

**S. 9. 3. – SHAPED BY THE SEA: HISTORIES OF OCEAN SCIENCE,  
MEDICINE AND TECHNOLOGY**  
**Chair: Peter Cole**  
(Western Illinois University)

**Panel Abstract**

Historians have deeply considered the role of the oceans as conduits for global connectivity and the transfer of ideas (see Lambert, Martins & Ogborn 2006; Armitage, Bashford & Sivasundaram, 2018). Oceanic or maritime frameworks have become a popular way to consider differences and similarities which transcended national boundaries. Some historians have gone further, focusing on the role of ships themselves as ‘scientific instruments’ and ‘mobile spatialities’, in which knowledge was not just moved but also produced (Dora, 2010; Sorrenson, 1996). However, ocean histories and human geographies of the sea, have also called for us to consider the sea as more than just an empty or horizontal space which needed to be crossed (Blum 2010; Peters & Anderson 2014).

This panel considers the sea as a dynamic, material environment which fundamentally shaped embodied human experiences, scientific practice, and the production of knowledge and geopolitical imaginations. It draws together different approaches in the history of science, medicine and technology, considering conceptions of health, the development and use of experimental scientific technologies, and the relationship between modern science and diplomacy. The three individual papers span the eighteenth to the twentieth centuries, and, in turn, explore the way the physicality of the ocean environment shaped mental disorder at sea, the use of photography in scientific expeditions, and the construction of imagined geopolitical and scientific futures.

Acknowledgements: This panel builds on a workshop of the same title organised by the speakers in June 2019, held at the University of Manchester and supported by the Institute of Historical Research, the Society for the Social History of Medicine and the British Society for the History of Science.

**Keywords**

Science, Medicine, Technology, Environment, Mobility

## *Minds at Sea: climate, mobility and mental disorder in the British Royal Navy 1740-1820*

CATHERINE BECK (Institute of Historical Research, University of London)

### **Abstract**

The understanding of insanity in the British Navy and experiences of mental disorder at sea were fundamentally shaped by the ocean environment and the contingencies of sea-service. Sailors were globally mobile but paradoxically confined to the tight space of the ship and the systems of social control required to sail it. The global mobility of sea-service dislocated sailors from kinship networks ashore which sufferers relied upon for care outside the asylum, while the tight space of ship caused surgeons to remove or restrain those they considered to be insane who they feared would disrupt the ship or endanger the crew. However, naval surgeons also widely attributed derangement to factors caused by the ocean environment and ship's mobility through it, such as movement between hot and cold climates, or exposure to sunstroke, scurvy and nostalgia. Exposure to the wide variety of factors thought to disturb the body and mind created a context in which mental disturbance was an expected part of life at sea to which everyone was vulnerable. The mobility and tight space of the ship which could isolate sufferers also created close-knit shipboard communities, where messmates cared for one another especially in times of mental and emotional distress. The contingencies of sea-service which made functionality of each individual sailor a priority also moulded a culture of practical tolerance, sympathy and care towards mental disorder, difference and disability.

This paper uses surgeons' logs, courts martial and hospital records from across the global extent of the British Royal Navy to explore the complex relationship between insanity and the sea in the long eighteenth century. It investigates the way that the physical effects of the ocean environment intersected with the space of the ship, to shape experiences of mental disorder and surrounding cultures of stigma or acceptance.

### **Biography**

Dr Catherine Beck is a social historian of the maritime world in the long eighteenth-century. She completed her PhD at UCL and the National Maritime Museum in 2017, on patronage and the Royal Navy between 1775 and 1815. In her postdoctoral research she has returned to her MA background in the history of medicine. She recently finished a one-year project at the Institute of Historical Research, University of London entitled 'Disordered Minds and Nervous Bodies: Insanity in the Royal Navy 1740-1820'. Her work re-examines responses to mental disorder, difference and disability at sea and the effect of the ocean environment on experiences and conceptions of seafarer insanity.

## *Making the Ocean Visible: Photography on the Challenger Expedition 1872-1876*

ERIKA JONES (National Maritime Museum, Greenwich)

### **Abstract**

This paper explores how the ocean shaped expedition photography in the second half of the nineteenth century. In particular, the paper considers how photography was used to make the ocean visible on the Challenger Expedition (1872-1876), a collaboration between the Royal Society and the Royal Navy to study the deep sea. Along with a six-person scientific team, an official photographer travelled on board HMS Challenger. Over 800 photographic images were produced during the voyage, yet Challenger photography has been largely dismissed in the historiography as a nascent technology unsuited to ocean science. This paper offers an alternative interpretation. Tim Cresswell and Peter Merriman argued that mobile practices create ‘spatial stories’ of how we experience the world and ‘involve a range of embodied engagements and an array of technologies and infrastructures’ (2011). By exploring expedition photography as an embodied mobile practice, the paper brings greater coherence to the Challenger collection of photographs as a project of the Royal Engineers that was profoundly shaped by the sea. In the second half of the nineteenth century, photographers on military and scientific expeditions advanced techniques to photograph distant places and to quickly produce copies for distribution. Giving attention to the importance of ship-space and ocean travel to this endeavour, the paper explores how HMS Challenger was an important experiment in this regard. Not only did the ship transport photographers and their equipment around the world, but the ship also carried a mobile photography darkroom and workshop where the photographs were produced and replicated. An examination of Challenger photographs in the albums of John Hynes, Assistant Paymaster, provides evidence of how the ocean became visible through photography during the expedition, and reveals many of the local labours, environments, and people involved in a global scientific study of the sea.

### **Biography**

Dr Erika Jones is Curator of Navigation at the National Maritime Museum, Greenwich. She completed her PhD at the Department of Science and Technology Studies, University College London and the National Maritime Museum in 2019. Her thesis explored how technologies and practices on the Challenger Expedition (1872-1876) were used to make knowledge of the oceans. Her research explored the development of oceanography in the late nineteenth century by examining the mobility of scientists, ships, instruments, natural history specimens, and material images associated with the voyage. This approach to the history of science produced an alternative narrative of the Challenger Expedition and provided opportunities to cross boundaries of discipline, time and geography.

## *Ocean Futures: science, sea and the nineteen-sixties.*

SAM ROBINSON (University of Kent)

### **Abstract**

How humanity perceived the oceans fundamentally changed in the 1960s. Promoters of ocean exploitation envisaged wonders such as rare mineral extraction, and the stationing of divers in underwater habitats from which they would operate seabed machinery not connected to the turbulent surface waters, and submarine exploration of watery worlds. Their dreams coincided with others' fears that nuclear weaponry would be placed on the seabed. Less developed countries feared that they lacked the technological capability to extract minerals from the seabed and that other nations would exploit their resources. Scientific imaginaries caused uncertainty in the international community, especially in the "Global South," which led the UN to call 'Law of the Sea' conferences to mediate emerging geopolitical tensions caused by the potential exploitation of technology. These conferences became a site where lawmakers projected futures rather than responding to past or present dilemmas. Diplomats' negotiations, with their basis in anticipation of the potential future uses of science and technology, reveal the role of scientific imaginaries within complex negotiations. Here, we see the impact of the distinction (or blurring) of the real and the imagined on the balance of relations between Global North and South, most especially insofar as the Group of 77 strove in the Law of the Sea negotiations to avoid increasing global imbalances of resources and power. This paper's analysis of such scientific diplomacy provides a valuable example of the power of ocean imaginaries to have a global impact.

### **Biography**

Dr Sam Robinson is Lecturer in History of Science and Technology at the University of Kent. He completed his PhD at the University of Manchester in 2015 having previously studied at the University of Aberdeen and has held post-doctoral research fellowships at the University of York, Aberystwyth University the University of Manchester. In 2018 he published, *Ocean Science and the British Cold War State* (Palgrave), work that was based on his PhD Thesis. Sam has research interests in the history of oceanography, the Cold War, politics and science, future imaginaries, and the historical development of Science Diplomacy. He is currently working on the place/role of marine science & technology within the UNCLOS negotiations 1967-1982.