Shipping Industry**

For most women, the decision to become a ship's officer is connected intimately to what occurred (or did not occur) at their maritime colleges. Did women get equal opportunities to develop confidence and leadership skills? Was the cadet experience marred by hostile crews? And did women undergraduates find answers to the nagging lifestyle issues that a sea-going career poses? If more women are to choose to sail on their licenses, they need to hear from women officers. They need to know that sailing does not preclude marriage and family and that beyond blue water sailing, opportunities exist for inland sailing, in ferry and tug boat operations, and on cruise liners. Women also need assurances that five years' blue water sailing is a legitimate and productive option, providing officers with strong credentials that can be parlayed readily into graduate school admissions and shoreside employment.

What can the industry do?

"I am wondering if the shipping companies are actually interested in hiring more women."<sup>38</sup> If more women are to become ships' officers, this vexing uncertainty must be dispelled. Interviewees suggest that the industry should:

- Pay attention to quality of life issues that pose the biggest downside of sailing: separation from family and friends. Ships must be equipped with email and satellite phone service. "Nowadays technology enables vessels to have internet and other communication devices that can connect people even if they are in the middle of nowhere. [Also], since the crew is bound to be on the ship for a long time, nice warm rooms with good food makes the whole experience more attractive. It is not just a job, it is also life and that should not be forgotten."<sup>39</sup> Companies also must post and enforce policies banning discrimination and harassment and ensure that complaints are responded to promptly and without retaliation. Attention to these areas pays dividends in a happier crew.
- Take a hard look at itself: Are women officers subject to a double standard, measured by a professional model that does not apply to male colleagues? Must women

still work twice as hard to prove themselves and are they held to a level of competence that their male colleagues escape? What are the shared difficulties of shipboard life and what can be done to address the difficulties that women alone face? A three-decade ship's officer reported: "I have over 30 years of stories. Most of the stories are general, not female related. Most of the female related ones are not the good ones. It has never been a benefit to be a woman at sea. It has made the work more difficult. Every new ship is a proving group where they watch you and expect you to fail. They don't treat men that way."<sup>40</sup> Men and women ships' officers need to talk together about these perceptions.

- Sponsor conferences for men and women ships' officers to discuss the shared challenges of sailing, as well as the more intense isolation of women. Conferences build pride and foster mutual respect and collaboration. Today, with supertankers and megaships, small crews, and brief port calls, conferences help to create community among seafarers.
- Underwrite a study exploring the values that women bring to shipboard life. The desire to attract more women to the industry must be more than a numbers game, with interest rising or subsiding reflexively to fluctuations in industry demand for officers.<sup>41</sup> The industry, broadly defined, must understand and articulate the impact of enhanced diversity in its leadership corps. Anecdotal reports suggest that the presence of women officers brings greater civility to shipboard life<sup>42</sup> and establishes more cordial environments. "I have noticed that there is an increased respect for everyone on board, with less noise and fewer arguments."<sup>43</sup> One female chief mate gives birthday cards to all aboard and hangs stockings at Christmas. On a more substantive level, do women officers present styles of leadership that add profit to ships' operations? In an interview, this same chief mate recalled her success, after the "arrogant" skipper's failure, convincing a foreign port agent to send a launch so the ship could offload garbage.<sup>44</sup> Captain Orsini learned of racial conflict aboard her ship and called crew and officers together, not to lecture them, but to tell their stories. Reminders of their common humanity ended the conflict.<sup>45</sup> Chief Mate Horton spoke of a woman third with whom he had sailed for three years: "She was aware of Muslim culture and practices, so that helped us. Most of the time, half of the unlicensed crew is Muslim and the majority of the officer corps is WASP." He continued, "all other things being equal, ships having more diversity and culturally-moderate people would probably be more profitable."<sup>46</sup> Do women bring different qualities to leadership that contribute to shipboard success? Chief Mate Bailey couldn't say, because in almost two decades at sea, she hadn't sailed with another woman. She could only describe her leadership: "as 2/M I had an AB that had kidney stones. I was up with him around the clock for 500 miles, until we were able to get him off the ship and to a medical facility. He was writhing in pain, crying like a baby, and I just sat there, holding his hand."<sup>47</sup> Are these examples idiosyncratic or does diversity also improve shipboard operations? It should benefit the industry to know.
- Address the marriage and family issue head on.<sup>48</sup> One maritime couple, both ships' officers, sailed separately for three months and stayed home together with their children for six months.<sup>49</sup> Allison Buckler sailed blue water for two years until she became pregnant. As a pilot now, she finds motherhood and sailing easily compatible.<sup>50</sup> What other adaptive permutations have ship's officers made to accommodate professional and family lives? Might not sailing be a five-year option, before mar-

riage and family, “a great way to save money, learn skills, travel, get a different/broader perspective on the world, and really learn what responsibility entails and feels like, and gain practical experience in leadership”?<sup>51</sup>

- Establish a mentoring network linking women in the industry to those in maritime education and training institutions. “Especially since there are so few of us . . . and even fewer in my position,” Captain Orsini asserts, it is critical to “support, aid, mentor and share with women in the community.”<sup>52</sup> Mentors are essential agents to “pitch the idea that working on a ship is an ‘empowering place’ where you get to make decisions within the ‘enclosed society’ [in which] you live.”<sup>53</sup>
- See sailing as a part of a career path, not necessarily an end in itself. Ships’ officers present enormous professionalism, skill, and international breadth, qualities that are highly marketable. Maritime students should be exposed to the professional options; ships’ officers become pilots and shore-side marine engineers, attend graduate school, and move into the business, government, and regulatory spheres.
- Place entry into maritime businesses on a continuum that starts with work in the field – at sea. A commitment to hiring former ships’ officers would encourage all maritime professionals to initiate their careers at sea. Patty Finsterbusch’s career represents a successful example about which fledgling mariners should hear. After graduation from the USMMA, she sailed on a tanker for five years, then moved ashore to become a port engineer and currently works in the operations department for Keystone Shipping. This migration allowed her to marry and have a child and belies the notion that shipping out is antithetical to happy family life.<sup>54</sup>

### 4. Shoreside Businesses

The literature around the integration of historically male professions suggests that to achieve real diversity, the maritime industry must engage in candid self-assessment of its business climate, asking difficult questions that probe the “nuances of exclusion.”<sup>55</sup> Examining subtleties, although difficult, is essential to culture change. What is the composition of meetings? Do women speak freely without interruption? Are there role models in the company? Very often elements that are seemingly innocuous to the majority have silencing and discouraging impact on the minority. Self-evaluation also includes discussion of images. For example, do maritime journals project an inclusive industry? Do articles and photographs display women in authority? Even business outings and networking events need to be scrutinized to assure that they do not impose subtle exclusion.

What must shoreside companies do to foster greater diversity?

- Audit women’s presence within companies, including their qualifications, salary scales, and rates of advancement. The maritime industry is both insular and diffuse, small yet far-flung. Nonetheless, leadership commitment to gender inclusion can result in common effort.
- Establish company mentoring programs, aligning senior and entry-level women. Female camaraderie is critical to retention.
- Encourage and support female employees who wish to attend conferences devoted to women’s issues and networking.<sup>56</sup>
- Adopt deliberate integration policies until women achieve a critical mass. Although written of engineering firms, these words apply equally to maritime fields: “When someone asks, ‘why special programs for women?’ the answer must be that women

. . . do not need special help to be good engineers, but they do need to benefit from assistance in dealing with engineering culture.”<sup>57</sup>

- Ask difficult questions. Has industry culture shaped a gender division of labor that discourages women? To gauge women’s progress by numbers alone may obscure differences in hiring patterns that prevent women from reaching the top. Are women “ghettoized” in HR, marketing, and planning, jobs that do not generate profits and hence take women out of the competition for top positions? Are women working as port captains, area managers, terminal managers, or operations managers in meaningful numbers? “Women I’ve seen tend to dominate the ‘administrative’ support staff within shipping companies. Women tend to get pigeon-holed into a specific sector of their company . . . The woman in the highest position for my company is the Vice President of marketing. Within the operations division of the company, the woman in the highest position is the head of the ‘claims’ department and serves as the company’s ISP/ISM coordinator. She has been in the claims department for over 20 years.”<sup>58</sup> Are jobs in the non-operational areas more expendable? One woman who has worked in the business end for several decades and wished to remain anonymous described a recent reduction in force, “with about ten percent [in her company] being terminated. The interesting thing was that all but one person were women. Because women are in purely staff or administrative roles . . . they are much more vulnerable when downsizing occurs.”<sup>59</sup> A systematic study of the positions women hold must endeavor to learn if barriers – the “glass ceiling” – bar women’s full advancement.
- Change must be driven by the top. Beyond saying the right things, company leadership must make diversity happen by shaping new structures, committing resources, and requiring contractors to make the same commitments. For example, mentoring generally is not “organic” to the culture of maritime business, but it is often pivotal to the success of junior women. Mentoring programs and female affinity groups must receive the support of top company leadership. The benefits of enlightened management should not be minimized.<sup>60</sup>

## 5. Conclusion

The almost uniform maleness of the maritime industry has receded dramatically over forty years. The presence of women at maritime academies, as officers aboard ship, or in the senior levels of maritime business no longer ripples in shock waves or overt resistance. But numbers are still numbers, and extreme disproportion has impact on behavior. Dramatically imbalanced gender demographics may diminish the contributions of women to the maritime profession without policies that recognize the discrepancies caused by numbers. Recruitment and retention of women remain relevant concerns. The challenge can be met successfully through deliberate partnership among the three branches of the industry. Maritime educators and shipping and shoreside business leadership must embrace, affirm, and broadcast the value that diversity brings to the overall performance of the industry. Shipping is the quintessential global industry; its historical multiculturalism has always been a benefit. The same must be said for the value that women bring to the industry.

## Endnotes

- [1] In 1988, the IMO initiated efforts to interest more women in becoming ships' officers, by establishing a Women in Development Program to encourage MET institutions to recruit more women. In 1997, the IMO spoke of women as "under-utilized" resources. Although in 2003, an estimated 2% of international seafarers were women, it is unclear if this figure includes women crew members or only female officers. See Belcher, P, Sampson, H., Thomas, M., Veiga, J, and Zhao, M., *Women Seafarers. Global Employment Policies and Practices.* (Geneva: International Labour Office, 2003), pp. 7, 8 41. The U.S. Coast Guard does not track the number of credentialed officers by gender.
- [2] Maine Maritime Academy was the first maritime college to admit women, in 1973. In July 1974, the USMMA became the first federal service academy to enroll women. They entered the other US federal service academies, the Military Academy (West Point), Naval Academy (Annapolis), Air Force Academy, and Coast Guard Academy, in 1976.
- [3] At the USMMA, where all graduates are required to earn U.S. Coast Guard licenses, women's representation has never exceeded 15%. For past figures of female enrollment, see *Final Report by the USMMA Women Recruitment and Retention Working Group*, January 31, 2007. Currently, the other federal service academies have female populations of between 20 and 25%. And the Marine Corps, the most thoroughly male military service, boasts a female representation of 15% and is currently creating new policy that should "open the door to thousands of new jobs for women." See "Marines Moving Women Toward the Front Lines," *New York Times*, April 25, 2012. By contrast, In the 1970s women made up 1% of engineering college majors in the U.S.; in 2005, 20% of engineering majors were women. See Bystydzienski, Jill M., *Women in Academic Science. Removing Barriers: Technology, Engineering, and Mathematics* (Bloomington: Indiana University Press, 2006), p. 94.
- [4] Benjamin Lyons to Jane P. Brickman, email interview, May 12, 2012.
- [5] Jessica Wiley to Jane P. Brickman, interview, February 9, 2012.
- [6] Benjamin Lyons to Jane P. Brickman, email interview, May 12, 2012.
- [7] Captain Susan Orsini to Jane P. Brickman, interview, April 25, 2012.
- [8] See, for example, Thom, Mary, *Balancing the Equation. Where are Women and Girls in Science, Engineering, and Technology* (Washington, D.C.: National Council for Research on Women, 2001).
- [9] In a 2006 survey of the 517 women USMMA graduates, a third of the respondents said they had applied to the Academy because it was tuition free. See *Final Report by the USMMA Women Recruitment and Retention Working Group*.
- [10] Lyons to Brickman, May 12, 2012.
- [11] Susan Orsini to Jane P. Brickman, email interview, May 11, 2012.
- [12] Kristin Bell to Jane P. Brickman, interview, February 9, 2012.
- [13] Eric Mueller to Jane P. Brickman, email interview, April 11, 2012.
- [14] Connie Buhl to Jane P. Brickman, interview, April 23, 2012.
- [15] Jacqueline Twomey to Jane P. Brickman, email interview, April 26, 2012.
- [16] Russell Horton to Jane P. Brickman, email interview, April 28, 2012.
- [17] Terrie Bailey to Jane P. Brickman, email interview, July 14, 2009.
- [18] CDR Dennis Compton to Jane P. Brickman, interview, April 23, 2012.
- [19] Rick Mariner to Jane P. Brickman, email interview, May 29, 2012.
- [20] In the early years at Kings Point, women's attrition often was 40% or higher. See Jane P. Brickman, "Maritime Education and Training of Women: Their Impact on the Program at

- the United States Merchant Marine Academy,” in *Conference Proceedings*, International Maritime Lecturers’ Association, 2009.
- [21] Laura Kovary to Jane P. Brickman, May 1, 2012. Jacqueline Twomey, a 1989 USMMA graduate, now a Commander in the U.S. Coast Guard, recalled, “When I was [at Kings Point], there was a persistently vulgar term for women, ‘KP Cracks.’ I can remember walking to class past a group of other students and then someone from behind would start saying, ‘crack, crack.’ I am sure you’ve heard of KPA for Kings Point ass, to indicate that the women tended to get fat bottoms.” Twomey to Brickman, April 26, 2012. In 1988, the U.S. Maritime Administration ordered California Maritime Academy to investigate several serious allegations of harassment of women students. See *Report of Investigation into Allegations of Sexual Harassment and Discrimination at the California Maritime Academy*, June 1989. The report revealed a decade of harassment and intimidation of women students and a failure of leadership in response to complaints.
- [22] An anonymous comment by a woman graduate of the USMMA. See Alumni (2007), “Survey of USMMA Women Alumni,” developed by the USMMA Committee on Women’s Recruitment and Retention.
- [23] Mary Grimshaw to Jane P. Brickman, Interview, June 14, 2009. Another early USMMA graduate said: “The way I was treated by male classmates. It was truly brutal. They admit that now.” “Survey of USMMA Women Alumni.”
- [24] Debra Krouse to Jane P. Brickman, email interview, April 25, 2012.
- [25] These included lunch and dinner meetings, some around specific topics and others just social, and opportunities to meet with female graduates, and to attend professional conferences.
- [26] For example, the U.S. Military Academy created the Corbin Seminar – named for Margaret Corbin, a hero of the American Revolution. The seminar annually gathered cadets and midshipmen for all of the service academies to discuss issues unique to women’s experiences at academies and to promote better human relations climates on academy campuses. Following its investigation of women’s status on campus, CMA sought to recruit female professional faculty and counselors, initiated human relations training, and held separate meetings for female students to discuss their concerns with administrators.
- [27] In the 1980s, the Association of American Colleges began sponsoring studies of college campuses with an eye toward understanding gender equity. The studies revealed that even on college campuses where men and women were evenly represented, women spoke less frequently in class, received less mentoring from faculty, and assumed fewer campus leadership positions. See, for example, Hall, Roberta, “The Classroom Climate: A Chilly One for Women?” (Washington, D.C.: Association of American Colleges, 1982); Krupnick, Catherine G., “Women and Men in the Classroom: Inequality and Its Remedies,” *Teaching and Learning* (Volume I, May 1985).
- [28] Educators learned about the connection between self-esteem and learning. “Chill” involves forms of inadvertent behavior that heighten the exclusion of a minority group. In unwelcoming environments, the education of the token group suffers. Although the early USMMA graduates did not have a name to attach to their experiences, their recollections reflect a “chilled” classroom experience: “One [professor] refused to call me by my name; instead [he] called me Mr. and my last name.” Another wrote: “I felt most instructors would have celebrated my failure. I heard several times that I took a spot from a man and therefore shouldn’t have been there. It was very hostile.” Another: “The majority of my

instructors ranged from nonchalant about my progress to downright hostile and verbally abusive.” 2006 Survey of USMMA Alumna.

- [29] In professional environments that were formerly homogeneous, minority groups struggle with the “riddle of acceptance” – the balance between maintaining separate identity and fitting in to the dominant population. Statements by female graduates about the advisory program reveal this tension: “Stop focusing on ‘female midshipmen.’ It only perpetuates the myth that women have it easier than men and makes it more difficult for female midshipmen.” 2006 Survey of USMMA Alumna.
- [30] Jacqueline Twomey to Jane P. Brickman, email interview, April 27, 2012.
- [31] Nancy Regan to Jane P. Brickman, email interview, April 26, 2012.
- [32] Focus Group, USMMA Women’s Basketball Team, conducted by Professors Laura Burton and Jane P. Brickman, February 9, 2012.
- [33] Critical mass theory applies to shipboard life as well, but until more women are recruited and retained, it is unlikely to be achieved soon. Cadet Jessica Wiley noted the dramatically different dynamic when she trained on a ship with six other women aboard. Interview, February 9, 2012.
- [34] These remarks were made in a focus group of the USMMA Women’s Swim Team, April 26, 2012. The focus group discussion was led by Professors Burton and Brickman.
- [35] Laura Kovary to Jane P. Brickman, email, April 26, 2011. For example, at Kings Point, gathering women to talk allows them to sort out comments from their male peers. During the focus group, members of the women’s basketball team laughed about some of the denigrating statements of their peers, i.e., never date an academy woman. Laughing together is restorative and helps prevent damage to self-esteem.
- [36] Captain Jennifer Williams, USCG, to Jane P. Brickman, email interview, April 5, 2012.
- [37] U.S. academies are hiring SARCs – Sexual Assault Response Coordinators. A campus SARC monitors the climate, trains students on sexual assault prevention and response, and is the point of contact when a sexual assault has occurred. Policies give victims the options of “unrestricted” or “restricted” reports; the latter permits the victim to receive help even if he/she does not wish to make a public charge that would initiate an official investigation.
- [38] Krouse to Brickman, April 25, 2012.
- [39] Ana Petrovic to Jane P. Brickman, email interview, April 23, 2012.
- [40] Mary Grimshaw to Jane P. Brickman, email interview, June 9, 2009.
- [41] The International Labour Office should conduct a follow up to *Women Seafarers*, its 2001 study.
- [42] In separate interviews with Captain Peter Kahl, CDR Dennis Compton, Chief Mate Bailey, Chief Mate Horton, and Midshipman Wiley, each confirmed to the sense of “normalcy” that derives from women officers’ presence on merchant vessels.
- [43] Horton to Brickman, April 27, 2012.
- [44] Bailey to Brickman, July 14, 2009.
- [45] Susan Orsini to Jane P. Brickman, May 15, 2012.
- [46] Horton to Brickman, April 27, 2012.
- [47] Bailey to Brickman, July 14, 2009.
- [48] The findings of Michelle Thomas suggest that shipping companies’ oft-stated rationale for not hiring women – that they will leave shipping once they start families – is incomplete. Many male mariners see blue water sailing as a chapter in their maritime careers and plan to leave once they have children. Thomas, M., “Get Yourself A Proper Job ‘Girlie!’:

- Recruitment, Retention, and Women Seafarers,” *Symposium 2003*, Seafarers International Research Center, Cardiff University, 2003.
- [49] Connie Buhl shared this story of her friends’ arrangement to Brickman, April 23, 2012.
- [50] Allison Buckler to Jane P. Brickman, April 23, 2012.
- [51] Lyons to Brickman, May 12, 2012.
- [52] Orsini to Brickman, May 15, 2012.
- [53] Horton to Brickman, April 27, 2012.
- [54] Patty Finsterbusch to Jane P. Brickman, email interview, June 2, 2009.
- [55] *Balancing the Equation*, p. 11. See also Rossiter, Margaret, *Women Scientists in America: Struggles and Strategies to 1940* (Baltimore: Johns Hopkins University Press, 1982); Rosser, Sue V., *The Science Glass Ceiling. Academic Women Scientists and the Struggle to Succeed* (NY: Routledge, 2004); Brockman, Joan, *Gender in the Legal Profession. Fitting or Breaking the Mould* (Vancouver: UBC Press, 2001).
- [56] The U.S. Maritime Administration sponsors annual Women on the Water conferences. In 2011, the topics included Rules of the Road for Women at Sea, Transitioning to Being a Pilot, Transitioning to Government Service, Transitioning to Maritime Ashore. AcademyWomen, a mentoring organization for women on active-duty service (and veterans), holds an annual symposium for women in the military to share their experiences.
- [57] Burack, Cynthia and Franks, Suzanne E., “Telling Stories about Engineering: Group Dynamics and Resistance to Diversity,” in *Women in Academic Science*, p. 104.
- [58] Horton to Brickman, April 27, 2012.
- [59] Email to Jane P. Brickman, August 20, 2009.
- [60] I thank Susan Hayman for these insights. Phone interview, May 30, 2012.