Maritime and marine: synonyms, solitudes or schizophrenia?

L. P. Hildebrand · J.-U. Schröder-Hinrichs

Maritime and marine. Are they this, are they that, or are they something in between? Does it matter what we call them, or important what we mean?

Two words we use so loosely, in meaning and intent; marine implies protection, while maritime pays in rent. We find their use exchangeable, with understanding being bent.

Maritime, marine, it's not as simple as it seems. Are these terms just synonyms, or is there more there yet to glean? Shall we accept our shared ambivalence, or discover what we mean?

We come from different backgrounds, in training and degree; one thinks in two dimensions, the other thinks in three. Marine regards the ocean, its rhythm and its rhyme, while maritime conducts its business, to be there just in time.

We see the sea in maritime, its profits being prime, while marine sees wealth in nature, its existence for all time. One views the sea as partner, in the world economy; one knows the natural wonder that gives us gifts for free.

We share the cause to protect our seas and certainly not abuse, we act on insults readily, not tolerate or excuse. The worlds that work together, nature and humankind, receive the gifts presented and protect them for all time.

Who is maritime, who is marine? Can we find a common language, in this anthropocene?

L. P. Hildebrand (✉)
Marine Environmental and Ocean Management (MEOM), World Maritime University, Malmö, Sweden
e-mail: lh@wmu.se

J.-U. Schröder-Hinrichs
Maritime Safety and Environmental Administration (MSEA), World Maritime University, Malmö, Sweden
e-mail: jus@wmu.se

The World Maritime University (WMU) is an institution of higher education in Malmö, Sweden, under the auspices of the International Maritime Organization (IMO) of the United Nations. It is where faculty and researchers from both the *maritime* and *marine* worlds come together to build the capacity of key individuals from developing countries who hold or aspire to positions of responsibility and authority in the maritime sector. Our students earn a M.Sc. and/or Ph.D. in Maritime Affairs by learning about the maritime sector and its rules, and how it depends on, interacts with and impacts the marine environment.

We also come from a variety of backgrounds and disciplines, each carrying their own sets of terminology and implicit meaning. We appear comfortable in our understanding and use of various terms, without necessarily probing inherent similarities, differences or specific meanings. 'Maritime' and 'marine', we posit, are two terms in particular, that are used interchangeably and imprecisely in this field. This brief commentary is intended to shine a spotlight on these two terms and stimulate thinking about whether they are indeed synonymous, or hold separate and specific meanings. Fundamentally, does our imprecise and interchangeable use of these two terms obscure meaning, or does it more optimistically represent a mature understanding of their inherent interrelationship?

On respective backgrounds of the authors, one (Hildebrand) has training in marine biology, marine affairs and marine environmental protection and heads the university's marine environmental and ocean management specialization. Yet, he also hails from the Canadian Maritime Provinces. The other (Schröder-Hinrichs) comes with a seafarer's background and worked as a navigation officer and later on, in the shipping industry. He coordinates the Maritime Risk and System Safety Research Group and heads the maritime safety and environmental administration specialization at WMU. One of his degrees is in Marine Transport Engineering.

A non-scientific survey of our colleagues and associates would lead us to believe that 'marine' is used to describe the physical ocean realm and its living resources and that 'maritime' is used to describe ships, shipping and shipbuilding and their associated activities. Other interpretations say that 'marine' refers to the military and 'maritime' refers to civilian shipping. Still, other views hold that 'maritime' is anything or anybody connected or related to the sea, and that 'marine' is belonging to or in the sea. It seems to depend on which side of a ship's hull one finds oneself.

Dictionary definitions are of little help in this regard. In fact, they contribute to the confusion and interchangeable use of these two terms. 'Maritime' is variably defined broadly as 'of or relating to the sea', yet in other definitions, it is more specifically related to shipping, navigation, law and naval affairs. Yet 'marine' too, is defined as 'of or relating to the sea' with ties to navigation and commerce. We refer to marine animals and produce marine or navigational charts, and conduct training and higher education in both marine and maritime affairs. A WMU graduate receives a master's degree in maritime affairs, even though he or she could have been part of the marine environmental and ocean management specialization.

Even the International Maritime Organization (IMO) uses 'maritime' and 'marine' variably. Safety issues on ships are gathered under the headline maritime safety. It is the maritime administration that is responsible for the implementation and enforcement of the mandatory IMO maritime safety standards into domestic law. However, if an accident occurs, it is called a marine casualty. The main IMO instrument to deal with

maritime accident investigation is called the Code of International Standards and Recommended Practices for a Safety Investigation into a Marine Casualty or Marine Incident. The Code was adopted by the Maritime Safety Committee.

In practice, an engineer working on a ship is called a marine engineer. It is interesting to note that persons working on deck are not called maritime—they are seafarers, mariners, navigators, or simply officers and ratings. And marine insurance is offered as a safeguard to commercial aspects during maritime transport. On their days off ashore, mariners may pursue marine recreation, enjoying the sight of both marine and maritime mammals (i.e., those living in, or adjacent to and venturing into the water to feed, respectively). Ecologists, ocean scientists and managers are working to manage human activities within marine ecosystems, which do not align with legally defined maritime boundaries.

In the European context, this imprecision is reflected in various parallel policy instruments. Consider both the Marine Strategy Framework Directive (MSFD) and the Integrated Maritime Policy. The MSFD is designed to more effectively protect the marine environment across Europe. It aims to achieve good environmental status of the EU's marine waters by 2020 and to protect the resource base upon which marine-related economic and social activities depend. The MSFD establishes European Marine Regions on the basis of geographical and environmental criteria. The Integrated Maritime Policy seeks to provide a more coherent approach to maritime issues, with increased coordination between different policy areas (such as marine knowledge). It focuses on issues that do not fall under a single sector-based policy, such as 'blue growth' (economic growth based on different maritime sectors).

There appear to be regional differences in the application of terms as well. In North America, the term 'marine' seems to be applied more often for issues like transport, whereas in Europe, the term 'maritime' is more often used in this context. It is interesting to note that the European Commission recently adopted a Directive on Maritime Spatial Planning. Everywhere else in the world where spatial planning in the ocean is being undertaken, this process is referred to as Marine Spatial Planning.

Perhaps a review of official journal titles will shed some light. There are many learned journals that are distinctly titled either marine or maritime, but others that can be found on both sides of the semantic divide. On the marine side, we note for example, journals of marine biology, marine fisheries, marine biodiversity, marine ornithology, marine chemistry and marine ecology; these appear to be distinct enough. For the maritime world, there are equally distinct journals of maritime affairs, maritime economics and logistics, maritime risk, and maritime research; good so far. However, the waters become muddied again with journals found in both camps, including law (e.g. The International Journal of Marine and Coastal Law and The Maritime Lawyer), policy (e.g. Maritime Policy and Management and Marine Policy), industry (e.g. Marine Industry Profile: Germany, France, UK, USA, Global and Maritime Risk) and research (e.g. Maritime Research and Marine Environmental Research); so much for clarity from the published world.

On research, the International Council for the Exploration of the Sea (ICES) offers a helpful view on the differences between marine and maritime research. They define 'marine research' as that which addresses a branch of earth science that studies the oceans and seas, including their flora and fauna, as well as their interaction with coastal territories and with the atmosphere. It covers a wide spectrum of scientific knowledge

and phenomena, such as marine organisms, ecosystem dynamics, ocean currents, plate tectonics and geology. 'Maritime research', on the other hand, aims at technologies and innovative solutions for a better exploitation of sea and ocean resources, such as the design, building and operation of vessels, harbours, and oil platforms and more widely, any kind of human-related activity centred around sea and ocean resources.

Maritime and marine research has different drivers. The Maritime industry works to achieve sustainable and efficient operations, and to position the maritime industry to meet challenges, such as competitiveness and cost efficiency. Marine research, on the other hand, is driven by the need to understand ecosystems, how they function and how they change, and to understand the impact of human activities on ecosystems and to develop options for sustainable use. The challenge is to convene the two communities, to address issues such as the transfer of marine invasive species through maritime transport, or the impact of ships on marine mammals.

The European Commission's Horizon 2020 Framework Programme for Research and Innovation has calls for both marine research and maritime research proposals in the programme Blue Growth: Unlocking the Potential of Seas and Oceans. The Atlantic Ocean is seen here as a maritime domain with large maritime resources, even though the marine observations and marine strategies are mentioned in the same programme document. The North American perspective might be different and would have called it marine, only.

Some attempts at addressing (or avoiding) this issue can be cited. For example, there is now a Marine and Maritime Science and Technology Forum in Europe, and the University of Southampton has established a Marine and Maritime Institute.

So, it seems that the terms 'maritime' and 'marine' are indeed used synonymously in every day parlance. We may consider them as two sides of the same coin (or ship's hull) rather than specific solitudes, and our variable and interchangeable use of the two terms does seem to border on schizophrenia.

We will no doubt continue to use these two terms, still variably and interchangeably, but perhaps now, with a better understanding of how they are distinct, yet intimately related. After all, it is but one marine environment that supports a thriving maritime industry.