

INDIAN OCEAN DEPTHS: CABLES, CUCUMBERS, CONSORTIUMS

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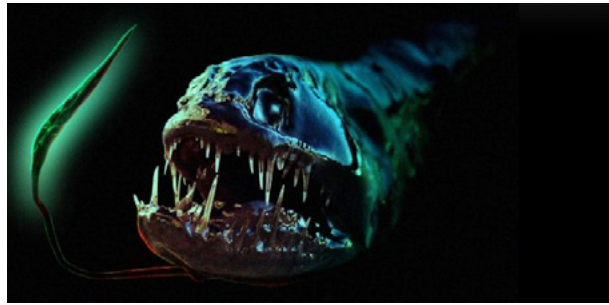
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In her essay on Indian Ocean literatures, Charne Lavery argues that fictive imaginaries reflect the persistent opacity of the ocean itself.

INTRODUCTION

This paper extends the calls by Pamila Gupta (2012), Sarah Nuttall (2009), Isabel Hofmeyr (2007) and Lindsey Bremner (2013), among others, to attempt to take seriously the liquid and geographical qualities of the Indian Ocean—qualities of the Ocean as ocean—exploring ways in which these constrain and allow forms of connectivity, meet and exceed human scales and interests, inspire and refuse imaginative engagement. It explores ways in which the deep ocean, in particular, might provide an avenue to think with the emergent, through sampling recent moments of undersea emergence, as well as its potential and imagined futures.

While the Indian Ocean has, in literary, cultural and historical studies, been conceived as an historical and social space efforts have been and are being made to think with the materialities of the monsoon, ocean currents, even, as Michael Pearson once suggested, the connecting tracks of southern bluefin tuna (2003). Alongside and developing from this work, I ask what possibilities exist for shifting our view below the much-tracked surface to explore three-dimensional oceanic space: ocean surfaces as subtended by ocean depths.



Peter Shearer, NIWA, *Black Dragonfish*.

Bathymetry is the study of underwater depth and formations on the seafloor, and is the underwater equivalent to topography. Rather than conceiving of topographies of interconnectedness, as Lindsey Bremner suggests, what the deep ocean suggests is a bathymetry of interconnectedness as well as disconnection.¹ This involves on-going (and surprisingly ineffective) efforts to map the ocean floor; the discoveries of mineral resources and thereby, accidentally, new species of sea cucumber and shark; deep sea fishing of particularly long-lived orange roughly, deepsea fish which live for over a hundred years; and the operations of submarines and divers. A bathymetric view proceeds from Bremner's folded image of the Indian Ocean, exploring however in this case the imaginative potential of the undersea cartographic imaginary.²

What this approach immediately (and perhaps constitutively) comes up against, however, is the “unassailable materiality and opacity of the ocean”. As many have pointed out, at least eighty percent of the ocean floor has not yet been mapped or seen at all; it is possible that we have a clearer cartographic view of the surface of the moon and Mars than we do of the floor of the ocean. This is partly because satellite imaging cannot easily penetrate bodies of water, so that ocean

floors are still largely mapped at any level of detail using acoustic methods such as sounding – methods still shared notably with marine mammals. Sounding proceeds at roughly the speed of a bicycle, while satellites circumnavigate the earth up to three times a day, producing the vast differences in coverage.³ These were brought tragically into the public imagination by the search for the missing Malaysian Airlines flight MH370, which disappeared in the still almost entirely unmapped Southern Indian Ocean. The geologist and oceanographer Dawn Wright, in an interview in a recent edition of *Harvard Design* on “Wet Matter”, suggests that one outcome of the disappearance of MH370 is an awareness of how little we know about oceans in general, and the Indian Ocean in particular.

As a literary scholar, I recently became interested in forms of transoceanic connection that appear more often and vividly in literary as opposed to historical accounts: networks of crime, smuggling, illegal immigration, political resistance and piracy. This social oceanic underworld is produced in literary and crime fiction in ways that highlight its opacity: kinds of activity that are intentionally hidden from the eyes of the law and consequently of history. The geologic oceanic underworld is similarly opaque and perhaps productively so, intruding into realms of scientific knowledge and exceeding human scales. The parallel that I'm beginning to explore here is of imaginaries of the invisible, ecological, energetic undersea.

At the same time, in shifting to the more literal oceanic underworld, I am following Kimberley Peters's suggestion that situating the ‘hydro world’ as central involves exploring not only its material but its affective qualities. Because points of human interaction with the deep ocean are rare and still in development—such as mining, fishing and diving—they only signal rather

than illuminate what are overwhelmingly inhuman, or posthuman, oceanic phenomena. There is, not unexpectedly, something spectral about powers and presences that exceed human time and space, a spectrality that is produced and reproduced in fictional and media accounts of Indian Ocean depths. I thus begin by exploring two emergent phenomena of the undersea, and end with suggestions of literary preemptions and possibilities.

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DEEPSEA FISHING: SIODFA THE ORANGE GOLD RUSH

The Southern Indian Ocean is relatively underexploited by the fishing industry for two main reasons: distance from the large markets of Europe, North America and the Far East; and extreme depths that require technological capacity only developed towards the end of the twentieth century.

The Southern Indian Ocean Deepsea Fishers Association was formed in 2006, bringing together the four main companies involved in exploiting these notoriously remote and difficult fisheries. They were first explored by the USSR and Ukraine, starting in 1965, but the catch remained minimal and largely undocumented. During the 1970s and 1980s, commercial fishers became aware, in Australia and New Zealand, of the close relationship between seafloor features—like sea mounts—and the presence of valuable fish stocks. Still, which seafloor features correlate with large numbers of fish is unknown. A South African vessel, returning from Tasmania

after those fisheries had been closed due to overfishing, chanced upon the Southern Indian Ocean fishery, leading to a commercial fishing gold rush. Between 1995 and 2000 the number of boats exploring that region of the ocean went from two or three to over fifty. The *Fishing News International*, in their May 2000 issue, referred to the event as the “Roughy Bonanza in Indian Ocean”—an orange roughy gold rush.

The two main points of environmental concern with this kind of fishing are reef destruction through trawl lines, and the considerable bycatch of rare species including deepsea sharks. The SIODFA website gently laments both the almost complete ignorance about these species and their unfortunate lack of charisma: “Perhaps because of their generally unappealing appearance that would make them poor candidates to feature in calls for funding or donations”.⁴ Nevertheless, between 2012 and 2014, one researcher discovered twelve new species of shark on two sixty-day trips approximately 1600km south of Mauritius, on the commercial trawler *Will Watch*.⁵

DEEP ENERGIES: THE DRAGON VENT, FISH AND SUBMARINE

A related kind of exploratory, high-risk, advanced-technology activity which involves the collateral discovery of new species, is deepsea submersible exploration, searching for gold and rare-earth minerals that are found in high concentrations around deepsea volcanic vents. The Indian Ocean was for a long time thought to contain very few volcanic vents, a belief disproved by deep ocean exploration in the last ten years.

The moment which interests me is the expedition of the Chinese deepsea submersible, named Jiaolong after a mythical dragon, and appropriately having

most recently been employed to explore what has become known as the Dragon Vent in the South-west Indian Ocean.⁶ The Jiaolong finished its 118-day journey in January 2015, and was, at the time of writing, still processing the results. The possibility of sharing the expense and potential profits of the deepsea mining project with India was proposed by He Zongyu, deputy director of the China Ocean Mineral Resource R&D Association. This was on the agenda to be discussed at the state visit of Narendra Modi to China in May 2015.⁷ The opportunity was reported in *The Times of India* as both attractive and suspicious: China is newly seeking access to the Indian Ocean through India, having stalled in its efforts to create lasting links with Sri Lanka. India itself acquired a deepsea research vessel from South Korea in 2013—called the *SamudraRatnakar*—specifically to improve its deepsea mining capabilities.

“This sense of the preternatural spectrality of the deep Indian Ocean is sustained in contemporary fiction”.

In addition to substantial polymetallic sulphide deposits, the Jiaolong discovered several new species, including the first sea cucumber to be found in the Indian Ocean—they occur in the Pacific but haven’t been discovered in the Atlantic⁸. Researchers from the UK, setting off from Cape Town, also found a new species of hairy ‘yeti crab’, more sea cucumbers, vent shrimps, scaly-foot snails and black dragonfish⁹. According to marine biologist Jon Copley, in evolutionary terms, hydrothermal vents are like the islands of the ocean floor: “Just like the 19th century naturalists used

to go to the Galápagos and other islands to find species there that are different to elsewhere and then use that to understand patterns of dispersal and evolution, we can use deep-sea vents to do the same things beneath the waves". That sense of vast undiscovered potential has motivated the petition by a group of scientists and conservationists to the International Seabed Authority to set aside areas of the deep ocean as closed to deepsea mining—before rather than after the technology is fully in place to begin.¹⁰

WHAT LIES BENEATH: MH370 AND OTHER SPECTRALITIES

The hyper-mediated response to the disappearance of Malaysian Airlines flight MH370 and subsequent search efforts is rich with ironies, as Bremner has described among others, and I would add, literary echoes. The numerous patches of debris identified by satellite imaging and flyovers—continually raising hopes of discovery and repeatedly dashing them—turned out to be “abandoned fishing equipment, the carcass of a dead whale or other pieces of marine trash”.¹¹

This reminded me, even at the time, of the haunting description, in Conrad’s *Lord Jim*, of the Indian Ocean as smooth surface, akin to the flat surface of a map or the pages of a book, an illusion that is disastrously shattered when Jim’s ship strikes an undersea obstacle in the middle of the night. The identity of the submerged obstacle is never determined in the novel—there is only this new sense of lurking, invisible dangers, beneath the apparently calm waters. It also suggests the “deep, deep sea” that provides Marlow in *Lord Jim* with a sense of the uncanny fluidity of identity in a space of otherness and to which Stein advocates

a process of continual submission. This is not the sense of the supernatural, but rather the preternatural—the oceanic presence of those things not currently explained or understood, even though not intrinsically beyond explanation.

This sense of the preternatural spectrality of the deep Indian Ocean is sustained in contemporary fiction. Michael Ondaatje’s boy narrator, in his most recent novel *The Cat’s Table*, survives a storm on a similarly Conradian journey from Sri Lanka to Aden, and finds in the aftermath a new sense of a haunting undersea.

It was only then, in that peacefulness, that I imagined the full nature of the storm. Of being roofless and floorless. What we had witnessed was only what had been above the sea. Now something shook itself free and came into my mind. It was not only the things we could see that had no safety. There was the underneath. (Ondaatje *Cat* 97)

This reference to “the underneath” is mirrored by Abdulrazak Gurnah’s descriptions of the monsters that, as the fisherman in *By the Sea* recount, are believed to haunt the Indian Ocean’s southern border.

This fictional legacy is not divorced from but is part of a wider representation of space. A *Foreign Policy* magazine article on MH370 is titled “MH370 and the Secrets of the Deep, Dark Southern Indian Ocean” with the subtitle, “The world’s most isolated ocean has a long history of making things disappear”.¹² It begins with a reference to Jules Verne’s *The Castaway of the Islands*, which sets the fictional island of New Switzerland, where the titular castaways end up, in

the middle of the Southern Indian Ocean precisely because it is the most imaginatively remote part of the world’s oceans. That lesser known novel is a sequel to Verne’s earlier *20 000 Leagues under the Sea*, a story of undersea submarine exploration that is a kind of fictional precursor to the Jiaolong expedition.¹³ And finally, drawing on a partially serendipitous link, the work of science fiction writer Arthur C. Clarke, whose non-fiction work on scuba diving links in interesting ways to his science fiction writing, and influences later Sri Lankan authors like Romesh Gunsekara, who describes snorkelling the Sri Lankan reef in his 1994 novel *Reef*.

CONCLUSION

Marie Tharp, a largely unacknowledged female geologist working at Columbia in the mid-twentieth century, produced the first panoramic map of the ocean floor, extrapolating from the minimal data produced from ship’s soundings and her geological knowledge. She created, along with Bruce Heezen, the 1977 World Ocean Floor Panorama.¹⁴ That map, while useful, is also beautiful and fanciful. The pinpoint tracks of acoustic information employed are surrounded by opaque darkness, and imaginative extrapolation is therefore a necessary part of the process of mapping. That might serve as a useful metaphor for thinking about deploying moments of contact with ocean depths as similarly suggestive but minimally illuminating, keeping always in mind the resistance of the ocean, as well as the importance of imaginative engagement. This requires embracing a ‘bifocal lens’, to use Meg Samuelson’s phrase, that gazes across the ocean’s surface while

simultaneously ‘apprehending the life—and death—beneath it’.¹⁵

This paper has attempted to sketch a set of directions and connections, and I’d like to end with a set of questions based on ideas that this has thrown up. I am interested in the imaginative links between the deep ocean and space, their technological requirements, inhuman scales, inhospitability. The overwhelming technological and financial challenges posed by deep ocean exploration and exploitation—as well as that of space—render it inaccessible to, for instance, impoverished Africa as opposed to rising India and China, although still overwhelmingly a Western enterprise. In another direction, what links might there be with Afrofuturism’s fascination with space as opposed to the ocean? What of myths of deep ocean kingdoms such as the Indian Ocean’s Lemuria? What traction does the deep ocean give us on questions of deep time, posthumanist perspectives and postcolonial ecology?

ENDNOTES

- 1 Lindsey Bremner, ‘Folded Ocean: The Spatial Transformation of the Indian Ocean World’, *Journal of the Indian Ocean Region*, 10:1, pp. 18-45 (2014).
- 2 It serves also to decontinentalize the ocean, as well as vividly to portray the ocean as “figure, rather than void” (20).
- 3 The information produced is dense but limited—“a line”—and necessitates a large amount of interpolation. Dan Vergano, “Undersea Mysteries Mapped by Satellite Gravity Sensors: Space missions reveal hidden hills and buried rifts in the ocean depths”, *National Geographic*, 2 October 2014
- 4 There are other marks of weird spectrality. One

species of deepsea shark has attracted the interest of fishermen because the same individuals of that one species are repeatedly caught. “Another shark of particular interest is the Southern sleeper shark (*Somniosus antarcticus*), not least because of the experience of repeated captures of the same individuals.” [http://www.siodfa.org/the-sio/bio-diversity/]

5 Paul Clerkin, Discovering deep-sea sharks, 18 August 2014, <http://saveourseas.com/update/discovering-deep-sea-sharks/>

6 <http://timesofindia.indiatimes.com/india/China-proposes-joint-mining-of-Indian-Ocean-with-India/articleshow/47184739.cms>

7 <http://timesofindia.indiatimes.com/india/China-proposes-joint-mining-of-Indian-Ocean-with-India/articleshow/47184739.cms>

8 <http://timesofindia.indiatimes.com/world/china/Chinas-sub-finds-mysterious-deep-sea-living-creatures-in-Indian-Ocean/articleshow/45896643.cms>

9 <http://www.theguardian.com/science/2011/dec/28/exotic-creatures-deep-sea-vent>

10 <http://www.washingtonpost.com/news/speaking-of-science/wp/2015/07/10/environmental-groups-call-for-regulation-as-world-dives-into-deep-sea-mining/>

11 (MH370: Chinese and Australian Ships Draw Blank, 2014)

12 <http://foreignpolicy.com/2014/03/27/mh370-and-the-secrets-of-the-deep-dark-southern-indian-ocean/#>

13 Interestingly, it turns out in the final novel, *The Mysterious Island*, that the famous Captain Nemo who has taken to the submarine in a kind of rejection of human society, is in fact Prince Dakkar, son of the Hindu Raja of Bundelkund, and a descendant of the Muslim Sultan Fateh Ali Tipu of the Kingdom of Mysore, famous for the Anglo-Mysore Wars. After the First Indian War of Independence of 1857, in which Dakkar

lost his family and his kingdom, he devoted himself to scientific research and developed the Nautilus, although maintaining his hatred of and resistance to British imperialism and even empire in general.

14 Hali Felt, *Soundings: The Story of the Remarkable Woman who Mapped the Ocean Floor*, 2013

15 M. Samuelson, ‘Sea Changes, Dark Tides and Littoral States’, p. 25.