



CONTEMPORARY PHILOSOPHY FOR  
MARITIME ARCHAEOLOGY

*Flat Ontologies,  
Oceanic Thought,  
and the Anthropocene*

SARA A. RICH & PETER B. CAMPBELL (EDS)



CONTEMPORARY PHILOSOPHY FOR  
**MARITIME ARCHAEOLOGY**



CONTEMPORARY PHILOSOPHY FOR  
**MARITIME ARCHAEOLOGY**

*Flat Ontologies,  
Oceanic Thought,  
and the Anthropocene*

SARA A. RICH & PETER B. CAMPBELL (EDS)

© 2023 Individual authors

Published by Sidestone Press, Leiden  
[www.sidestone.com](http://www.sidestone.com)

Imprint: Sidestone Press Academics  
This book has been peer-reviewed.  
For more information see [www.sidestone.com](http://www.sidestone.com)

Lay-out & cover design: Sidestone Press  
Photograph cover: Oil spill (photo: Yellow Boat | [stock.adobe.com](https://stock.adobe.com))

ISBN 978-94-6427-039-6 (softcover)  
ISBN 978-94-6427-040-2 (hardcover)  
ISBN 978-94-6427-041-9 (PDF e-book)



*To the water, and all things in and of it*



# Contents

|                                                                                                                                        |            |
|----------------------------------------------------------------------------------------------------------------------------------------|------------|
| <b>Acknowledgements</b>                                                                                                                | <b>9</b>   |
| <b>Prelude: A History of Maritime Archaeological Thought</b>                                                                           | <b>11</b>  |
| Peter B. Campbell                                                                                                                      |            |
| <b>1. Collapse, Cataclysm, and Eruption: Alien Archaeologies for the Anthropocene</b>                                                  | <b>35</b>  |
| Sara A. Rich and Peter B. Campbell                                                                                                     |            |
| <b>2. The Shipwreck of Theseus: Philosophy and Maritime Archaeology</b>                                                                | <b>57</b>  |
| Graham Harman                                                                                                                          |            |
| <b>3. What Washes Up on the Beach: Shipwreck, Literary Culture, and Objects of Interpretation</b>                                      | <b>75</b>  |
| Steve Mentz                                                                                                                            |            |
| <b>4. An Anthropocene Section</b>                                                                                                      | <b>87</b>  |
| Matt Edgeworth                                                                                                                         |            |
| <b>5. Maritime Christening: Anthropomorphism and the Engender(bend)ing of Metaphor</b>                                                 | <b>105</b> |
| Jeremy Killian and Sara A. Rich                                                                                                        |            |
| <b>6. Complicit Objects and New Materialist Praxis</b>                                                                                 | <b>123</b> |
| Claire S. Watson                                                                                                                       |            |
| <b>7. Assemblage Theory and the Mediative Practice of Ship Hull Reuse</b>                                                              | <b>147</b> |
| Chelsea M. Cohen                                                                                                                       |            |
| <b>8. 'The Biggest Museum Gallery in the Whole World': Virtual Excavation and the Musealization of the Seafloor</b>                    | <b>169</b> |
| Lisa Yin Han                                                                                                                           |            |
| <b>9. Naufragic Architecture in the Anthropocene</b>                                                                                   | <b>187</b> |
| Sara A. Rich, Leila Hamdan and Justyna Hampel                                                                                          |            |
| <b>10. Octopodology and Dark <i>Amphorae</i>: Alien Archaeologies, Reflexivity, and the Non-Human Afterlives of Objects in the Sea</b> | <b>205</b> |
| Peter B. Campbell                                                                                                                      |            |

|                                                                                                                     |            |
|---------------------------------------------------------------------------------------------------------------------|------------|
| <b>11. Water as a Hyperfact</b>                                                                                     | <b>231</b> |
| Johan Normark                                                                                                       |            |
| <b>12. Drift</b>                                                                                                    | <b>251</b> |
| Þóra Pétursdóttir                                                                                                   |            |
| <b>13. Contemporary Philosophies for Maritime Archaeology: A Response</b>                                           | <b>269</b> |
| Joe Flatman                                                                                                         |            |
| <b>14. OOO, Archaeology, and the Anthropocene. Comments on<br/>Maritime Archaeology and Anthropocene Philosophy</b> | <b>279</b> |
| Christopher Witmore                                                                                                 |            |
| <b>15. Compelled by Things: A Response to <i>Contemporary Philosophy<br/>for Maritime Archaeology</i></b>           | <b>309</b> |
| Matthew Harpster                                                                                                    |            |
| <b>16. Theory at Sea. Some Reflections from the Gunwale</b>                                                         | <b>317</b> |
| Björnar J. Olsen                                                                                                    |            |
| <b>Conclusion: If on a Winter's Night a Ship Wrecks</b>                                                             | <b>335</b> |
| Peter B. Campbell                                                                                                   |            |
| <b>Author Biographies</b>                                                                                           | <b>351</b> |

# Acknowledgements

The publication of this book is supported by the Honor Frost Foundation with a grant for developing the discipline. The editors thank HFF director Lucy Blue and the board of trustees, along with Nathan Richards and Filipe Castro for supporting our grant application. The editors also thank our students Elizabeth Feiss and Jennifer Terry for editorial support. We thank the reviewers of papers found here, and of course, we are most grateful to every contributor of this volume for enhancing critical thought in maritime archaeology and beyond.



# Prelude

---

## A History of Maritime Archaeological Thought

Peter B. Campbell

### Introduction

Before considering contemporary philosophy and maritime archaeology, it is worth reviewing the history of maritime archaeological thought. R. G. Collingwood, notable as the only professor of philosophy who was also a practicing archaeologist,<sup>1</sup> argued ‘no historical problem should be studied without studying... the history of historical thought about it’ (Collingwood, 1939, p. 132), which is the approach of Bruce Trigger’s *A History of Archaeological Thought* (2006, pp. 1-2). Trigger’s monumental study of archaeology’s intellectual trajectory provides a framework for understanding the broader field; however, it rarely touches on thought relating to archaeology under water, largely due to maritime archaeology being ‘theory agnostic’ according to Matthew Harpster.<sup>2</sup> Indeed, the relationship between maritime archaeology and theory, especially engagement with new philosophies, has been fraught. While archaeology and the related field of anthropology have significant cohorts of scholars who experiment and appraise new philosophical and theoretical approaches, contemporary maritime archaeology has been slow to do so. However, this was not always the case if we look at the pursuit of knowledge through underwater excavation, which has a history of over 250 projects from 1006 until the advent of modern maritime archaeology following the excavation of the Bronze Age shipwreck at Cape Gelidonya in 1960 (Campbell and Flemming, 2022). This chapter provides a short, non-comprehensive history of maritime archaeological thought which might – as Collingwood advocates – provide useful context for the rest of the volume.

For a full history of theory in archaeology see Trigger’s landmark study (2006), while Oliver Harris and Craig Cipolla’s *Archaeological Theory in the New Millennium* (2017) provides a useful overview of contemporary theory. Theory in (terrestrial) archaeology is not discussed in this chapter except when necessary for context. A longer discussion of maritime archaeology

---

1 Collingwood introduced question-based archaeology, advocating against excavation unless there is a research question guiding the work and thereby cementing the transition from Antiquarianism to archaeology as a field of study.

2 ‘Are Maritime Archaeologists Theory Atheists, Agnostics, or Adjacent?’, Nordic TAG 2022, Oslo, Norway.

theory has been prepared by Chuck Meide (2013), while Babits and van Tilburg (1998) and Staniforth and Nash (2008) provide helpful context. Readers should note that the following sections review key paradigms, but not the work of individual scholars or single publications, thus important work by Virginia Dellino-Musgrave, Helen Farr, Joe Flatman, David Gibbins, John Goggin, Toby Parker, Mark Staniforth, and others are not detailed to a great extent.

## **Christian Worldview (11<sup>th</sup> to 18<sup>th</sup> centuries)**

Archaeology as a field did not develop in earnest until the 20<sup>th</sup> century; however, the pursuit of knowledge from archaeology under water begins much earlier. These were intellectual pursuits distinguishable from salvage for profit. These early excavations used material culture to address questions about the past, the Earth, and oneself or one's culture. Therefore, the intellectual trajectory of maritime archaeology begins with Abbot Ealdred of St. Albans, who in 1006 led the earliest known shipwreck excavation in Europe (Ellmers 1973). The Abbot and his successor Eadmer received permission to excavate the Roman ruins of Verulamium along the River Ver until Viking raids ended work in the region, a health and safety hazard that fortunately no longer affects projects.

The monastic records state, '[T]he diggers... found close to the river bank oak timbers with nails sticking inside and smeared with naval pitch (things which used to be used in ships). They also discovered some naval tackle, namely half-rusted anchors and pine oars, a definite and obvious sign of sea water which once upon a time bore the ship to Verulamium' (Preest and Clark, 2019). An 11<sup>th</sup> century shipwreck discovery is interesting, but the account is better understood in the context of place-making and conferring historical legitimacy (Harris, 2017, pp. 45, 54). The full account mixes pagan storytelling (i.e. discovery of a dragon den in the Roman ruins), historical and Christian legitimacy (i.e. discovery of a book of Saint Alban's life), and practical enforcement of the abbots' powers (i.e. destruction of Verulamium's remains that were being used by squatters, prostitutes, and criminals). The shipwreck is one piece of a narrative meant to provide legitimacy to the abbot and the cathedral at St. Albans. Specifically, the shipwreck denotes changes to the Earth and in Christian worldview the sea is an entity that struggles against God (e.g., Genesis, Noah's flood, and Exodus), a struggle that only comes to a close with the final utopia in *Revelations* (Connerly, 2006, p. 499). The final utopia is described as, 'And I saw a new heaven and a new earth: for the first heaven and the first earth were passed away; and there was no more sea' (*Rev* 21:1 KJV).

The reason for discussing this odd case is not only that it is the oldest known account, but the fact that there are many similar accounts in subsequent centuries. The discovery of shipwrecks became a theme that supported the Christian worldview of the Biblical Flood, an event that defined scholarship for centuries. Many scholars sought evidence of the antediluvian, or pre-Flood, era, including early geologists and archaeologists. For example, ships interpreted in this way were found in Bristol in 1480 (Neale, 2000, p. 237), Berne in 1483 (Hooke, 1705, p. 439), and Lima in 1635 (Nieremberg, 1635, pp. 72-74).

The lesson of theory in this period is twofold; first, scholars interpret archaeological materials based on their worldview. Today we understand that these interpretations can look odd if one does not use a research design that mitigates one's cultural blindspots. Second, Christian and colonial theories have not entirely left us, as antiquated as the antediluvian theory may seem to us. In another theory from the period, while Spain

was undertaking the colonial conquest of the Americas the Jesuit priest Jose de Acosta proposed the peopling of the Americas from Asia via a land bridge (de Acosta, [1590] 2002).

Notably, this section is Eurocentric but Medieval sources using underwater archaeological material from elsewhere are currently unknown. A survey of Arabic and Persian sources, for example, provide few mentions of submerged archaeological sites in texts by geographers such as Nâsir-i-Khusrau (1047), Muhammad al-Idrisi (1154), Ibn Khaldûn (1377), Ibn Jubayr (1145-1214) and Abû Abdallâh Ibn Battûta (1325-1354). However, given the many Arab and Persian texts on the natural sciences and geology, there are likely discussions of the processes submerging archaeological sites prior to the 20<sup>th</sup> century.

## Renaissance and Engineering (15<sup>th</sup> to 16<sup>th</sup> centuries)

The Renaissance brought about new ideas, but many were rooted in the past. The period was also firmly entrenched in a Christian worldview, in particular the idea that all knowledge was revealed at the moment of creation and subsequently dispersed or lost. It is this concept that led Renaissance scholars to look to the past, searching both for texts and excavating archaeological sites to ‘recover’ lost knowledge and technologies. While the reader may be familiar with later Enlightenment approaches to scientific thought and the *discovery* of knowledge, Renaissance thinkers sought to *recover* knowledge.

When Petrarch, writing in the 14<sup>th</sup> century, described the period before his lifetime as a ‘Dark Age’, he bookended these ‘Middle Ages’<sup>3</sup> with the grandeur of Rome and a rebirth of Classical knowledge, or Renaissance (Mommsen, 1942; McLaughlin, 1988). Within the conception of these time periods is the ‘loss’ (during the Dark or Middle Ages) of Classical knowledge and the ‘recovery’ of it in the Renaissance. By the time of the first intellectual maritime archaeological endeavour in Lake Nemi, the individual who conceived of the project, Leon Battista Alberti, saw the work as part of this recovery of lost knowledge.

A new field developed during the Renaissance, one initially frowned upon by the establishment: engineering. The burgeoning engineers, often regarded as polymaths who undertook painting, sculpture, mathematics, and architecture, also practiced archaeology to inform these different disciplines. It is through texts such as Vitruvius and archaeological excavations of Roman ruins that they sought to rediscover knowledge that had been lost. Archaeological excavation on land was widespread, but Leon Battista Alberti began the discourse on maritime archaeology and published the first treatise on ancient ship construction (McManamon, 2016).

Alberti was hired to raise the Roman ships that were sunk in Lake Nemi outside Rome, but his interest in the project focused on ancient methods of ship construction in order to build better vessels in his own day. Alberti’s book *Navis* on ship construction, which he references in *Architettura* (Alberti, [1452] 1988), was either never published or is now lost. There is evidence that Leonardo da Vinci may have read it (Alberti, 1988, p. 384 n.44), so it may have only been available in Florence. The brief sections on ship construction that survive in *Architettura* demonstrate Alberti’s grasp of Roman shipbuilding techniques and thought them an improvement over contemporary approaches. ‘Recently, during the

---

3 The term ‘Middle Ages’ was created in the 15<sup>th</sup> century by Flavio Biondo who is regarded as the ‘Father of Archaeology’.

preparation of this book, fragments of one of Trajan's ships were raised from the bottom of Lake Nemi, where they had lain submerged for more than 1,300 years: I noticed that the pine and cypress had lasted extremely well. The paneling had been covered on the outside with a double layer of fabric, consisting of linen soaked in black pitch, itself protected by sheets of lead fastened together with copper nails. In building a ship, the ancients would use the lineaments of a fish; so that its back became the hull, its head the prow; the rudder would serve as its tail, the oars as its gills and fins' (Alberti, 1988, pp. 136-137).<sup>4</sup> While still entrenched within the Christian worldview and the underlying assumption about knowledge, Alberti and his contemporaries differ from Ealdred in an important way. Ealdred sought to explain the world in terms of the Bible, evidenced by archaeological remains. It is a form of 'Ruling Theory' where the evidence is made to fit a conclusion (Rodgers et al., 2005). Alberti was guided by the Christian worldview to look to the past, but sought to understand the objects he found without predetermined conclusions.

### **Antiquarianism and Geology (16<sup>th</sup> to 19<sup>th</sup> centuries)**

Alberti and his contemporaries turned questions about the past on its head, and were only a step away from interrogating artifacts on their own terms, rather than as proof of Christian narratives. That shift came with Francis Bacon (1561-1626), who 'sought to persuade scholars to cease relying on revealed or authoritative knowledge to understand the world and instead to employ observation, classification, comparison, and where possible experimentation to achieve this goal. In this way, scientific knowledge was made the ever-developing product of communities of researchers' (Zimmerman, 2001, p. 117). Scholars such as Helisäus Rößlin, John Leland, Nicolaes Witsen and Robert Hooke studied ritual deposits in springs, shipwrecks, and sunken cities to address questions about past cultures, ship construction, and Earth's forces.

Antiquarians grew out of the Renaissance discoveries, their name belying an interest in the past. The London Society of Antiquaries was founded in 1572 with many members owning copies of Leland's prized notebooks, which formed a core of their knowledge, though the Society was later disbanded by suspicious monarchs (Trigger, 2006, p. 84). The antiquarians collected descriptions of architecture, ruins, and inscriptions, often in the form of itineraries, though later published as papers in proceedings or as books that are quite similar to academic publications today (e.g., Hooke, 1705; Leland, [1543]1768). A second Society of Antiquaries of London was founded in 1707 and continues to this day.

Antiquarians contended with the past without much of the basic information that we benefit from today. They lacked dating methods and were burdened with the Christian worldview, so they divided the past into antediluvian and postdiluvian periods since the Biblical flood was their primary point of reference in the past. Their work is primarily descriptive and typically linked to historical texts to provide context. This is not to say that their research was insignificant; Hooke's research of Earth movements, for example, drew on a wide range of maritime archaeological observations (among

---

4 John McManamon's book on the Lake Nemi ships as the origins of nautical archaeology is an essential read for those interested in this subject (McManamon, 2016).

other types including paleontology and geology) from Europe to South America to arrive at important conclusions about the planet's dynamism (Hooke, 1705).

During this period, military officers frequently applied their Classical education while on missions. Royal Navy and French military expeditions to Egypt and Greece revealed significant information about archaeological sites, while also resulting in the looting (most common) or purchase (less common) of statues, architectural elements, and portable cultural property (Jomard, 1822; Beechey and Beechey, 1828; Puillon de Boblaye, 1836; Smyth, 1854). Underwater mapping and site descriptions by navy specialists during this period are particularly useful for today's maritime archaeologists. However, these military accounts underscore how Antiquarianism could be an extension of the colonial project, exploiting indigenous communities for prestige at home.

Antiquarian interest in Earth movements catalyzed in the first half of the 19<sup>th</sup> century with the work of Charles Lyell. The antiquity of the Earth was best determined through change and Lyell drew upon natural and archaeological evidence to create a new field: geology. *Principles of Geology* gave birth to the field and its frontispiece is the Roman ruins of the Macellum of Pozzuoli where Lyell gained significant insight into natural forces (Lyell, 1830). The Macellum has undergone periods of submergence and re-emergence due to the bradyseism, which Lyell was able to determine through the endolithic marine borers that had damaged the marble columns when submerged. A separation between geology and archaeology was not distinguished at this time and Lyell clearly had an appreciation for archaeology's ability to inform about Earth process. He wrote, 'It is probable that a greater number of monuments of the skill and industry of man will, in the course of ages, be collected together in the bed of the ocean than will exist at any one time on the surface of the continents' (Lyell, 1830, p. 150). Lyell's subsequent book, *Geological Evidences of the Antiquity of Man*, dealt directly with what we would today term archaeology (Lyell, 1863). It is notable that maritime archaeology served as foundational elements of both engineering in the 15<sup>th</sup> century and geology in the 19<sup>th</sup> century, demonstrating the theoretical potential of submerged cultural heritage for addressing 'big' questions.

## Culture-Historical and Historical Particularism

Between the foundation of geology and the foundation of maritime archaeology in 1960, there are several hundred projects underwater. These including archaeologists who donned diving gear to survey or excavate underwater, including Heinrich Ulrichs (1843), Odo Blundell (1908), Byron Kuhn de Prorok (1924), and Konstantin Grinevich (*Revue Archéologique*, 1931).<sup>5</sup> Archaeologists in this period did not use philosophy to make sense of material culture, being part of what is termed culture-historical archaeology which sought the origins and migrations of cultures (Trigger, 2006, p. 303). The archaeologists were specialists of specific time periods or regions, or were art historians: Classical Greece

---

5 This is also true for projects where the leading archaeologist did not dive, but nevertheless provided either exceptional discoveries or publications: the Antikythera shipwreck (Svoronos, 1902), Naples' submerged ruins (Günther, 1903), the Mahdia shipwreck (Merlin, 1908), the submerged ruins of Alexandria (Malaval and Jondet, 1912), the Lake Nemi shipwrecks (Ucelli, 1950), *Elefanta* (Ekman, 1942), submerged ruins of Sidon and Tyre (Poidebard, 1939; Poidebard and Lauffray, 1951), Fos-sur-Mer Roman villa (Beaucaire, 1964), the Albenga shipwreck (Lamboglia and Pederzini, 1965), and the Grand Congloué shipwreck (Benoît, 1961).

in the case of Ulrichs, Scottish crannogs for Blundell, Carthaginian and Roman North Africa for Prorok, and Classical Period Crimea for Grinevich.

A change began with the incorporation of explicit theory when archaeologists interacted with anthropologists, especially Franz Boas, Alfred Radcliffe-Brown, and Bronisław Malinowski (Trigger, 2006, p. 365). They were practicing what Boas articulated as seeking to understand the culture of specific populations of people (1920), which Marvin Harris termed 'historical particularism' (1968). This approach would become dominant among maritime archaeologists in the 1950-70s.

The 1950-60s saw a significant increase in interest among, on one hand, ship and boat specialists and on the other hand underwater archaeologists. The joining of these two intellectual trajectories provides the key paradigm in nautical archaeology that the field uses to this day. Norwegian Olaf Hasslöf arrived at a key insight during his research into traditional boatbuilding, observing that certain vessels had a shell-based structural system while others were frame-based (Hasslöf, 1958, 1963, 1972). Hasslöf focused on Nordic traditions, but his observation was picked up by other scholars including Basil Greenhill who was working on a broad history of watercraft. Greenhill supplemented Hasslöf's findings by noting that these approaches also differed in assembly sequence; shell-based vessels were built shell-first (1976). It was Lionel Casson who had been keeping abreast of the underwater excavations in France, Italy, and Greece (Casson, 1953) that transferred the concept to ancient Mediterranean ship construction (1963). Lucien Basch further developed the paradigm by identifying 'active' and 'passive' frames (1972). Contributions were provided by pioneers such as Richard Steffy (2006), Patrice Pomey (1988), and Sean McGrail (1997), among others. The dichotomy of shell and frame sat uncomfortably with some scholars who noted outliers, especially in Northern Europe, which led Beat Arnold to propose a third shipbuilding approach in 1988 called 'bottom-based construction' (Hocker, 2004, p. 7). These scholars are historical particularists, using description, historical texts, and ethnography to understand specific contexts. Their contributions are significant and have endured, despite the pushback that historical particularism received with the introduction of the idea that 'archaeology is anthropology or it is nothing' (Willey and Phillips, 1958, p. 2).

Historical particularism received a poor reputation in archaeology, perhaps unfairly, following the anthropological turn of New Archaeology, or Processualism. Historical particularism focuses on situating artifacts within a certain culture, which readers will be familiar with from a wide range of studies even today. In maritime archaeology, George Bass is the most prominent proponent (1966). He published 'A Plea for Historical Particularism in Nautical Archaeology' in the Processual Archaeology focused volume *Shipwreck Anthropology* (Bass, 1983). The field did not heed it.

The primary criticism of maritime archaeology in the 1980s and 1990s by (terrestrial) archaeology was that maritime archaeologists only produced descriptive accounts or documentary records, i.e. historical particularism (Veth, 2008, pp. 13-14). Archaeology was undergoing a change, 'break[ing] out of its famous place and famous person styles of research and its historical particularism to seek broader humanistic and scientific goals' (Adams, 1993, p. 23). The theoretical changes occurred in terrestrial archaeology first, which is the root of the criticism that maritime archaeology is theory-less. The cause, and continuation, was maritime archaeologists' slow adoption of Processual Archaeology in the 1960-80s and subsequently Post-Processual Archaeology in the 1980-90s.

## New Archaeology and Processualism

The creation of New Archaeology followed publications by Gordon Willey and Philip Phillips (1958) and Joseph Caldwell (1959) and it centered anthropology within archaeological inquiry (Binford, 1972, pp. 2-13; Trigger, 2006, pp. 294-300). It was a revolution in theory, but one that followed revolutions in scientific methods such as radiocarbon dating, which opened up new possibilities for understanding chronologies. The joining of anthropology and scientific methods led advocates to apply a hypothetico-deductive model to archaeological research, which stood at odds with previous approaches.

If there are two ‘theory’ books that every introductory course in underwater archaeology teaches, then they are *Maritime Archaeology* (Muckelroy, 1978) and *Shipwreck Anthropology* (Gould, 1983b), both volumes that introduced Processualism to the field. The first was written by Keith Muckelroy and the book served as an organizing manifesto for the burgeoning field. He notes that ‘as things stand in the late 1970s, [there is a] remarkable lack of development or systematisation, when compared with most other archaeological sub-disciplines. This arises directly from the fact that it is a relatively new study, and is only now reaching the position where the data-base is sufficiently extensive to allow some tentative steps in defining the discipline’, deficiencies which he classifies as ‘academic immaturity’ (Muckelroy, 1978, p. 10). He applies Processual Archaeology to maritime data, such as his models of site formation processes and archaeological knowledge formation (Muckelroy, 1978, pp. 158, 249). It is Muckelroy who coined the term ‘maritime archaeology’ (Muckelroy, 1978, p. 9), which has been used throughout this chapter, moving beyond the particularism of nautical archaeology toward the interconnected qualities of maritime communities. Were it not for a tragic diving accident which took his life in 1980, maritime archaeological theory may have made further strides under his intellectual guidance.

*Shipwreck Anthropology* followed several years later, the proceedings of a conference organized by Richard Gould. Anthropology had been critical for maritime archaeology as a sub-field and, as argued by Richard Gould, among others, it was the best lens through which to understand past cultures (Gould, 1983a). Gould gathered key maritime archaeologists including Bass, Daniel Lenihan, Larry Murphy, and Wilburn ‘Sonny’ Cockrell, but also luminaries in Processualism from other corners of archaeology including Patty Jo Watson and Cheryl Claassen from cave archaeology, Mark Leone of Critical Theory, and prehistoric archaeologists Peter Schmidt, Stephen Mrozowski, and E. Gary Stickel. Muckelroy was due to attend, but his accident occurred shortly beforehand. Despite Bass’ plea for historical particularism, the volume is a call to action for theory in maritime archaeology and forays into different applications of Processual Archaeology.

## Post-Processualism

Post-Processualism arrived in reaction to Processualism’s positivist model, arguing it lacked explanatory ability for critical aspects of culture including the intangible, symbolism, and emic, or internal, community perspectives (Hodder, 1985). As Alice Kehoe writes, ‘Obsolete paradigms entail inadequate explanations and cause us to dismiss, or actually fail to see, valuable data’ (Kehoe, 1990, p. 29), so the movement toward Post-Processualism was necessitated by the research questions that Processualism could not address. This shift toward intangible aspects of culture, a human focus instead of material or social structures, met with derision among Processualists who saw the new approach as lacking

substance or reality. Binford wrote that archaeology had moved from ‘science to séance’ (1989), and significant tension between the theoretical camps existed for two decades.

The first application of post-processualism to maritime archaeology was a session titled ‘Stretching the envelope in theory and method’ hosted by Suzanne Spencer-Wood at the 1990 Society for Historical Archaeology conference (Spencer-Wood, 1990b). Besides Spencer-Wood, speakers included Gould, Kehoe, Parker Potter, Sheli Smith, Monica Hunter, and Charles Orser, and the papers were published in the conference proceedings. The contributions are important forays into Post-Processualism, such as Spencer-Wood’s ‘Beyond Reification’ which warns of the subjectivity of interpretation. ‘We need to counteract the natural psychological tendency towards reifying widely accepted assumptions, frameworks, and answers. Interpreting data in ways that confirm accepted models is often an unconsciously circular process that forms an intellectually limiting self-referential system... Continual questioning of accepted assumptions and models is needed to develop new insights about the past’ (Spencer-Wood, 1990a, p. 30). This approach underlines the contributions of Post-Processualism in its reflexive notion about the archaeologist as observer and theory-builder. The biases inherent in worldview and theoretical frameworks have to be kept in check, though are never completely eradicated. Spencer-Wood provides five recommendations for archaeological research to avoid reification: 1. Reveal political implications of models and paradigms, 2. Tolerate dissonance, 3. Value questions, 4. Tolerate ambiguity, and 5. Emphasize and publish unexplained data and unanswered questions (Spencer-Wood, 1990a, p. 32). The qualitative nature of these recommendations reflects Post-Processualism’s push beyond the certainty of Processualism, and are common to best practice today.

Post-Processualism was not met with widespread enthusiasm initially. ‘Few maritime archaeologists will be converted to Post-Processualism. Whereas traditional archaeology eschewed explicit theory, and New Archaeology provided the basis for field strategies, the latest vogue almost denies the “reality” of data’ (Gibbins, 1992, p. 83). Gibbins could not have been more wrong for Post-Processualism arrived with a ‘comet’ in the very same issue of the *International Journal of Nautical Archaeology (IJNA)* that his words were published in.

## Maritime Cultural Landscapes

In *IJNA*’s first issue of 1992, the journal began with an article by Christer Westerdahl titled ‘The maritime cultural landscape’ (1992). If Hasslöf’s shell-based and frame-based observations set in motion maritime archaeology’s first great paradigm, then Westerdahl ignited the second. Flatman explained the impact, writing, ‘Westerdahl’s comet-like 1992 article...was one of those paradigm-shift documents that all academic disciplines occasionally produce, initiating a rethinking of every angle of archaeology, at once a looking-back at the old and a looking-forward at possible new agendas’ (Flatman, 2011, p. 311). Until Westerdahl’s article, maritime archaeology’s theoretical approaches lacked explanatory ability for the social aspects of maritime communities and sites, which was precisely what Post-Processualism was developed to address.

Westerdahl developed the paradigm during his field research in Sweden from 1972-82 (2011, p. 291). He drew on Orvar Löfgren’s concept of cognitive landscapes, which refers to ‘the mapping and imprinting of the functional aspects of the surroundings in the human mind. Man in landscape, landscape in man’ (Löfgren, 1981; Westerdahl, 1995, p. 5).

Landscape theory applied phenomenology which was a key part of Post-Processualism, especially the work of Michael Shanks (1992), Timothy Ingold (1993), and Christopher Tilley (1994). In these approaches the landscape is mediated through the human mind, rather than existing independently of the human mind.

Maritime cultural landscapes applies this theory to the sea and it has been widely adopted by the field. According to Westerdahl, the maritime archaeological landscape 'comprises the whole network of sailing routes, old as well as new, with ports and harbors along the coast, and its related constructions and remains of human activity, underwater as well as terrestrial' (Westerdahl, 1992, p. 6). While situated within landscape theory, Westerdahl provides his own approach, noting that while maritime landscapes are comparable to terrestrial landscapes they are not simply extensions of them. This model is broad in scope, but widely applicable which is why the approach has found such traction with maritime archaeologists. As the paradigm developed, it was simplified to be the 'sea, the foreshore and the coastal margin' (Parker, 2001, p. 22) and 'encompassing the entire coastline, from the land, across the intertidal zone and onto the seabed' (O'Sullivan and Breen, 2007, p. 240). It expanded a field focused primarily on technical details of shipwrecks and period-focused material cultural studies to include – or at least articulate and provide a framework for integrating – maritime anthropology and ethnography. Maritime ethnography has been a significant component of the field since the Antiquarians, but maritime cultural landscapes allowed for the integration in a theoretically consistent manner. This is in contrast to Muckelroy, for example, who could not integrate ethnography into Processualism, seeing the result as being inevitably 'both bad ethnology and bad archaeology' (1978, p. 7). Post-Processualism therefore opened new avenues for research. 'Indeed [the maritime cultural landscape] is generally seen as the way forward for maritime archaeology – moving from the study of nautical archaeology (e.g., ships and boats) to landscapes and seascape' (O'Sullivan & Breen, 2007, p. 240).

Maritime cultural landscapes are not without criticism. The framework has grown so broad in definition that anything can fit under the banner. It has been argued that the concept maintains an artificial gap between land and sea (Tuddenham, 2010, p. 9). The approach arguably does not address the agency of the sea, an issue with all cognitive landscape models, and scholars have sought to integrate it with contemporary theories, such as Van de Noort's 'hybrid landscapes' (2011, p. 44). Similarly, the author has argued that the idealist philosophy that underpins cognitive landscapes lacks explanatory ability for non-human agency, such as the sea, and therefore realist philosophies provide a path beyond cultural landscapes (Campbell, 2020).

## **Feminist and Queer Theory**

Feminist theory has catalyzed change in interpretation since Laura Mulvey introduced the concept of the male gaze (1975). It exposed the fallacy of the impartial observer, demonstrating the biases within male-dominated theory and methods. In archaeology, studies have shown that male interpretations of Palaeolithic female figurines identified them as reified fertility goddess, while feminist theorists note that the figurines depict elder women past child-bearing age and have a perspective that suggests they are self-portraits (McCoid and McDermott, 1996; McDermott, 1996). Feminist theory contributed

to a reflexive turn in archaeology about who is doing the interpreting and what possible biases their worldview and experiences insert into the interpretations (Wylie, 1997).

In maritime archaeology, the adoption of Feminist theory was led by Sheli Smith and Suzanne Spencer-Wood (Smith, 1990; Spencer-Wood, 1990a). Smith raises similar concerns to McCoid and McDermott about the gendering of material culture through interpretation, writing, 'Thus the occurrence of artifacts generally referred to as domestic wares aboard ships neither confirms nor denies women's presence at sea... It is therefore important that archaeologists with knowledge of historical documentation of seafaring women study the archaeological remains without attachment of gender and look beyond the projected expectations and convention, in order to find the variance' (Smith, 1990, p. 40). Feminist theory continues with Jesse Ransley's publications critiquing the male-dominated nature of maritime archaeology (Ransley, 2007, 2008, 2010). She finds the male gaze within the field's theory and methods, such as the emphasis on 'objectifying, measuring and surveying' (Ransley, 2010, p. 626).

In 'Boats are for boys: Queering maritime archaeology', Ransley draws on Feminist theory but also applies Queer theory, providing an important critique of the field. She quotes Thomas Dowson, who states that 'Queer is by definition whatever is at odds with the normal, the legitimate, the dominant', while Queer theory 'actively and explicitly challenges the heteronormativity' (Dowson, 2000, p. 163; Ransley, 2010, p. 628). Ransley writes, 'If "queering" is questioning the dominant narrative, then the narrative of maritime archaeology, drawing on Western, modern constructions of gender, as well as the gendering of maritime activity as male, is ripe for queering... The dominant narrative that prescribes the business of boats and the sea as male... is evident in the development of our discipline, in our techniques, in our dominant theoretical frameworks and our prevailing interpretative narratives' (2010, p. 622). If each theory discussed in this chapter has provided different explanatory ability from those that came before, then Queer theory certainly provides new perspective on material culture as well as a reflexive perspective on the field. Ransley notes that the heteronormative approaches that dominate the field continue to fail certain questions about culture. 'Epistemological privilege in maritime archaeology remains rooted in an extremely conservative discourse that focuses on construction and function; it is about the physical not the social' (Ransley, 2010, p. 626).

Spencer-Wood, Smith, and Ransley perhaps speak more to researchers today than when they were published, as they have helped to shape a more diverse and inclusive archaeology. Their insights offer better explanatory ability for certain cultures and contexts than heteronormative male-dominated perspectives. Arguably, the seafaring culture of Bronze Age Minoans cannot be understood from the normative perspective (Graeber and Wengrow, 2021, p.435). The same is true for the next paradigm, which has likewise received muted response despite its prescience.

## Postcolonial Nautical Archaeology

Postcolonial studies developed following Edward Said's landmark book *Orientalism* (1978). As a field studying maritime connectivity, including vessels used by colonial powers to transport the enslaved, one would imagine that postcolonial theory would feature prominently in maritime archaeology. Fred McGhee's 1997 article 'Toward a Postcolonial Nautical Archaeology' is a call to action for adopting postcolonial theory. He writes,

‘Nautical archaeology has not sufficiently problematised the concept of empire; it has not critically engaged European colonialism, its own colonial legacy, nor situated itself, in terms of power, in relation to the human subjects it studies’ (McGhee, 1997, p. 1). In this way article is reflexive, not only addressing the colonial nature of the material culture, but the field itself. This is because the two are interconnected: the research questions being asked preferred European ships of discovery over ships transporting the enslaved, and in the process obscures the difficult histories of genocide, enslavement, and inequality, as McGhee outlines. In postcolonial maritime archaeology these ships are cultural and political entities, and it is not possible to view them as technologies divorced from these activities (McGhee, 1997, p. 1; see also Watson, this volume). Eurocentric maritime archaeological research abdicates both scholarly and moral duties.

McGhee’s approach also identified the technological fetishism that has typified archaeology under water in the post-World War II period, a subject addressed in subsequent chapters (Han, this volume; Rich et al., this volume). He correctly posits that the focus on technology has come at the expense of theory. Citing George Bass, McGhee notes the emphasis on underwater technology rather than underwater archaeology: ‘This pervasive influence has left a huge theoretical gap within the field and has led to the privileging of technological and methodological hodgepodgery at the expense of substantive cultural, political, and historical analysis’ (McGhee, 1997, p. 1). Indeed, McGhee’s criticism of the lack of theory was widely held by terrestrial colleagues, but he identifies the Faustian bargain made to fund the field’s early forays.

McGhee was an early advocate for postcolonial archaeology with the advent in wider archaeology coming in the 2000s (Harris and Cipolla, 2017, p. 176). Unfortunately, maritime archaeology has engaged only on a limited basis with McGhee’s call to action (Flatman, 2003; Meide, 2013; but see Rich et al., 2022)

## **Behavioural Archaeology**

If the 1990s saw maritime archaeological theory return to Scandinavia, then the theoretical center shifted to Australia in the early 2000s (Veth, 2008). Critical publications include rethinking site formation processes (Ward, Larcombe and Veth, 1999), the interdisciplinary research of SS *Xantho* (Veth and McCarthy, 1999; McCarthy, 2001), Mark Staniforth’s application of the Annales school to maritime archaeology (2003), and a coalescing of an Australian approach outlined in an edited volume (Staniforth and Nash, 2008).

One theoretical approach that emerged was Nathan Richard’s study of ship graveyards in Australia (2008), and later North America. Ship graveyards are a complex site type, as they can be studied for the individual construction of the vessels, the socio-economic trends of the assemblage, or how it is situated within the maritime cultural landscape. However, Richards recognized that this did not exhaust the potential of these sites, especially the social activities related to their formation. Richards applied behavioural archaeology to the sites, drawing on William Rathje’s studies of contemporary garbage deposits (Rathje and Murphy, 2001). Richards identified specific behaviours universal to vessel abandonment (2008), providing a framework for understanding social behaviours within maritime communities.

## Cultural Evolution

Evolution in culture has been debated since Charles Darwin's *The Descent of Man* discussed societies (1871). Various iterations in terrestrial archaeology of Darwinian, techno-evolution, or cultural evolution have been attempted. Memetics, 'memes' being the mental version of genes, and cultural 'viruses' have been proposed as mechanisms for change in culture (Dawkins, 1976; Dunnell, 1995; Cullen, 2000), while phenotypes, genetic drift, and survival of the fittest have been adopted as components of this analogy (O'Brien and Shennan, 2010). Maritime archaeology has applied evolution to watercraft, though not engaging with these broader archaeological publications. David Conlin argues that 'It is almost impossible to open a book on ship design or ship construction without confronting the assumption that ships evolve in a progressive manner, one design building and improving upon those which preceded' (Conlin, 1998, p. 3). Daniel Zwick attempted to restart engagement with cultural evolution a decade later (2013). It is worth noting that many authors employ the term 'evolution' as shorthand to denote change, for example Lucien Basch (Basch, 1972, p. 9), though not meaning an evolutionary mechanism.

However, cultural evolution has been largely discredited. Even proponents acknowledge the lack of a mechanism for evolution in culture, writing, 'Whereas the modern synthesis of evolutionary theory has provided an encompassing scientific framework for the selection and transmission of biological adaptations, a convincing theory of cultural evolution has yet to emerge... applying evolutionary theory to culture remains little more than a suggestive trope' (McGraw et al., 2014, p. 1). While the analogy may appear to make sense superficially, as in Conlin's description, evolution does not describe the observable reality and lacks explanatory ability for questions about the past. In maritime archaeology specifically, Jon Adams and Johan Rönby have reviewed the evolutionary analogy and come to the conclusion that it does not provide an explanation for social change (2013, pp. 5-6). Colin Palmer sees the complexity of technological change as frustrating to Western reductionist thinking, whose followers try to understand why change occurs by turning to biological analogies (2000, p. 83). Evolution as a literary analogy for change is found throughout maritime archaeological publications; however, evolution as a mechanism that drives cultural change has met with broad dismissal (McGrail, 1998; Palmer, 2000; Adams, 2003, 2013; Whitewright, 2008; Blue and Palmer, 2010).

## Actor-Network Theory

Actor-Network Theory (ANT) was developed by Bruno Latour (1987, 2005) and Michael Callon (1986), among others. The theory proposes that materially heterogeneous elements form actor-networks, or webs. ANT focuses on how associations are made or transformed (Dolwick, 2009, p. 36). The network seeks to dismiss the dualisms that frequent philosophy since Kant and Descartes, especially the privileging of the human mind. Applications of ANT in maritime archaeology have been led by Jim Dolwick (2008, 2009) and David Berg Tuddenham (2010, 2012a, 2012b). Dolwick uses ANT to review applications of social theory in maritime archaeology. Tuddenham uses ANT to re-examine maritime cultural landscapes and address the artificial gap between land and sea that the paradigm inadvertently maintains. He proposes a new term, 'maritimity', which he defines 'as the process of purification that takes place in the network, in

between the poles of Land and Sea. In this sense, maritimity is equivalent to the modern metaphysic as described by Bruno Latour (1993), with the same actants and process at work' (Tuddenham, 2010, p. 8). Engagement with ANT has been limited as other theories have built upon it, such as meshworks and entanglements (Ingold 2008; Hodder 2012). Contemporary philosophy likewise draws on Latour, so ANT has significantly influenced the development of new approaches.

## **Eclecticism and Pragmatism**

This section differs from the others, as it is out of chronological sequence. It examines what some might term the 'reality' of maritime archaeological theory. Archaeology, it has been argued, requires a broad intellectual toolkit to interpret the past. Matthew Johnson and Adam Smith argue that archaeology is an 'undiscipline' since it draws heavily on theories developed in other fields (Johnson, 2006; Smith, 2006). This could be described as a mixed bag approach, or criticized as cherry-picking. As discussed above, Processualism struggles to address emic perspectives, while Post-Processualism is anti-positivist (Johnson, 2010, pp. 83, 119). A mixed approach draws on aspects of different theories but anchors them in a specific site. Jon Adams refers to this as 'eclecticism', while Trigger refers to it as 'theoretical convergence' and 'pragmatism' (Trigger, 2006, p. 497; Adams, 2013, p. 44). They are referring to the adoption of aspects of several theoretical approaches to address the questions that arise at an archaeological site rather than subscribing to a single 'Grand Theory' (Adams, 2013, p. 45).

Examples in maritime archaeology include Adams' influential model of ship construction, which explores the interrelated constraints on watercraft that affect their design. He argues that environment, materials, ideology, technology, tradition, economics, and purpose are all factors that constrain ship design, but that 'infinite fluidity' passes between the factors (Adams, 2013, p. 23). Robert Van de Noort uses a hybrid approach of maritime cultural landscapes with contemporary philosophy to understand the interconnectivities between landscape, technology, and culture (2004), then developed it further to address non-human agency (2011, pp. 27-30). A pragmatic approach can be useful, as you might wish to understand the technical capabilities of a sailing vessel (Processualism), but also understand how the social hierarchy on board manifested in the vessel's spaces and the patterning of material culture (Post-Processualism). The key to not cherry-picking from different theories – thereby accidentally incorporating poor interpretive aspects of certain approaches – is to have a carefully thought out research design that addresses the parameters of each question you are seeking to answer.

## **Contemporary Philosophy**

Speculative Realism (SR) and Object-Oriented Ontology (OOO) are related philosophies that have been developed since 2007 by Levi Bryant (2011, 2014), Graham Harman (2016, 2018a, 2018b), Quentin Meillassoux (see English translations in Harman, 2015), and Timothy Morton (2007, 2013, 2016, 2019), among others. SR and OOO de-anthropocentrize existence and examine the agency of objects, which has led to new perspectives on the role of objects beyond human perception. Note that 'object' is a philosophical term, but archaeologists may prefer the synonymous term 'entity' since 'object' has specific meaning in the field.

SR and OOO are characterized by a shift from idealism to realism, since they do not privilege the subject (e.g., person, mind) over the object (e.g., artifact, landscape, the sea, ship, shipworm, etc.), and are therefore known as ‘flat ontologies’ (Harman, 2018a, p. 54). This ‘speculative turn’ challenges the subject-object correlationism of Kantian philosophy or Cartesian dualisms (e.g., human/nature, mental/physical, mind/body, etc.) by arguing that objects exist independent of the subject (Harman, 2018a). Ian Bogost neatly summed this up by stating, ‘all things equally exist, yet they do not exist equally’ (Bogost, 2012, p. 11). Harman explains that while previous theories ‘have asserted that reality is something ‘constructed’ by language, power or human cultural practices [i.e. *idealist*], OOO is a bluntly *realist* philosophy’ (Harman, 2018, p. 10). Contemporary philosophy is particularly well-suited for archaeology since the field is object-based. The central argument of OOO is that objects exist and possess agency, independent of the human mind mediating them, and we (or other objects) only interact with a portion of an object: their sensual properties. The real object is ‘withdrawn’ from our perception, in the manner of Heidegger (Harman, 2018, p. 22), and we perceive only the sensual properties when the object comes in contact with others. For example, we do not see the wind, but we perceive its interaction with trees or our skin (Morton, 2013, p. 86). The wind drives ships through their sails, but that interaction does not exhaust the wind; there is more to the wind than it pushing ships, carrying seeds, or passing over the hairs on our skin. The real object of the wind is withdrawn and humans, seeds, ships, bees, and other entities experience it differently, each perception of which is a fraction of the whole. The real objects are irreducible (Harman, 2018, p. 30) and their interactions with other objects – not only their interactions with humans – leads to ‘the infinite being of things’ (Morton, 2013, p. 22). This is important for maritime archaeology since sailing is a tension between the sea and atmosphere, two entities of enormous scale, while shipwrecks undergo site formation processes which are a series of object interactions.

Given the recent creation of SR and OOO during this period of global warming, aspects of contemporary philosophy were created to address issues impacting our planet (Morton, 2013). It might be argued that OOO is the first Anthropocene philosophy, which ideally situates it to address contemporary concerns. Trigger writes that ‘A history of archaeological thought requires knowledge not only of the social settings in which archaeological research is carried out but also of the ongoing development of archaeology as a practice’ (Trigger, 2006, p. 25). Today’s philosophy, along with archaeology’s engagement with it, contends with an Anthropocene world by exposing the past/present dichotomy to be an artificial distinction as archaeological sites around the world face threats due to climate change.

Archaeology has been engaging with contemporary philosophy through New Materialism and Symmetrical Archaeology, and these scholars have in turn made substantial contributions to contemporary philosophy. The work of Bjørnar Olsen (Olsen, 2010; Olsen et al., 2012), Christopher Witmore (Witmore, 2007, 2019; Olsen and Witmore, 2015), and Þóra Pétursdóttir (2017; Pétursdóttir and Olsen, 2018) are foundational to archaeology’s engagement with contemporary philosophy, especially through dialogue with philosophers Graham Harman, Levi Bryant, and Timothy Morton. Matt Edgeworth has likewise applied SR and OOO for many years and, critically, is the archaeologist on the International Commission on Stratigraphy’s Anthropocene Working Group (Edgeworth, 2016; Waters et al., 2016). This volume is fortunate to have contributions from these scholars.

Maritime archaeological application of these approaches has been limited, but this volume seeks to increase engagement. Sara Rich uses OOO in her study of cedar trees in the environment, ship construction, and metaphor (Rich, 2017). In *Shipwreck Hauntography*, she reflects on maritime archaeology and its colonial legacies, and the savior-scholar that has permeated the field (Rich, 2021). Chelsea Cohen applies New Materialism and OOO to vessel abandonment and the non-human afterlives of the structures (Cohen, this volume). The author has used OOO to challenge the idealist foundations of cognitive landscape theory, specifically maritime cultural landscapes, in order to understand the agency of the objects involved in seafaring (Campbell, 2020). In particular, this work shifts to a conception of the sea as a *hyperobject*, an entity of vast geographical and temporal scale (Morton, 2013). In another article the author argues that archaeology is undergoing a change in the Anthropocene as the role of artifacts recedes and ecofacts, hyperfacts, and archaeo-energy come to the foreground, drawing on several maritime examples (Campbell, 2021). There are several archaeologists who use maritime case studies (Edgeworth, 2011; Normark, 2014), and philosophers who use maritime archaeology (Bogost, 2012; Harman, 2016; Mentz, 2020), but it is hoped that within the field engagement continues to grow.

## Discussion: Why Theory?

In reviewing the trajectory of maritime archaeological theory certain trends emerge. Each theoretical approach has aspects of the past that it reveals, but also limitations. For this reason different theoretical perspectives advance distinct interpretations. This is the worrisome thing about the general lack of explicit theory in maritime archaeology: by being theory agnostic or failing to outline the theory used, one defaults to one's inherent worldview. For many this 'default mode' is a return to archaeology before engagement with philosophical concepts in the 1960s or a research design that excludes theory (Trigger, 2006, p. 303), resulting in thin descriptive accounts of archaeological sites. Muckelroy's concern for the amount of data necessary to synthesize a theory (and thereby a discipline) reveals the anxiety that maritime archaeology has experienced around theory (Muckelroy, 1978, p. 10); after all, Pétursdóttir conceived of the theory of Drift from items on a Norwegian beach (Pétursdóttir, this volume). Theorizing does not require a certain amount of data, only a willingness for intellectual experimentation and contemplation. After all, each of us is a theory-builder (Carey, 2009, p. 22); it is the intrinsic nature of how we understand the world.

Matthew Johnson writes that 'theory is the order we choose to put facts in' (2006, p. 118). In order to internalize information from the outside world, all observations are theory-laden. 'All archaeologists see description and classification as (at least partial) goals of archaeology, and description and classification are scientific activities. Moreover, these activities are not purely observational; they are also theory-laden. Regardless of whether one classifies an artifact as to function, style, or technological features, he makes use of a theoretical framework' (Salmon, 1976, p. 376). However, as Kehoe notes, certain paradigms dismiss or fail to see certain data (1990, p. 29), or what we might term lacking explanatory ability. This is because there is information that each theoretical approach cannot perceive (Spencer-Brown, 1979, p. 50). Morton writes that 'for every system of meaning, there must be some opacity for which the system cannot account, which it must include-exclude in order to be itself' (2013, p. 89). Therefore, when Abbot Ealdred saw a shipwreck, his theory-laden observation connected it to the Biblical flood, while Alberti connected the

Nemi shipwrecks to lost knowledge that needed a rebirth in his own time. Bass observes a ship as a product of a specific temporal and cultural context, while Richards observes ship graveyards products of specific human behaviours. There is no theory-less maritime archaeology, only archaeologists who fail to articulate the theory they are applying.

Theory helps to create an informed perspective, as each archaeologist carries biases. 'Archaeological interpretations consciously and unconsciously (it is often impossible to determine which) echo current concerns. These relate to a vast array of issues, including globalization, American hegemony, international terrorism, pandemics, rising debt loads, environmental pollution, the changing role of government, and the disintegration of the family. Current understandings of ideologies, such as Marxism, neoconservatism, and nationalism, also color interpretations of the past' (Trigger, 2006, p. 484). Each of us (as observers) are theory-builders and our current social contexts inform us, but also create biases. The aim of a new theory should be to create a better-informed method of explaining our observations and research questions, while identifying and limiting our biases. Explicit research designs outline the approach used and force one to consider their underlying assumptions (Banning, 2002), or avoid a Ruling Theory (Rodgers et al., 2005). 'The test of any good idea in archaeology, whatever its source, is whether it helps archaeologists look for things in the archaeological record that they might otherwise overlook or underrate' (Terrell, 2003, p. 74). No one can deny that, for example, Richards' theory of ships' graveyards significantly improves interpretation of sites, as well as prospection of new ones, through understanding abandonment behaviors.

Which theory should you adopt? Looking back we can see new theories derided by previous paradigms in each period. Pushed to the limits of their explanatory ability, any theory can be made to sound absurd. Often new theories are couched in these terms, such as Gibbins' claim that Post-Processualism 'denies the "reality" of data' (1992, p. 83). Maritime cultural landscapes hardly seems as radical as Processualists' first reaction to it. When assessing new theories look not to the extremes, but toward the center. Does this theory offer explanatory ability beyond other approaches? As advocated by Adams' eclecticism and Trigger's pragmatism, archaeology can benefit from a multivocality of theory: the Medieval ships found in Turkey's Yenikapı harbour (Kocabaş, 2015), for example, can be interpreted by historical particularists studying the Byzantine artifacts, Processualists analysing the timbers and sediments, Post-Processualists seeking insight into the maritime cultural landscape, and behavioralists studying abandonment depositional traits. Each has strengths and weaknesses in their explanatory ability. It is as simple as choosing a theory that can address your research question.

However, theory is often a difficult sell to archaeologists. When discussing theory we should acknowledge that many people are intimidated by it – not only students, but also senior archaeologists. Theory can seem abstract, confusingly or tediously jargon-heavy, and divorced from the physicality of material culture. Hopefully, however, the preceding sections have shown that – to paraphrase the widely attributed maxim – we see archaeological sites not as they are, but as we are. Without a theoretical approach, our own cultural blindspots and biases enter our interpretation. Therefore theory – sometimes difficult and other times exciting – is necessary. Morton has written among the most prescient philosophy books of our time and he recognizes the challenge of theory. 'Theory class is intimidating, students are shy, participation is part of your grade,

and so on. So, I say to them, “The dumber a question you ask, the higher a grade you will get”. Children are well known for asking the most profound questions because these are the most simplistic: Why are you my dad? Do we have to have Wednesday? One teacher I like says, “Dare to be dumb”. Some of us theory teachers could remember that a bit more when it comes to writing theory-style prose, no? It might be quite a relief if the questions became more profound and sound more dumb, and looked less sophisticated and intense. It might be more like what Socrates was aiming at, saying that he was just a clown, an *eirōn*, from which we derive our word irony. This isn’t just a cute version of theoretical wonderment, setting the bar nice and low for intimidated students. This is the *actual* face of theoretical reflection, not just a dumbed-down version of it’ (Morton, 2019). Do not be afraid to ask dumb questions: theory does not need big data or incomprehensible jargon, it can be found among the flotsam on a beach.

## Conclusion

If one were seeking to describe theory in maritime archaeology, Adams’ description of the maritime session at the 1996 Theoretical Archaeology Group conference captures the subject in its entirety: ‘highly enjoyable but... [not] well attended’ (Adams, 2006, p. 1). At the time of writing, the majority of maritime archaeologists are theory agnostic, as evident in maritime archaeology textbooks which give only cursory mention of theory. The field continues to adhere to paradigms from the 1960s-1990s which are rarely challenged, verging on dogma or sacred cows. We can look to the world around us and see prejudice, inequality, and injustice. If theories reflect the society that conceives them, do we need more publications stating that the theories we have – some of which we continue to apply after 50 years – are enough?

Theory should frame your thinking, protecting it from your unconscious biases and, ideally, give you a fresh perspective. If you only find what you expect, then your theoretical approach is failing. A theory should make you see archaeological sites not with your values and ideals, but should prompt something revelatory about the past cultures. Greater engagement with theory might offer new perspectives on the ‘big questions’ that the field grapples with, as well as offer new research avenues. If we look at the history of maritime archaeological thought and ask ‘Why theory?’, hopefully the reader reaches the conclusion that theory is an integral part of archaeology practice and new approaches help to better understand the past.

## Works Cited

- de Acosta, J. (2002) *Natural and Moral History of the Indies*, J. E. Mangan (ed.). Duke University Press.
- Adams, J. (2003) *Ships, Innovation and Social Change: Aspects of Carvel Shipbuilding in Northern Europe 1450-1850*. Stockholm: University of Stockholm.
- Adams, J. (2006) ‘Editorial Article: From the Water Margins to the Centre Ground?’, *Journal of Maritime Archaeology* 1(1), pp. 1-8.
- Adams, J. (2013) *A Maritime Archaeology of Ships: Innovation and Social Change in Medieval and Early Modern Europe*. Oxford: Oxbow.
- Adams, J. and J. Rönnby (2013) ‘Landscapes, Seascapes and Ships’, in J. Adams and J. Rönnby (eds), *Interpreting Shipwrecks Maritime: Archaeological Approaches*. Southampton: Highfield Press, pp. 1-8.

- Adams, W.H. (1993) 'Historical Archaeology Strove for Maturity in the Mid-1980s', *Historical Archaeology* 27(1), pp. 23-31.
- Alberti, L.B. (1988) *On the Art of Building in Ten Books*, J. Rykwert, N. Leach, and R. Tavernor (trans.). Cambridge: MIT Press.
- Babits, L. and H. Van Tilburg (1998) *Maritime Archaeology: A Reader of Substantive and Theoretical Contributions*. New York: Plenum.
- Banning, E.B. (2002) *The Archaeologist's Laboratory*. London: Springer.
- Basch, L. (1972) 'Ancient Wrecks and the Archaeology of Ships', *International Journal of Nautical Archaeology* 1(1), pp. 1-58.
- Bass, G.F. (1966) *Archaeology Under Water*. London: Thames and Hudson.
- Bass, G.F. (1983) 'A Plea for Historical Particularism in Nautical Archaeology', in R.A. Gould, (ed.), *Shipwreck Anthropology*. Albuquerque: School for Advanced Research Press, pp. 91-104.
- Beaucaire, R. (1964) 'Les Fouilles Sous-Marines de Fos', *Revue Provence Historique* 55(1), pp. 16-25.
- Beechey, F.W. and H.W. Beechey (1828) *Proceedings of the Expedition to Explore the Northern Coast of Africa*. London: John Murray.
- Benoît, F. (1961) *L'Épave du Grand Congloué à Marseille*. Paris: Centre National de la Recherche Scientifique (Gallia Suppl. 14).
- Binford, L.R. (1972) *An Archaeological Perspective*. New York: Seminar Press.
- Binford, L.R. (1989) 'Science to Séance, or Processual to "Post-Processual" Archaeology', in L.R. Binford (ed.), *Debating Archaeology*. New York: Academic Press, pp. 27-40.
- Blue, L. and C. Palmer (2010) 'Country Boats of the Ganges Delta: An Ethnographic Study of Inland Navigation', in R. Bockius (ed.), *Between The Seas: Transfer and Exchange in Nautical Technology*. Mainz: Schnell & Steiner, pp. 479-488.
- Blundell, O. (1908) 'Notice of the Examination, by Means of a Diving-Dress, of the Artificial Island, or Crannog, of Eilean Muireach, in the South End of Loch Ness', *Proceedings of the Society of Antiquaries of Scotland* 43, pp. 159-164.
- Boas, F. (1920) 'The Methods of Ethnology', *American Anthropologist* 22(4), pp. 311-321.
- Bogost, I. (2012) *Alien Phenomenology, or What It's Like to Be a Thing*. Minneapolis: University of Minnesota Press.
- Bryant, L.R. (2011) *Democracy of Objects*. London: Open Humanities Press.
- Bryant, L.R. (2014) *Onto-Cartography: An Ontology of Machines and Media*. Edinburgh: Edinburgh University Press.
- Caldwell, J.R. (1959) 'The New American Archaeology', *Science* 129(3345), pp. 303-307.
- Callon, M. (1986) 'Some Elements of a Sociology of Translation: Domestication of the Scallops and Fishermen of St Brieuc Bay', in J. Law (ed.), *Power, Action and Belief: A New Sociology of Knowledge*. London: Routledge, pp. 196-223.
- Campbell, P.B. (2020) 'The Sea as a Hyperobject: Moving Beyond Maritime Cultural Landscapes', *Journal of Eastern Mediterranean Archaeology Heritage Studies* 8(3), pp. 1-22.
- Campbell, P.B. (2021) 'The Anthropocene, Hyperobjects and the Archaeology of the Future Past', *Antiquity* 95(383), pp. 1315-1330.
- Campbell, P.B. and Flemming, N.C. (in prep.) *Antiquities Under the Sea: The Origins of Archaeology Under Water*. Honor Frost Foundation General Series. Leiden: Sidestone.
- Carey, S. (2009) *The Origin of Concepts*. Oxford: Oxford University Press.

- Casson, L.S. (1953) 'Sea-Digging', *Archaeology* 6(4), pp. 221-228.
- Collingwood, R.G. (1939) *An Autobiography*. Oxford: Oxford University Press.
- Conlin, D. (1998) 'Ship Evolution, Ship "Ecology", and the "Masked Value Hypothesis"', *International Journal of Nautical Archaeology* 27(1), pp. 3-15.
- Connery, C. (2006) 'There Was No More Sea: The Supersession of the Ocean, from the Bible to Cyberspace', *Journal of Historical Geography* 32(3), pp. 494-511.
- Cullen, B.S. (2000) *Contagious Ideas: On Evolution, Culture, Archaeology and Cultural Virus Theory*. Oxford: Oxbow.
- Darwin, C. (1871) *The Descent of Man*. London: John Murray.
- Dawkins, R. (1976) *The Selfish Gene*. Oxford: Oxford University Press.
- Dolwick, J.S. (2008) 'In Search of the Social: Steamboats, Square Wheels, Reindeer and Other Things', *Journal of Maritime Archaeology* 3(1), pp. 15-41.
- Dolwick, J.S. (2009) "'The Social" and Beyond: Introducing Actor-Network Theory', *Journal of Maritime Archaeology* 4(1), pp. 21-49.
- Dowson, T.A. (2000) 'Why Queer Archaeology? An Introduction', *World Archaeology* 32(2), pp. 161-165.
- Dunnell, R.C. (1995) 'What Is It That Actually Evolves?', in P.A. Teltser (ed.), *Evolutionary Archaeology: Methodological Issues*. Tucson: University of Arizona Press, pp. 33-50.
- Edgeworth, M. (2011) *Fluid Pasts: Archaeology of Flow*. Bristol: Bristol Classical Press.
- Edgeworth, M. (2016) 'Grounded Objects. Archaeology and Speculative Realism', *Archaeological Dialogues* 23(1), pp. 93-113.
- Ekman, C. (1942) 'Stora Kraveln Elefanten', in A. Zettersten (ed.), *Svenska Flottans Historia I*. Malmö: Allhems Förlag, pp. 89-98.
- Ellmers, D. (1973) 'The Earliest Report on an Excavated Ship in Europe', *International Journal of Nautical Archaeology* 2(1), pp. 177-179.
- Flatman, J. (2003) 'Cultural Biographies, Cognitive Landscapes and Dirty Old Bits of Boat: "Theory" in Maritime Archaeology', *International Journal of Nautical Archaeology* 32(2), pp. 143-157.
- Flatman, J. (2011) 'Places of Special Meaning: Westerdahl's Comet, "Agency", and the Concept of the "Maritime Cultural Landscape"', in B. Ford (ed.), *The Archaeology of Maritime Landscapes*. New York: Springer, pp. 311-329.
- Gibbins, D. (1992) 'Review of Underwater Archaeology Proceedings from the Society for Historical Archaeology Conference', *International Journal of Nautical Archaeology* 21(1), pp. 82-84.
- Gould, R.A. (1983a) *Shipwreck Anthropology*. Albuquerque: University of New Mexico Press.
- Gould, R.A. (1983b) 'Looking Below the Surface: Shipwreck Archaeology as Anthropology', in R.A. Gould (ed.), *Shipwreck Anthropology*. Albuquerque: University of New Mexico Press, pp. 3-22.
- Graeber, D. and D. Wengrow (2021) *The Dawn of Everything*. London: Allen Lane.
- Günther, R.T. (1903) 'The Submerged Greek and Roman Foreshore Near Naples', *Archaeologia* 58(2), pp. 499-560.
- Harman, G. (2015) *Quentin Meillassoux: Philosophy in the Making (Speculative Realism)*. Edinburgh: Edinburgh University Press.
- Harman, G. (2016) *Immaterialism*. Cambridge: Polity Press.

- Harman, G. (2018a) *Object-Oriented Ontology: A New Theory of Everything*. London: Penguin.
- Harman, G. (2018b) *Speculative Realism*. Cambridge: Polity Press.
- Harris, M. (1968) *The Rise of Anthropological Theory: A History of Theories of Culture*. New York: Thomas Y. Crowell.
- Harris, O.J.T. and Cipolla, C.N. (2017) *Archaeological Theory in the New Millennium: Introduction to Current Perspectives*. Oxford: Routledge.
- Harris, S. (2017) *The Linguistic Past in Twelfth-Century Britain*. Cambridge: Cambridge University Press.
- Hasslöf, O. (1958) 'Carvel Construction Technique Nature and Origin', *Folk-liv: Acta Ethnologica Europaea* 22, pp. 49-60.
- Hasslöf, O. (1963) 'Wrecks, Archives, and Living Tradition: Topical Problems in Marine-Historical Research', *Mariner's Mirror* 49(3), pp. 163-177.
- Hasslöf, O. (1972) 'Main Principles in the Technology of Ship-Building', in O. Hasslöf, H. Henningsen, and A.E. Christensen (eds), *Ships and Shipyards, Sailors, and Fishermen: Introduction to Maritime Ethnography*. Copenhagen: University of Copenhagen Press.
- Hocker, F. (2004) 'Shipbuilding: Philosophy, Practice, and Research', in F. Hocker and C. Ward (eds), *The Philosophy of Shipbuilding: Conceptual Approaches to the Study of Wooden Ships*. College Station: Texas A&M University Press, pp. 1-11.
- Hodder, I. (1985) 'Postprocessual Archaeology', *Advances in Archaeological Method and Theory* 8, pp. 1-26.
- Hodder, I. (2012) *Entangled: An Archaeology of the Relationships Between Humans and Things*. Oxford: Wiley-Blackwell.
- Hooke, R. (1705) *The Posthumous Works of Robert Hooke*. London: Royal Society.
- Ingold, T. (1993) 'The Temporality of the Landscape', *World Archaeology* 25(2), pp. 152-174.
- Ingold, T. (2008) 'When ANT Meets SPIDER: Social Theory for Arthropods', in C. Knappett and L. Malafouris (eds), *Material Agency*. New York: Springer, pp. 209-215.
- Johnson, M.H. (2006) 'On the Nature of Theoretical Archaeology and Archaeological Theory', *Archaeological Dialogues* 13(2), pp. 117-132.
- Johnson, M.H. (2010) *Archaeological Theory: An Introduction*. 2nd ed. Oxford: Wiley-Blackwell.
- Jomard, E.F. (1822) *Description de l'Égypte, ou Recueil des Observations et des Recherches Aui Ont Été Faites en Égypte Pendant L'Expédition de L'Armée Française*. Paris: Impr. Impériale.
- Kehoe, A.B. (1990) 'Small Boats and Large Ideas', in T.L. Carrell (ed), *Underwater Archaeology Proceedings from the Society for Historical Archaeology Conference*. Rockville: Society for Historical Archaeology, pp. 26-30.
- Kocabaş, U. (2015) 'The Yenikapi Byzantine-Era Shipwrecks, Istanbul, Turkey: A Preliminary Report and Inventory of the 27 Wrecks Studied by Istanbul University', *International Journal of Nautical Archaeology* 44(1), pp. 5-38.
- Lamboglia, N. and A. Pederzini (1965) 'Albenga', in J. du P. Taylor (ed.), *Marine Archaeology*. London: Hutchinson, pp. 53-66.
- Latour, B. (1987) *Science in Action*. Cambridge: Harvard University Press.
- Latour, B. (1993) *We Have Never Been Modern*. Cambridge: Harvard University Press.

- Latour, B. (2005) *Reassembling the Social: An Introduction to Actor-Network Theory*. Oxford: Oxford University Press.
- Leland, J. (1768) *The Itinerary of John Leland the Antiquary*, T. Hearne (ed.). 3rd ed. Oxford: James Fletcher.
- Löfgren, O. (1981) 'Manniskan i Landskapet- Landskapet i Manniskan', in L. Honko and O. Löfgren (eds), *Tradition och Miljö: Ett Kulturrekologiskt Perspektiv*. Lund: Liber Läromedel, pp. 235-261.
- Lyell, C. (1830) *Principles of Geology*. London: John Murray.
- Lyell, C. (1863) *Geological Evidence of the Antiquity of Man*. London: J.M. Dent & Sons.
- Malaval, B. and G. Jondet (1912) *Le Port d'Alexandrie*. Cairo: Imprimerie Nationale.
- Mccarthy, M. (2001) *Iron and Steamship Archaeology: Success and Failure of the SS Xantho*. New York: Springer.
- McCoid, C. H. and L.D. McDermott (1996) 'Toward Decolonizing Gender: Female Vision in the Upper Paleolithic', *American Anthropologist* 98(2), pp. 319-326.
- McDermott, L. (1996) 'Self-Representation in Upper Paleolithic Female Figurines', *Current Anthropology* 37(2), pp. 227-275.
- McGhee, F.L. (1997) 'Toward a Postcolonial Nautical Archaeology', *Assemblage* 3(1).
- McGrail, S. (1997) 'Early Frame-First Methods of Building Wooden Boats and Ships', *Mariner's Mirror* 83(4), pp. 76-80.
- McGrail, S. (1998) *Ancient Boats in North-West Europe: The Archaeology of Water Transport to AD 1500*. London: Longman.
- McGraw, J.J., S. Wallot, P. Mitkidis, and A. Roepstorff (2014) 'Culture's Building Blocks: Investigating Cultural Evolution in a LEGO Construction Task', *Frontiers in Psychology* 5(1017), pp. 1-12.
- McLaughlin, M.L. (1988) 'Humanist Concepts of Renaissance and Middle Ages in the Tre- and Quattrocento', *Renaissance Studies* 2(2), pp. 131-142.
- McManamon, J. (2016) *Caligula's Barges and the Renaissance Origins of Nautical Archaeology Under Water*. College Station: Texas A&M University Press.
- Meide, C. (2013) *The Development of Maritime Archaeology as a Discipline and the Evolving Use of Theory by Maritime Archaeologists*. Dissertation Position Paper No. 2, Department of Anthropology, College of William and Mary, Williamsburg, Virginia.
- Mentz, S. (2020) *Ocean*. London: Bloomsbury.
- Merlin, A. (1908) 'Statues de Bronze Trouvées Près de Mahdia', *Comptes Rendus des Séances de l'Académie des Inscriptions et Belles-Lettres* 52(4), pp. 245-254.
- Mommsen, T.E. (1942) 'Petrarch's Conception of the "Dark Ages"', *Speculum* 17(2), pp. 226-242.
- Morton, T. (2007) *Ecology Without Nature*. Cambridge: Harvard University Press.
- Morton, T. (2013) *Hyperobjects: Philosophy and Ecology After the End of the World*. Minneapolis: University of Minnesota Press.
- Morton, T. (2016) *Dark Ecology: For a Logic of Future Coexistence*. New York: Columbia University Press.
- Morton, T. (2019) *Humankind: Solidarity with Non-Human People*. London: Verso.
- Muckelroy, K. (1978) *Maritime Archaeology*. Cambridge: Cambridge University Press.
- Mulvey, L. (1975) 'Visual Pleasure and Narrative Cinema', *Screen* 16(3), pp. 6-18.

- Neale, F. (2000) *William Worcestre: The Topography of Medieval Bristol*. Bristol: Bristol Record Society.
- Nieremberg, J.E. (1635) *Historia Naturae*. Antwerp: Balthasar Moretus.
- Normark, J. (2014) 'Water as a Hyperfact', *Current Swedish Archaeology* 22(1), pp. 183-206.
- O'Brien, M.J. and S.J. Shennan (2010) 'Issues in Anthropological Studies of Innovation', in O'Brien, M.J. and S.J. Shennan (eds) *Innovations in Cultural Systems: Contributions from Evolutionary Anthropology*. Cambridge: MIT Press, pp. 3-17.
- O'Sullivan, A. and C. Breen (2007) *Maritime Ireland: An Archaeology of Coastal Communities*. Gloucestershire: Tempus.
- Olsen, B. (2010) *In Defense of Things: Archaeology and the Ontology of Objects*. Plymouth: AltaMira.
- Olsen, B., M. Shanks, T. Webmoor, and C. Witmore (2012) *Archaeology: The Discipline of Things*. Berkeley: University of California Press.
- Olsen, B. and C. Witmore (2015) 'Archaeology, Symmetry and the Ontology Of Things. A Response to Critics', *Archaeological Dialogues* 22(2), pp. 187-197.
- Palmer, C. (2000) 'The Evolution of Traditional Boat Design: A Different View', *Maritime Life and Times* 8, pp. 491-516.
- Parker, A.J. (2001) 'Maritime Landscapes', *Landscapes* 2(1), pp. 22-41.
- Pétursdóttir, Þ. (2017) 'Climate Change? Archaeology and Anthropocene', *Archaeological Dialogues* 24(2), pp. 175-205.
- Pétursdóttir, Þ. and B. Olsen (2018) 'Theory Adrift: The Matter of Archaeological Theorizing', *Journal of Social Archaeology* 18(1), pp. 97-117.
- Poidebard, A. (1939) *Tyr: Un Grand Port Disparu*. Paris: Librairie Orientaliste Paul Geuthner.
- Poidebard, A. and J. Lauffray (1951) *Sidon: Aménagement Antiques du Port de Saida*. Beirut: Ministère des Travaux Public.
- Pomey, P. (1988) 'Principes et Methodes de Construction en Architecture Navale Antique', *Navires et Commerces de la Mediterranee Antique* 33(3), pp. 397-412.
- Preest, D. and J.G. Clark (2019) *The Deeds of the Abbots of St Albans: Gesta Abbatum Monasterii Sancti Albani*. Suffolk: Boydell Press.
- Prorok, B.K. de (1924) 'Recent Researches on the Peninsula of Carthage', *Geographical Journal* 63(3), pp. 177-187.
- Puillon de Boblaye, É. Le (1836) *Expédition Scientifique de Morée: Ruines de la Morée*. Paris: F.G. Levrault.
- Ransley, J. (2007) 'Rigorous Reasoning, Reflexive Research and the Space for "Alternative Archaeologies": Questions for Maritime Archaeological Heritage Management', *International Journal of Nautical Archaeology* 36(2), pp. 221-237.
- Ransley, J. (2008) 'Time for a Little Pedagogical Reflection?', *Journal of Maritime Archaeology* 3(2), pp. 53-58.
- Ransley, J. (2010) 'Boats are for Boys: Queering Maritime Archaeology', *World Archaeology* 37(4), pp. 621-629.
- Rathje, W. and C. Murphy (2001) *Rubbish! The Archaeology of Garbage*. Tucson: University of Arizona Press.
- Revue Archéologique (1931) 'Les Fouilles Sous-Marines de Chersonnèse', *Revue Archéologique* 34, p. 204.

- Rich, S.A. (2017) *Cedar Forests, Cedar Ships: Allure, Lore, and Metaphor in the Mediterranean Near East*. Oxford: Archaeopress.
- Rich, S.A. (2021) *Shipwreck Hauntography: Underwater Ruins and the Uncanny*. Amsterdam: Amsterdam University Press.
- Rich, S.A., C. Sievers-Cail, and K. Patterson (2022) 'What Is there to Do if You Find an Old Indian Canoe? Anti-Colonialism in Maritime Archaeology', *Heritage* 5(4), pp. 3664-3679.
- Richards, N. (2008) *Ships' Graveyards: Abandoned Watercraft and the Archaeological Site Formation Process*. Gainesville: University Presses of Florida.
- Rodgers, B.A., N. Richards, and W.R. Lusardi (2005) "'Ruling Theories Linger": Questioning the Identity of the Beaufort Inlet Shipwreck', *International Journal of Nautical Archaeology* 34(1), pp. 24-37.
- Said, E.W. (1978) *Orientalism*. New York: Pantheon.
- Salmon, M.H. (1976) "'Deductive" Versus "Inductive" Archaeology', *American Antiquity* 41(3), pp. 376-381.
- Shanks, M. (1992) *Experiencing the Past: On the Character of Archaeology*. London: Routledge.
- Smith, A.T. (2006) 'Undisciplined theory', *Archaeological Dialogues* 13(2), pp. 158-163.
- Smith, S.O. (1990) 'Fair Wind, Fair Gender, Fair Due', in T.L. Carrell (ed.), *Underwater Archaeology Proceedings from the Society for Historical Archaeology Conference*. Rockville: Society for Historical Archaeology, pp. 38-40.
- Smyth, W.H. (1854) *The Mediterranean: A Memoir Physical, Historical, and Nautical*. London: John W. Parker.
- Spencer-Brown, G. (1979) *Laws of Form*. New York: E.P. Dutton.
- Spencer-Wood, S. (1990a) 'Beyond Reification', in T.L. Carrell (ed.), *Underwater Archaeology Proceedings from the Society for Historical Archaeology Conference*. Rockville: Society for Historical Archaeology, pp. 30-34.
- Spencer-Wood, S. (1990b) 'Stretching the Envelope in Theory and Method', in T.L. Carrell (ed.), *Underwater Archaeology Proceedings from the Society for Historical Archaeology Conference*. Rockville: Society for Historical Archaeology, pp. 21-44.
- Staniforth, M. (2003) 'Annales-Informed Approaches to the Archaeology of Colonial Australia', *Historical Archaeology* 37(1), pp. 102-113.
- Staniforth, M. and M. Nash (2008) *Maritime Archaeology: Australian Approaches*. New York: Springer.
- Svoronos, J.N. (1902) 'Τα Ευρηματα Του Ναυαγιου Των Αντικυθιρων', *Ephēmeris Archaeiologikē* 20(1), pp. 145-172.
- Terrell, J. E. (2003) 'Archaeological Inference and Ethnographic Analogies: Rethinking the "Lapita Cultural Complex"', *Archaeological Papers of the American Anthropological Association* 13(1), pp. 69-76.
- Tilley, C. (1994) *A Phenomenology of Landscape*. Oxford: Berg.
- Trigger, B.G. (2006) *A History of Archaeological Thought*. 2nd ed. Cambridge: Cambridge University Press.
- Tuddenham, D.B. (2010) 'Maritime Cultural Landscapes, Maritimity and Quasi Objects', *Journal of Maritime Archaeology* 5(1), pp. 5-16.

- Tuddenham, D.B. (2012a) 'Cyborgs and Shipwrecks: The Management of Norwegian Underwater Cultural Heritage in the Light of Actor Network Theory', in P. Nymoen (ed.), *Årbok 2011*. Oslo: Norsk Maritimt Museum, pp. 99-148.
- Tuddenham, D.B. (2012b) 'Ship Finds and Their Management as Actor Network', *Journal of Maritime Archaeology* 7(2), pp. 231-243.
- Ucelli, G. (1950) *Le Navi di Nemi*. Rome: Libreria dello Stato.
- Ulrichs, H. N. (1843) *Topographie der Häfen von Athen*. Munich: Verlag der Bayerischen Akademie der Wissenschaften.
- Van de Noort, R. (2011) *North Sea Archaeologies: A Maritime Biography, 10,000 BC-AD 1500*. Oxford: Oxford University Press.
- Van de Noort, R. (2004) 'An Ancient Seascape: The Social Context of Seafaring in the Early Bronze Age', *World Archaeology* 35(3), pp. 404-415.
- Veth, P. (2008) 'Theoretical Approaches', in M. Staniforth and M. Nash (eds) *Maritime Archaeology: Australian Approaches*. New York: Springer, pp. 13-26.
- Veth, P. and M. McCarthy (1999) 'Types of Explanation in Maritime Archaeology: The Case of the SS XANTHO', *Australian Archaeology* 48, pp. 12-15.
- Ward, I. A. K., P. Larcombe, and P. Veth (1999) 'A New Process-Based Model for Wreck Site Formation', *Journal of Archaeological Science* 26(5), pp. 561-570.
- Waters, C.N. et al. (2016) 'The Anthropocene is Functionally and Stratigraphically Distinct from the Holocene', *Science* 351(6269), 10.1126.
- Westerdahl, C. (1992) 'The Maritime Cultural Landscape', *International Journal of Nautical Archaeology* 21(1), pp. 5-14.
- Westerdahl, C. (1995) 'Traditional Zones of Transport Geography in Relation to Ship Types', in O. Olsen, J.S. Madsen, and F. Rieck (eds), *Shipshape*. Roskilde: The Viking Ship Museum.
- Westerdahl, C. (2011) 'The Binary Relationship of Sea and Land', in B. Ford (ed.), *The Archaeology of Maritime Landscapes*. New York: Springer, pp. 291-310.
- Whitewright, J. (2008) *Maritime Technological Change in the Ancient Mediterranean: The Invention of the Lateen Sail*. PhD, Department of Archaeology, University of Southampton.
- Wiley, G. and P. Phillips (1958) *Method and Theory in Archaeology*. Chicago: University of Chicago Press.
- Witmore, C. (2007) 'Symmetrical Archaeology: Excerpts of a Manifesto', *World Archaeology* 39(4), pp. 546-562.
- Witmore, C. (2019) 'Hypanthropos: On Apprehending and Approaching That Which is in Excess of Monstrosity, with Special Consideration given to the Photography of Edward Burtynsky', *Journal of Contemporary Archaeology* 6(1), pp. 136-153.
- Wylie, A. (1997) 'The Engendering of Archaeology: Refiguring Feminist Science Studies', *Osiris* 12(1), pp. 80-99.
- Zimmerman, A. (2001) *Anthropology and Antihumanism in Imperial Germany*. Chicago: University of Chicago Press.
- Zwick, D. (2013) 'Conceptual Evolution in Ancient Shipbuilding: An Attempt to Reinvigorate a Shunned Theoretical Framework', in J. Adams and J. Rönnby (eds), *Interpreting Shipwrecks: Maritime Archaeological Approaches*. Southampton: Highfield Press, pp. 46-71.

# Collapse, Cataclysm, and Eruption

## Alien Archaeologies for the Anthropocene

Sara A. Rich and Peter B. Campbell

### Abstract

Our shared planet is becoming increasingly alien in the Anthropocene, and increasingly inundated. These radical changes to our home call for critical considerations of *collapse* – when destruction comes from above and rains downward – and *cataclysm* – as in flood or deluge, when destruction surges up from below – alongside *eruption* – or hyperbolic destruction spewing forth from a container as small as a split atom. The authors propose that a theoretical framework of object orientation offers a way for archaeologists, especially those whose work brings them into the sea, to contribute more meaningfully to contemporary research about our planet's past-present-future. We have two primary aims: 1) to help usher the alienated subdiscipline of maritime archaeology into the broader discourse of the humanities; and 2) to issue a call to action for fellow maritime archaeologists to respond to ecocide more urgently, more cross-disciplinarily, and more responsibly with new interventions into old research questions. After defending the unique relevance of object orientation to the humanities and social sciences – archaeology specifically and maritime or nautical archaeology most of all – it will pose some relevant questions on how to use our research expertise to move forward, while establishing effective methodologies for thinking and communicating the nonhuman to students and the general public. Ultimately, this chapter advocates for mobilizing a radical shift in how humans think and care for all the objects sharing our lives, and our destinies, which are increasingly impacted from above, below, and within.

### Introduction: Alienations

The need for a drastic revision of human activity has become undeniable if societal collapse is to be avoided and the health of our living planet is to be restored to a state comparable to that prior to the Industrial Revolution. This realization has led scholars across the arts, humanities, and social sciences to develop new approaches to understanding human impacts, the roles of nonhuman objects, and how best to interpret their interactions. The

more the present crisis is studied and Earth's future is considered, the more apparent it becomes that the past is thoroughly imbricated in the times called present and future. This temporal awareness is a precipice over which archaeological discourse may pass to make potentially valuable contributions to contemporary theory and policy praxis (Nativ and Lucas, 2020). Considering overlapping questions of eschatology, causality, and teleology, the fields of archaeology and philosophy, in particular, share several research domains relevant to understanding and responding to contemporary planetary crises, and as such, our (inter) disciplinary efforts should be at the forefront of conversations about Earth's rapidly shifting reality. Archaeology has access to the most substantial dataset of humankind, which can be brought powerfully to bear on the new realities of the Anthropocene. As our shared planet becomes increasingly alien, and inundated, critical considerations of *collapse* – when destruction comes from above and rains downward – and *cataclysm* – as in flood or deluge, when destruction surges up from below – alongside *eruption* – or hyperbolic destruction spewing forth from a container as small as a split atom – are essential for understanding the perils of the Anthropocene and teasing out the most appropriate responses to them.

In no small part, this chapter serves as a prompt for maritime archaeology, meant to catalyze a discourse outside the comfort of a Holocene Earth and toward an uncertain future. It proposes that a theoretical framework of object orientation offers a way for archaeologists, particularly those working in the maritime milieu, to contribute more significantly and meaningfully to contemporary research about our planet's past-present-future through closer examinations of nonhuman object realities. In a 'flat ontology', object realities are not privileged over one another, but are all agents capable of having real effects in the world. The flat ontology runs in opposition to the 'vertical ontology', which lends itself to ontological hierarchies, and which has prevailed in Western thought for centuries (Table 1; Bryant, 2014, pp. 237-240, table 8.1). Most philosophy in the European tradition following Kant (1998 [1781]) has been confined to thinking about objects by way of correlationism, or subject-object relations (Meillassoux, 2010, pp. 5-6). Philosophical premises since Kant have rested upon the belief that, because solely humans are capable of thought, only the human subject can be known to exist, and even human subjects are only capable of knowing objects as correlates of Thought and Being. Or in an even more extreme form of idealism, the human mind creates the existence of all external objects, whether global warming, COVID-19, or prehistoric shell middens. By contrast, flat ontologies argue – as is becoming painfully clear in the Anthropocene – that discrete objects are just as real as the subjects thinking them, and that humans can no longer pretend that reality is subjective or that privileged members of our species are the only 'subjects' possessing agency. With this geological epoch having been newly redefined by the presence of humans and our waste, and because archaeologists are effectively scientists of trash, archaeological investigations into refuse have never been more pressing (cf. Pétursdóttir 2017). And as maritime archaeologists, the authors approach this epoch from a perspective of particular urgency because most of our garbage ends up in Earth's waterways. Therefore, maritime and nautical archaeologists are especially implicated in the urgent call for a reassessment of what our research can offer to 'stem the tide of ruination' (Gan et al., 2017, p. G1). Maritime archaeologists are well suited to address nonhuman and posthuman futures as we often deal in discarded worlds that are particularly 'alien' – being both ancient and underwater, fundamentally foreign – and so it

| Vertical ontology                                                                                                                                                                    | Flat ontology                                                                                                                                                                     |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Humanism: the human is placed at the center of scholarly enquiry, with all other objects held at the periphery                                                                       | Posthumanism: humans are understood as objects among objects, biomes among biomes, and are displaced from the sole focus of enquiry                                               |
| <i>Scala naturae</i> : supreme deity rules over creation, which is organized in descending order from humans who look most like the deity, to entities that least resemble the deity | Ecology: in a given system, entities, whether animal, plant, fungus, or mineral, are co-dependent and the removal or introduction of a substance often disrupts the entire system |
| Orthogenesis: evolution leads from most simple to most complex; evolution defined by progress                                                                                        | Symbiogenesis: organisms and environment are co-producing, in response to random mutation, cooperation and competition                                                            |
| Idealism: thinking subject is at the core of existence ( <i>cogito ergo sum</i> ) and thought is rendered more pure than the physical object of thought                              | Realism: thinking subject and thought object are mutually engaged and both/either have the capacity to affect and be affected by that engagement                                  |

Table 1. Some examples, necessarily simplified, contrasting vertical and flat ontologies. Adapted from Bryant 2014, 238, table 8.1.

seems that we should have some important, relevant things to say about the submersion of our contemporary world into warming and acidifying seas (Helmreich, 2009). As a result, maritime archaeology can be a gateway to archaeology in Anthropocene imaginaries.

This paper has two primary aims: 1) to help usher the rather alienated subdiscipline of maritime archaeology into the greater sphere of the humanities because our research should be more relevant now than ever; and 2) as a call to action for fellow maritime archaeologists to think more urgently, and more cross-disciplinarily, about the present triad of crises, and to respond appropriately with new interventions into the old research questions. These aims are already rather ambitious, and as such, this paper merely advances an explanation of object-oriented approaches for application to maritime archaeology, which others may then adapt and apply to their own field and museum practices (see papers throughout this volume). As will be explained in the following section, maritime archaeology has long favored praxis over theory, which has resulted in a lack of critical debate. And yet elsewhere in the social sciences and humanities, debates about object agency, and by extension the agency of archaeological objects, have been ongoing for years. It is past time to settle these debates and bring the implications of object agency into the material urgency of the Anthropocene. After defending the unique relevance of object-orientation to the humanities and social sciences – archaeology specifically and maritime or nautical archaeology most of all – this paper poses some relevant questions to guide new ways of using our maritime research expertise to move forward responsibly, while establishing effective methodologies for thinking and communicating the nonhuman to students and the general public. Ultimately, this paper advocates for mobilizing a radical, transdisciplinary shift in how humans think and care for all the objects sharing our (past) lives and our destinies, which are increasingly inundated from above, below, and within.

## Past: Appropriations

Maritime and nautical archaeology has long been prone to a lack of critical theory (cf. Flatman, 2003; Harpster, 2013; Rich, 2021; Campbell, ‘History’, this volume). It is shocking

that a subdiscipline in the humanities and social sciences that deals so directly with the sea has not been involved in the transdisciplinary conversations about Anthropocene oceans. Rather, these conversations, helping to compose the ‘maritime turn’, are being headed by literary theorists such as Steve Mentz (2009, 2010, 2014, 2015; see Mentz, this volume) and Stacy Alaimo (2013, 2016); geographers, such as Kimberley Peters and Philip Steinberg (2015); anthropologists, such as Stefan Helmreich (2009, 2016) and Patrick Nunn (2020); and surfers, such as Karin Amimoto Ingersoll (2016). In part, this tendency toward archaeological alienation might have arisen from the frequent segregation of water- from land-based archaeology, with scholars of the former presenting research at specifically maritime and nautical sessions of national and international archaeology conferences, or even entirely specialist conferences (e.g., TROPIS International Symposium on Ship Construction in Antiquity, International Congress for Underwater Archaeology, and the International Symposium on Boat and Ship Archaeology). Likewise, nautical archaeologists often publish primarily if not exclusively in journals such as *The International Journal of Nautical Archaeology* and *The Journal of Maritime Archaeology*. Most of this research is technology-focused, either ancient nautical technologies for establishing trade and shipboard activity, or contemporary technologies enabling more efficient research in the underwater environment. Notable exceptions to prioritizing praxis over theory include papers utilizing Bruno Latour’s Actor-Network Theory (Dolwick, 2008, 2009), the phenomenology of Maurice Merleau-Ponty (Papadopoulou, 2016), queer theory (Ransley, 2005), and Donna Haraway’s cyborg theory (Tuddenham, 2012). Other recent publications, such *North Sea Archaeologies* (Van de Noort, 2011) and *A Maritime Archaeology of Ships* (Adams, 2013), have employed the works of various sociological thinkers to situate maritime research into grander historical and economic schemata.

Overall however, the engagement of maritime and nautical archaeologists with contemporary theory has remained comparatively, abysmally, low. To provide a couple metrics, for the last six years (2016-2021) at the Theoretical Archaeology Group (TAG), which is North America’s leading conference on cutting-edge theoretical approaches to the study of material culture and past peoples, there has been a range of 0-4 representatives of our subdiscipline presenting maritime research, out of 40-147 presenting terrestrial archaeology. In 2016 when TAG Europe was held at the University of Southampton (UK), which is home to one of the world’s top research programs in Maritime Archaeology, there were only two papers on nautical archaeology out of a total 229. This series of observations is indicative of a larger trend in the field, and one that could and should be reversed if maritime and nautical archaeologists ever hope to have a large impact within the field comparable to our land-based colleagues, and if we ever hope to contribute research that is valued beyond the confines of a highly exclusive subdiscipline.

Besides the general lack of theory in nautical archaeology, even when it comes to archaeological theory overall, there has historically been a single trajectory: philosophers write philosophy and archaeologists apply those philosophies to archaeology. For example, Christopher Tilley applied phenomenology to the field in *A Phenomenology of Landscape* (1994), *Metaphor and Material Culture* (1999), and *The Materiality of Stone* (2004). However, phenomenological theory remained unaffected by his and others’ numerous archaeological applications thereof. This trajectory began to change with the numerous examples of archaeological applications of Deleuze and Guattari’s rhizomatic assemblage

theory explained in *A Thousand Plateaus* (1987), and which was later expanded upon by Manuel Delanda's *Assemblage Theory* (2016; see Cohen, this volume), along with Jane Bennett's *Vibrant Matter* (2010). This 'speculative turn' began to offer a deviation from the usual archaeological appropriations of philosophy, in no small part because the principal theorists are still-living (and often rather young) contemporary philosophers. For example, recent influential books *In Defense of Things* (Olsen, 2010) and *Archaeology: The Discipline of Things* (Olsen et al., 2012) developed symmetrical archaeology and provide useful applications of Actor-Network Theory (ANT) and Object-Oriented Ontology (OOO), among others, to archaeological contexts, but in the case of OOO, we now see the principal philosophers engaging directly with archaeologists, co-authoring books and papers (Harman and Witmore, 2023) and even working together on excavations. Specifically, OOO-affiliated philosopher Levi Bryant, author of *The Democracy of Objects* (2011) and *Onto-Cartography* (2014), has assumed a critical role in the contemporary archaeology project, *Unruly Heritage – An Archaeology of the Anthropocene* (UiT: The Arctic University of Norway, Tromsø). Bryant's direct participation in archaeological fieldwork and resultant publications (see Bryant, 2021; Timothy Morton has a paper in the same volume), along with Harman's participation in the present volume, testify to the potential benefit for mutual disciplinary influences, and for the possibility that archaeology might have something uniquely valuable to offer contemporary philosophy, thereby reversing the entrenched trajectory of one-way appropriation (Pétursdóttir and Olsen, 2018; Harman, 2019; Cipolla et al., 2021).

While there is much to admire in the archaeological theories described above, we suggest here that neither phenomenology nor the 'symmetrical' archaeologies (Witmore et al., 2014; Edgeworth, 2014; Olsen, 2010, pp. 9-10; Webmoor, 2007; Witmore, 2007; Alberti et al., 2011, p. 909) goes quite far enough to avoid the snare of anthropocentrism and the ricochet of its most disastrous consequences. As we catapult ourselves and fellow earthlings deeper into the Anthropocene, a more radical archaeological vision of human : nonhuman relations is needed, one that better acknowledges the asymmetry of humans within the vastness of earthly existence, and at the same time, that this asymmetry takes seriously the need to dismantle the nature : culture binary (cf. Rich, 2017, 2021). Along with other forms of speculative realism, and the closely related new materialisms, OOO has extraordinary potential for completely rethinking the role of archaeology and its objects, and for opening up possibilities for cross-disciplinary discourse between philosophers and archaeologists. Nautical archaeologists, with our notorious fixation on the minutiae of ship parts, sea changes, trade relations, metaphors, and microcosms, could take much fuller advantage of this philosophy; however, the specificity of water-bound archaeologies has much to offer metaphysics too (Rich, 2021). After all, maritime analogies are already abundant in OOO literature: e.g., Harman uses the Dutch East India Company (Vereenigde Oostindische Compagnie, or VOC; Harman, 2016; 2018, pp. 27-30; 2019), and Bogost uses the cargo ship (Bogost 2012, pp. 22-23) to exemplify how complex objects behave with their fellows who compose and consume them simultaneously. Because speculative realism and new materialism alike acknowledge the mystical in the mundane, imagine how much more deep insight into the liminality and uncanniness of ancient ships, shipwrecks, and submerged settlements could offer to the logic of object orientation.

As far as metaphysics is concerned, OOO is a new movement, having begun only a decade ago, and it has taken a pronounced place among other branches of speculative

realism and related threads of new materialism. In this short time, it has been a significant influencer among several disciplines in the arts and humanities beyond philosophy in the strict sense. Aptly, OOO and similar philosophical veins move toward a materialistic view of objects and away from the text-based discursive practices that have predominated philosophical discourse in recent decades (Bryant, 2014, pp. 1-8). Key thinkers affiliated with this movement assert that reality is composed of objects, that objects are autonomous, and that objects are paradoxically and simultaneously accessible and withdrawn. Although the term 'object' may be problematic for archaeologists due to its connotations within the field (Hodder, 2012), in a flat ontology, it generally refers to any entity that can be described in specific terms and that interacts with other objects, whether animate or inanimate, real or imagined (e.g., a hand-axe, Sargon the Great, Pegasus, the Big Bang, an electron). As we will explain further below, absorption of this meaning of 'object' into that of the 'archaeological object' is highly advantageous to interpretations of the past by way of material culture. That said, alternative terms such as 'unit' (Bogost, 2012) and 'machine' (Bryant, 2014) have also been offered to describe how individual entities are both autonomous and interactive.

Principle OOO theorist Graham Harman has drawn from the phenomenologies of Edmund Husserl and Martin Heidegger to formulate a theory of how objects exist in reality as discrete units that are also subject to change through relationships and encounters with other objects (Harman, 2011, 2018). He claims that the effects of these outside influences alter the more vulnerable, phenomenal aspect of the object while leaving its autonomous, withdrawn core unchanged. To provide another nautical analogy, we might consider the paradox of the ship of Theseus (Plutarch, *Theseus* 23.1; see Harman, this volume). An object-oriented approach would claim that the ship, which has been refitted and repaired so many times that none of the original timbers remains, is both the same ship (as a *real* object, withdrawn) and a different one (as a *sensual* object, accessible). Because objects cannot be reduced to their parts, it must be the same ship; yet because the ship is experienced differently by other objects and experiences itself fluctuating, so must it also be a different ship (Rich, 2017, pp. 4, 181-182; 2021, pp. 95-96; Harman, 2018, p. 28). The *real* object can only every be accessed (whether by knowledge or by handsaws) obliquely, through metaphor for example, in a way parallel to how humans use hints and inuendo to talk about something without actually talking about it (see Killian and Rich, this volume).

Affiliated OOO thinkers have expanded significantly on, and at times diversified, these basic tenets. For example, Timothy Morton has written on the impossibility of nature, environment, and world as factual 'things' (Morton, 2007, 2013a,b, 2016, 2017), while identifying the existence of hyperobjects, which are massive time-transgressive objects as varied as global warming and microplastics (Morton, 2013b, 2016, 2017; see Normark, this volume; Edgeworth, this volume). Bryant's geophilosophy, on the other hand, counters Morton by maintaining that the category of nature is a material one, and that culture is simply an emergent, ecological manifestation of human clusters (Bryant, 2014, pp. 156, 281; 2021). These ideas have extraordinary implications for how archaeologists and others studying 'material culture' define the objects of our study, and the impossibility of situating them within the overwhelming contemporary theories and policies regarding 'natural' or 'cultural' heritage, and its preservation or conservation. In a flat ontology, it becomes counterproductive to *automatically* prioritize certain objects (including certain beings or certain lives) over others, simply because doing so might benefit humankind.

Here, the grounds that justify deforestation and mountaintop removal become untenable because flat ontologies propose that the default of what is good is what contributes to human flourishing, often has the effect of coming at the expense of many other objects, whose existences are just as real as ours.

Not surprisingly, OOO's proposed radical decentering of the human from the tangled sphere of existence, and the direct refutation of Cartesian binaries such as subject/object and especially nature/culture, has sent shockwaves throughout the academy. Reverberating especially throughout the arts and humanities, it is becoming increasingly common for scholars to challenge dualistic, anthropocentric modalities of human thought and behavior, and to understand these Cartesian rifts as foundational to the problem of the Anthropocene: that is, that anthropocentrism requires by definition the relative disregard of all things regarded as nonhuman; therefore, anthropocentrism has led to capitalism, industrialization, colonialism, deforestation, nuclear warfare, irresponsible agriculture, pollution, and the dehumanization of even fellow humans. To put it bluntly, the horrors of the sixth mass extinction event, environmental racism, and patriarchy are all direct results of anthropocentrism, so to prevent the worst blows of the current catastrophe – in the forms of collapse, cataclysm and eruption – we must displace the human from the center of our ideological universe – and the sooner, the better. Archaeology, as the study of anthropic and anthropogenic remains, benefits from a de-anthropocentric approach by enabling itself to more holistically understand the variations and proportions of human : nonhuman impacts, from scales molecular to planetary and, increasingly, extraterrestrial. Because OOO recognizes human beings as just one example within the category of object, its metaphysics is very well suited to archaeology, whichever ecosystem or epoch is under investigation.

## **Present: Argumentations**

Now that we have discussed the relevance of OOO to archaeology, how exactly can object-orientation critically and responsibly contribute to archaeological practice? Specifically, how does flat ontology, a philosophy that de-centralizes humanity, benefit a discipline that by definition elevates human culture into the primary field of focus? And if the human is decentered, how can implementing object orientation remain ethical, by, e.g., not placing racist monuments on a level of equal importance with the people oppressed by them (see Ribeiro and Wollentz, 2020)? To be clear, flat ontology states merely that all things equally exist, not that all things exist equally (Bogost, 2012, p. 11; cf. Bryant, 2021, p. 74). In other words, this philosophy is making an ontological claim rather than a moral or ethical one. Indeed, recent research identifies the common ethical objection to flat ontologies as a strawman argument, and rightly so (Cipolla et al., 2021, p. 6); to the extent that it continually resurfaces despite having been put to rest consistently for a decade, one might wonder if it might be considered something of zombie strawman. To the point, no one is suggesting that a coronavirus has just as much right to existence as a human; however, a flat ontology might imply that the coronavirus has just as much of an agenda as the human it infects. Likewise, no one is suggesting that the monument to Christopher Columbus is just as important as an Indigenous American individual. Rather, an object-oriented approach would regard the statue as an active agent in spacetime, rather than a mere symbol of a bygone past: that is, that the statue of a man long dead remains a

powerful enactor and enabler of continued oppression against living people (see Watson, this volume). This is exactly why monuments to Christopher Columbus and slave trader Edward Colston have been pulled down by crowds of people in recent days (at the time of writing) and, again implicating maritime archaeology, thrown into bodies of water on either side of the Atlantic (Fig. 1.1) Put simply, in flat and object-oriented ontologies, the nonhuman object is anything but passive, waiting to be layered with meaning by a human subject (see Han, this volume). Instead, nonhuman objects also generate their own meanings, and, ironically in the broader field of anthropology, this realization of powerful, not just empowered, objects is hardly a new one (e.g., Gell, 1998).

In archaeology, a flat ontology has the ability to add nuance to not only the oversimplified binary of human/nonhuman (where do I end and gut microbes begin?), but also nature/culture, Western/non-Western, colonized/colonizer, past/present (Cipolla et al., 2021; Rich, 2021). As intimated in the section above, if the nature/culture binary could be dissolved, then the other Otherings of 'x demographic is closer to nature' would follow suit because colonialism, racism and sexism are dependent upon the idea that the Other is closer to a feminized animal nature and further from a masculine civilized culture (cf. Bryant, 2021).

But traditionalists should fear not. Even though objects are being studied as more than a mere means to an end, because humans are one object among many, human decentralization can still increase an understanding of human behavior and past cultures. Recently, Kyle Harper reframed the social structure and economy of the Roman Empire using environmental data, arguing that the Romans 'had no idea of the contingent and parlous environmental foundations of what they had built' (Harper, 2017, p. 15). In sum, not every human behavior is guided by intent, but is rather the result of interacting entities both human and non. In acknowledging the frequent unintentionality of interactions and impacts, we can think of objects human and nonhuman, animate and inanimate, as possessing a kind *potency*, or potential agency (Rich, 2017, pp. 5-6). The idea of potency was developed in response to historical, geochemical, and iconographic analyses of East Mediterranean cedar forests, the shipbuilding industry, and the ancient deities who presided over seas and seafaring. When synthesized, these analyses led to the conclusion that the physical and metaphysical properties of cedar wood generally, and the diverse qualities of specific forests, had discernible impacts on shipbuilding, seafaring, timber trade, and deforestation in the ancient East Mediterranean. Whether intentional or not, external, extrahuman, agents affect our decision-making regularly, and these effects require acknowledgement in order to interpret human behavior broadly, as Harper has done for the Roman period and Rich for shipbuilding in the East Mediterranean. By contrast, trying to understand reality within anthropocentrism is like trying to understand a football game by only focusing on the bodies of the players. This assessment would necessarily be limited because it does not acknowledge that the movements of the players are entirely dependent on the ground upon which they play, the air they breathe, the chemical reactions inside their bodies, the presence of the audience, and of course, the movements of the ball. While the ball may not move independently, it is only by analyzing its interactions with the players, the field, the atmosphere, and the rules of the sport that one can come to an understanding and appreciation of the game. Just as each of these objects must exhibit some kind of potency in order for the game to be played, the complexities of human behavior and culture can best be understood as the myriad and nested interactions of nonhuman and human objects.

Alongside considering the potency of objects, humans included, we might also bear in mind the *pluripotency* of objects: that is, that all objects ‘possess a range of possible becomings allowing for the genesis of distinct forms and functions’ (Bryant, 2014, p. 26). Maritime archaeology operates in and around bodies of water, which have been put to use by humans in a variety of ways throughout time. For this reason alone, it is impossible to interpret human behaviors within maritime cultures without understanding these peoples’ interactions with the water. Water possesses specific physical qualities that have allowed for the most efficient methods of transportation up until the automobiles and air travel of the very recent past. Archaeologizing Morton’s time-transgressive hyperobject, Johan Normark terms water a *hyperfact* due to its special, transcendent characteristics (Normark, 2014; reprinted in this volume). An object-oriented archaeology of the sea would challenge prevailing anthropocentric theoretical frameworks, such as maritime cultural landscape theory, by acknowledging the sea as the central agent, providing the numerous mechanisms (buoyancy, currents, and winds) that allowed for the development of maritime mobility and long-distance trade to begin with (Campbell, 2020). Interactions between humans and the sea are dependent on the qualities of each, and because the latter is particularly uncanny and strange, human behaviors in maritime environments are different from those that are landlocked. The qualities that define mobility on land, such as gravity, elevation, slope, friction, and textures of the grounds being traversed, are not found at sea. Instead, seafarers successfully interact with the entity of the sea by ensuring one factor: buoyancy. Because of the mass, density, and surface tension of water, the force of gravity is less significant for seafarers, which in turn allows humans to undertake activities not possible on land (Greene, 1986, p. 40; Strang, 2015). Comprehending the reality of water was a revelation for human transport, tens of thousands of years ago, when our ancestors’ watercraft first set sail, as much as it was a hundred years ago, when metal ships weighing thousands of tons were built to move great distances, buoyantly, over water. Without coming to terms with the distinctly alien realities of seawater and oceanic behavior, it is unlikely that large-scale human connectivity and globalization would have developed.

Ever more apparent as the Anthropocene progresses, complex interactions between humans, the sea, technology, and ecology are better understood through realist rather than idealist philosophies. For example, the development of a highly specialized and insular culture in 1863, centered on the sponge-diving industry, and its collapse in 1986 is explained not through behavior confined to the human alone, but through ecological cycles lasting far longer than human lifetimes and which work alongside the agency of the sea (Campbell, 2020). As time and space somehow expand and contract in this new epoch of the human, it is increasingly clear within archaeology that the role of artifacts is receding while the role of ecofacts is advancing, due to the latter’s ability to provide large-scale narratives of human cultures over great swaths of time. While ecofacts and other nonhuman agents are increasingly acknowledged for their potency and diverse methods of influencing human behavior – in particular by scholars employing ANT, new materialism, or symmetrical archaeology – OOO continues to be more controversial, particularly but not exclusively among those subscribing to the subject/object, mind/body, and nature/culture divides of European philosophy since the Renaissance.

This controversy often centers on the claim that the Kantian subject/object divide cannot be overcome, especially in regards to intent. This argument is typified by Andreas



Fig. 1.1. Statues of Christopher Columbus (left, Richmond, Virginia, USA) and Edward Colston (right, Bristol, UK) were pulled down by civil rights activists in the summer of 2020. Activists threw the statues into nearby bodies of water (Columbus into Byrd Park Lake, and Colston into Bristol Harbour), only for them to be fished back out of the water by counter-protestors. (Image sources: Columbus photograph from Wikimedia Commons by Smash The Iron Cage, 2015; Colston photograph from Wikimedia Commons by Simon Cobb, 2019).

Malm, who writes, ‘The sun does not act when it rises in the morning (although it certainly makes a difference to a state of affairs), for on the lay view, an element is needed which is absent in the daybreak: an agent seeking to accomplish some goal. The parent who wakes up his child when the sun rises has agency, while the morning light does not’ (Malm, 2018, p. 84). Malm rejects object orientation on the basis that objects cannot have agency because they do not have an explicit intent or goal (Malm, 2018, pp. 84-85). While Malm’s method for interrogation of such objects to discern whether they have aims is unclear, it must be clarified that most OOO philosophers – along with proponents of ANT, new materialism, and symmetrical archaeology who likewise reject post-Kantian correlationism – do not argue that sentience or even intention is what constitutes the capacity for agency (which is an important distinction between agency in most flat ontologies and in some Indigenous ontologies; compare Bryant, 2021, and Watts, 2013). Instead, most argue for a definition of agency that is distributed, or that encompasses possibility and accountability, wherein human, nonhuman, animate, and inanimate objects, and the relations between them all, have discernible, tangible effects on existence writ large, and on a smaller scale, human culture and behavior (e.g., Bennett, 2010). As explained in Karen Barad’s theory of agential

realism, possibility and accountability do not rest exclusively on intent, even in solely human affairs like negligent homicide, where accountability overrides intent (Barad, 2007; cf. summary in Dolphijn and van der Tuin, 2012, pp. 54-57). Likewise, a hurricane may not have the intention of causing a captain to change course, but it does anyway, and that is agency – or at the very least, potency (Rich, 2017, p. 6). The sun may not have the intention of causing blindness, sunburn, or skin cancer, or any other outcome including photosynthesis, yet in the human material record, there exists kohl, sunscreen, parasols, and tinted windows to counteract solar radiation because the sun has agency. There may have been no intent behind the Big Bang, yet it created the matter that forms all bodies, and its gravity waves are visibly evident as static on our televisions. Agency is equivalent to affective action, not to intent, as Malm suggests. By contrast, OOO argues that interactions between objects – human and nonhuman and regardless of intent – can have real impacts, some but not all of which are discernible to sentient beings, including but not exclusively human beings.

Another counterargument is that OOO is simply too masculine to account for a queer planet of multiplicities, and that this is apparent through its tendency to take as its sample objects machines and corporations, masculine things such as toasters or ships or entire companies of ships (e.g., Behar 2016; Alaimo, 2016, pp. 179-184). While it is true that machines do compose some of the examples used to explain the theory, it cannot be stated with any accuracy that machines are fundamentally more masculine than any other form of art or technology. That a division even exists between art and technology is grounded in European Renaissance thought when a functional and hierarchical separation between forms of *technē* (Greek) and *ars* (Latin) – both of which mean simply ‘craft’ – began to emerge (e.g., Flusser, 1999). In addition to this subtle Eurocentrism, there is also an underlying assumption that machines are for men while willowing organic forms are for women, and that by relying on machines to tell a story, OOO thinkers are excluding women and queer folk from the tale. However, this reasoning seems to rest uncomfortably on stereotypes of what women and men and queer folk are drawn to and the analogies that we each are capable of (and enjoy) understanding (cf. Ransley, 2005). While it is true that most of OOO’s principal thinkers at the moment are male, Morton identifies as nonbinary, and each regardless of sex or gender writes for audiences of all parts and proclivities, and in no uncertain terms decries patriarchy while implicating it in the emergence of the Anthropocene (e.g., Morton, 2018, p. 27; Bryant, 2014, pp. 258-260).

Anthropological archaeologist Severin Fowles has recently claimed that the turn to things is at least partially a product of postcoloniality impeding the study of people of other cultures (Fowles, 2016). The turn to things allows anthropologists to keep giving voice to subaltern subjects – now nonhuman objects – at a time when postcolonial discourse justifiably pushed to end such colonialist practices. His argument that nonhuman objects have become surrogates for non-Western subjects is powerful and warrants deep introspection. However, it does not fully account for Harman’s theory of OOO, which draws from philosophies of Husserl and Heidegger that predate postcolonialism. His argument also brushes up against another criticism of OOO, that in all its panpsychist sympathies (e.g., Harman, 2011, pp. 118-121; Harman, 2009), it is merely an appropriation of animism, present in many Indigenous and non-Western ideologies that also recognize autonomy if not personhood in animate and inanimate objects alike (Marín-Aguilera, 2021; Todd, 2016). While it is true that OOO reaches a similar conclusion regarding the inherent power of all things, and the mysteries that each

contains, it has reached its conclusion independently, and perhaps surprisingly, by means of Western philosophy: that is, beginning with a rejection of the Kantian Revolution of human privilege (Harman, 2011, p. 120; Morton, 2017, pp. 11-13). That many ancient and non-Western cultures theorized first on the secret inner lives of nonhuman things is not up for negotiation; yet neither should it be negotiable that different methods of reasoning can be used by thinkers hailing from different cultural groups to reach the same or similar conclusions – archaeologists in particular ought to be wary of falling back on diffusionist models when convergence is a better explanation for cultural similarities. If anything, the consensus only adds credence to the entire theoretical set. The primacy of Indigenous, ancient, and non-Western thought on this matter is also acknowledged abundantly, perhaps most often by Morton who a) discusses contemporary Aboriginal Australian art and its capacity for embodying the concept of object allure (2013a,b, 2016, 2017), b) ascribes the first identification of hyperobjects to 10<sup>th</sup> century Islamic scholar Muhammad ibn Zakariya al-Razi (2013b, p. 66); and c) whose most recent solo-authored book, *Humankind* (2017), is dedicated to the Water Protectors, Indigenous Americans who have intervened at great cost in the illegal construction of various pipelines that threaten water potability, sovereign territory, and treaty rights in favor of the fossil-fuel economy. Harman also roots his theory of vicarious causation in the Islamic occasionalism espoused by al-Ash'ari and al-Ghazali, in the 10<sup>th</sup> and 12<sup>th</sup> centuries respectively (Harman, 2018, pp. 163-164). It is also worth noting that some Indigenous scholars have incorporated new materialism into their own research, if not uncritically (Tuck and McKenzie, 2015; see also Rich et al., 2022). That said, it is true that greater acknowledgement should be given to Indigenous authors who write on parallel issues of Anthropocene studies and nonhuman ontologies (e.g., Watts, 2013; Kimmerer, 2013; Todd, 2015; Ingersoll, 2016; Whyte, 2017), while avoiding the fictional, universalizing trope of 'Indigenous thought' (cf. Abadía and Porr, 2021). There is no question of who arrived first at this place where the vibrancy of things is self-evident, but it does seem clear that OOO thinkers would like to meet likemindeds there since they happened to arrive too, if unwittingly and by way of a different, phenomenological, theological or existential, path. It might also be noted that neither were OOO affiliates the first Western thinkers in the wake of the Kantian Revolution to encounter this place since, in the seventeenth century, Baruch Spinoza also arrived nearby this multicultural, multitemporal, philosophical trysting tree by way of radical Jewish theology.

Within the Western tradition, an important philosophical objection to OOO's emphasis on collusion with the nonhuman is the sheer impossibility of transcendence into the consciousness of another being. With this view of the limitations of consciousness, we humans cannot ever understand the realities of even fellow *Homo sapiens*, let alone other animals, and least of all those least-ensouled plants, and forget altogether rocks, plastic, glass, and others of the so-called inanimate variety. In his highly influential 1974 paper, 'What Is It Like to Be a Bat?' philosopher Thomas Nagel acknowledges that, although consciousness cannot easily be defined and that it almost certainly exists in forms that we humans and our machines may never detect, moving beyond our subjective phenomenal experience is simply impossible. We are bound to our individual experience and cannot transcend it. Bogost has offered a sympathetic but substantial rebuttal to Nagel's central argument while retaining some of his key concepts on subjectivity, epistemology, and metaphysics. His book *Alien Phenomenology* (2012; see also Bryant, 2014, pp. 62-63, and Killian and Rich, this volume) accepts the limitations of both subjective experience and 'objective' science, but claims that the incomprehensibility

of the 'alien' other is no excuse for not trying to get closer to mutual (?) comprehensibility. He offers three methods for easing the limitations imposed upon us by our epistemic systems (invented and innate) while decentering the human from our 'worlding' (to borrow a Heideggerianism): ontography, metaphorism, and carpentry, each of which embeds humans a little deeper into the realities of our nonhuman fellows (on ontography, see: Harman, 2011, pp. 124-135; Rich, 2017; for all three, see Rich, 2021). He concludes that this practice is not in vain – rather it is the opposite of vanity. As we 'go outside and dig in the dirt', like good archaeologists, we expose our most vulnerable selves to the wonder of Being – and indeed, Becoming (Bogost, 2012, p. 133; cf. Rich, 2017, 2021). This in turn can lead us into closer, tighter, more respectfully intertwined relationships with the 'everyday alien' among us.

The final primary criticism comes from OOO's peers in new materialism and in other branches of speculative realism whose readings of this philosophy's basic tenets have issued concerns about objecthood being defined as withdrawn instead of entangled. They claim that withdrawal cannot account for the symbiotic, nested, and layered aspects of earthly existence (e.g., Keller and Rubenstein, 2017, p. 2). However, this reading does not account for the Janus-faced, paradoxical nature of objects as possessing real (internal, inaccessible) and sensual (phenomenal, changeable) selves as described especially by Harman (2011, 2018). In addition, Bogost (2012), Bryant (2011, 2014), and Morton (2018) – conjuring computer technology, Lacanian psychoanalysis, and quantum mechanics, respectively – all engage with the entanglement of 'sensual' objects considerably more than with their withdrawn alter-egos, for the simple reason that as inaccessible, unknowable, unsolvable mysteries, they exemplify the limits to human knowledge or any other form of access – so what more can be said about the shadowy alter-egos beyond acknowledging their existence?

In effect, new materialism and speculative realism, including its more contested branch of OOO, are in profound agreement about the vibrant, shimmering, and altogether powerful nature of the nonhuman world (cf. Harman, 2016; Harman, 2018, pp. 240-243), and these nonhuman autonomies must once and for all be acknowledged in the West, and especially in the academy, if widespread ideological change is to happen. What these metaphysical explorations all agree on is that this understanding of the nonhuman as greater than the human, as resistant and resilient not passive and conquerable, and as warranting just as much 'thought-power' (to adapt a Bennettism) as the human, has profound implications for human behavior at this critical moment in our shared existence.

To be clear, the most important area of overlap in this ideological Venn diagram is the urgency of the Anthropocene. The people-first (and by extension, the me-first) mentality of humanism (and by extension, capitalism) is what has gotten us into this mess to begin with. Therefore, as humanists and social scientists, there is great potential to heed the call to study objects, not as means to an end – as in the all-too-common human-social (re)integration of objects – but in and of themselves, which includes by definition their accidents, relations, and entanglements. An ideological change may lead us toward real political and socioeconomic change, and in the current system of things, that may be the only way forward. As we attempt to free ourselves and others of the fishing line and plastic six-pack rings that pull us deeper into rising sea levels, those of us whose expertise is in artifacts underwater should step up and take more responsibility for considering critically the simultaneously withdrawn and entangled nature of objects in existence.

## Future: Adaptations

While a radical departure is inevitable as we sink deeper into the Anthropocene, we might begin with more humble adaptations of the usual research questions of ‘how did this ship wreck’, or ‘with whom were these people trading when their settlement was consumed by glacial meltwater’, to consider how this knowledge can be put to the work of the Anthropocene. In so doing, ethical concerns surrounding the implementation of flat ontologies into archaeology might be mitigated (Ribeiro and Wollentz, 2020). Although by no means exhaustive, we offer a few questions that we believe are worth considering as we embark on new projects, revise older ones, and advise new generations of students (whose lives will be most directly affected by what is done and not done now) on their own research paths. To respond adequately to cataclysm, collapse, and eruption, fervent adaptation is an urgent necessity.

## Collapse

If collapse is a failure from above, then questions addressing this form of destruction may be understood as explicitly political. The academy has long been complicit in the darkest avenues of industrialism, neoliberalism, and globalization following centuries of exploitative colonial and neocolonial policies, which have made the Anthropocene into its own system of oppression, disproportionately harming marginalized populations. Although we have too often been complicit, academics have also long been aware of the failures of these policies. Now, a collapse of these systems appears imminent, if not overdue.

- Considering the possibility of the collapse of civilization as we know it, what are the advantages to maritime and nautical archaeologies adopting more critical theory? Moving beyond archaeological applications of philosophical approaches, what are the precedents for mutual lines of influence between philosophy and archaeology? To what extent can such mutualistic relationships be strengthened, and what would be the consequences?
- If maritime archaeology is to increase within the Global South then room has to be made for more non-Western theoretical approaches to archaeological practice; so how can maritime and nautical archaeologies more substantially and significantly include and account for collapsed Indigenous perspectives?
- Considering the number of contemporary refugees who perish in water crossings, how can nautical archaeologists contribute to preventative measures by studying the crises?
- What can be learned from previous overseas colonization missions that might inform current conversations about Mars colonization as an escape from earth-bound extinction?
- Given the increasing amount of satellite and rocket debris that re-enters Earth and crashes into oceans, what can maritime archaeologists contribute to the study of its effects on marine habitats?
- If object-oriented ontologies, criticisms of heritage, de-anthropocentric approaches to fields within the humanities and arts, and critical evaluations of the Anthropocene all have urgent real-world implications, how can we as theorists, researchers, and educators effectively translate complex theories into pedagogical, public-engagement, and public-policy praxis?

## Cataclysm

Surging up from below, cataclysm is the particular destruction of a warming planet, whose polar ice caps are melting at accelerated rates and raising sea levels at several millimeters per year and counting. Other results of cataclysm are the megastorms – the severe hurricanes, typhoons, and cyclones battering coastal areas – that are increasing in power and number due to rising surface temperatures of oceans. But cataclysm doesn't stop at just the encroachment of water. In the Anthropocene, these waters are loaded with microplastics, agricultural runoff, raw sewage, petroleum and its derivatives, and radioactive waste. These entanglements of the anthropogenic and the preexisting obfuscate the nature/culture divide, and should cause us to radically reconsider the place of the human in the world. Furthermore, as scientists of trash, and as scientists of refuse in water, maritime archaeologists have a distinct responsibility to rise, so to speak, to the occasion of cataclysm.

- As those who study death by drowning (shipwrecks and submerged coastal settlements) in the midst of global cataclysm, how can maritime and nautical archaeologists significantly contribute to conversations about and actions against global sea-level rise?
- How can maritime archaeology use object-orientation to become action-oriented toward coastal resiliency?
- What can nautical archaeologists offer to mitigation efforts of polluting Industrial-era and contemporary shipwreck sites?
- How does the idea of the 'archaeological object' change when it encompasses the truly liquid, i.e., the nonmaterial and the noncultural?
- Understanding the fundamentally public nature of these problems, if *nature* and *culture* as distinct domains are dissolved, what happens to tangible and intangible forms of heritage?
- How does the Humanities change course to reflect the realization that human 'subjects' are but other objects in a complex and interconnected planet, our fellow participants of whom are no less deserving of scholarly attention?
- To what degree do classic Western dualisms, such as past and present, nature and culture, human and world, subject and object, influence everyday human behaviors? What effect would breaking down the binaries in an academic sphere have on the general public, and by extension, Earth's planetary systems?

## Eruption

Bursting forth from containment, catastrophic eruption is not limited to volcanoes. Retaliating against centuries of colonial racism, there are, at the time of writing, millions of marginalized people groups bursting forth in public demonstrations to demand justice and protest police violence. Movements such as the Arab Spring, Black Lives Matter, and Missing and Murdered Indigenous Women and Girls, are grassroots eruptions in response to the violently oppressive social conditions generated within the Anthropocene. Other examples of epochal eruption, from capitalism to Chernobyl, have only exacerbated the conditions of oppression among vulnerable human and nonhuman populations alike. Humans have not only witnessed but facilitated eruptions of radioactivity from split hydrogen atoms; the permeation of micro-plastic pollution into soft animal bodies and rigid Arctic ice; and a pandemic caused by a microscopic virus in Wuhan bats, killing

millions around the world as it spreads by air and boat travel. Again, maritime archaeology has a unique capacity to analyze the potency of anthropogenic forces as objects, which erupt into new and disastrous afterlives.

- With the understanding that ships were the mechanisms of European colonialism, how can maritime archaeology contribute to post- and anti-colonial narratives, instead of reiterating that of the seafaring colonizer as ‘Great Man’?
- Given the role of cruise ships in the spread of the current coronavirus pandemic (COVID-19), how can maritime archaeologists use their expertise in ship architecture; modes, modifications, and motivations of sea travel; and alternative uses of ships to conceive of alterations to an existing maritime industry?
- It is often predicted that the next major violent conflicts will be fought over fresh water. The US is already seeing these eruptions of conflict at pipeline construction sites that threaten to interfere with Indigenous peoples’ access to fresh water. The Syrian Civil War was also precipitated by water mismanagement. So how can maritime archaeologists use their knowledge of past water crises to contribute to important negotiations between the conflicting interests of infrastructure, investments, and human rights?
- In what ways can maritime archaeologists convert their knowledge of waterways into concrete changes to public policy on nuclear waste disposal, fossil-fuel pollution, sea- and airborne pandemics, microplastics pervasion, wastewater and runoff?
- An overarching question that encompasses the whole catastrophic triad raises the issue of pedagogy: how can we establish effective programs for public discourse and teaching that do not fall back on the dystopian languages of hopelessness (‘there’s no use in trying’) or apocalypticism (‘divine (or technophilic) intervention will fix it, so there’s no use in worrying’)?

It may be noted that none of the research questions offered here poses sustainability as a solution worthy of scholarly consideration. The paradigm of sustainability that has seeped into academic communities and campuses in rich countries around the world is not just insufficient but also counterproductive. Sustainability is guided by a gospel of comfortability, ultimately rooted in capitalism, which is one of the most powerful underlying forces of the Anthropocene (Moore, 2015). It pre-supposes an equilibrium that existed, if it existed at all, in a past and increasingly distant Holocene planet. It leads consumers to believe that if they buy organic food and recycle their plastics that the current extinction event will stop. Sustainability fools consumers into a false sense of security by thinking that they are ‘saving the world’ by buying not less but differently and discarding not less but differently, all the while ‘sustaining’ a comfortable, neoliberal lifestyle. Ultimately, sustainability externalizes individual humans from their commodity-world, which is perceived as remote and inert, and this is the selfsame ideology of the Anthropocene (Alaimo, 2016, pp. 171-177).

Just as dangerously, in Morton’s terms of dark ecology, sustainability makes its adherents susceptible to ‘Beautiful Soul Syndrome’ (to adapt a Hegelianism), the sufferer of which clings to a false sense of superiority at the same time as one of false hope (Morton, 2016, pp. 130-131; Rich, 2017, pp. 219-220). In an era of necessary hierarchical flattening done honestly if hastily, neither a false sense of superiority nor one of security will help us achieve the radical revision needed to confront the

Anthropocene head-on. Instead, we must realize that our heads, our choices, our undifferentiated mind-bodies, are all a part of Earth without being apart from it. We must embrace the fact that we are always-already immersed in objects, and only then can we orient ourselves among the entanglements.

## **Conclusions: Accountability**

Given rapidly rising sea levels and the promise to make ruins of many more island and coastal communities, maritime and nautical archaeologists have the potential to be at the forefront of conversations surrounding the realities of the Anthropocene. Wrecked oil tankers globally, along with the desperate flight of climate refugees resulting in more wrecked boats and ships, heightens the urgency of maritime and nautical archaeologists' involvement at the levels of interdisciplinary academic discourse and public policy (Campbell, 2021; Rich et al., this volume). While mutual and effective interdisciplinarity is increasing among philosophers and archaeologists, more maritime archaeologists might also step out to offer unique and important insights into climate adaptability, landscape submersion, refugee crises, waterborne pollution, and escapist colonization. Archaeology, as the field containing the sum of data of human existence on Earth, should be a bigger part of the discourse on the reality of the Anthropocene and, in all likelihood, in the driver's seat of a radical re-imagination of human life on Earth as the one field that regularly engages with the alienness of different temporalities and ontologies.

Finally, we would like briefly to acknowledge the irony at work in separating the three sections of the body of this paper into past, present, and future. While grasping the arbitrariness if not fallaciousness of the tripartite division of time (cf. Lucas, 1997, 2005), we suggest that there may be some value in conforming to these standards: namely, that there is an accountability in thinking in terms of what has happened, what is happening, and what could happen. Global warming, Morton's favorite example of a hyperobject (Morton, 2013b), transcends these times, which is why we must stop referring to it as though it were a prognostication. Global warming, like other causes of ecocide, is neither a future tense nor a past tense. It is a present tense that we cannot defer to times other than our own. Acknowledging this is requisite to taking responsibility for it, which in turn will help us change our tenses so there exists a future that as many of us earthlings as possible might recognize as earthly.

## **Acknowledgements**

The first author of this paper wrote her sections along the cypress swamps of the Waccamaw River, which is settler-occupied Waccamaw territory in what is now known as South Carolina, USA. She wishes to express gratitude to the Waccamaw Indian People – *pilamayaye* – and seeks ways to honor the ancestors, water, and land, where she is a guest. Both authors thank the readers of early drafts of this paper for their insights, and all the collaborators of this edited volume for their contributions.

## Works Cited

- Abadía, O. M., and M. Porr (eds) (2021) *Ontologies of Rock Art: Images, Relational Approaches, and Indigenous Knowledges*. London: Routledge.
- Adams, J. (2013) *A Maritime Archaeology of Ships: Innovation and Social Change in Late Medieval and Early Modern Europe*. Oxford: Oxbow.
- Alaimo, S. (2013) 'Violet-Black', in J.J. Cohen (ed.), *Prismatic Ecology: Ecotheory behind the Green*. Minneapolis: University of Minnesota Press, pp. 233-251.
- Alaimo, S. (2016) *Exposed: Environmental Politics & Pleasures in Posthuman Times*. Minneapolis: University of Minnesota Press.
- Alberti, B., S. Fowles, M. Holbraad, Y. Marshall, and C. Witmore (2011) 'Worlds Otherwise': Archaeology, Anthropology, and Ontological Difference', *Current Anthropology* 52, pp. 896-912.
- Barad, K. (2007) *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning*. Durham: Duke University Press.
- Behar, K., ed. (2016) *Object-Oriented Feminism*. Minneapolis: University of Minnesota Press.
- Bennett, J. (2010) *Vibrant Matter: A Political Ecology of Things*. Durham: Duke University Press.
- Bogost, I. (2012) *Alien Phenomenology: Or, What It's Like to be a Thing*. Minneapolis: University of Minnesota Press.
- Bryant, L. (2011) *The Democracy of Objects*. Ann Arbor: Open Humanities Press.
- Bryant, L. (2014) *Onto-Cartography: An Ontology of Machines and Media*. Edinburgh: University of Edinburgh Press.
- Bryant, L. (2021) 'Wilderness Heritage: For an Ontology of the Anthropocene', in T.R. Bangstad and Þ. Pétursdóttir (eds), *Heritage Ecologies*. London: Routledge, pp. 66-80.
- Campbell, P.B. (2020) 'The Sea as a Hyperobject: Moving Beyond Maritime Cultural Landscapes', *Journal of Eastern Mediterranean Archaeology and Heritage Studies* 8(3), pp. 1-22.
- Campbell, P.B. (2021) 'The Anthropocene, Hyperobjects and the Archaeology of the Future Past', *Antiquity* 95(383), pp. 1315-1330.
- Cipolla, C.N., R.J. Crellin, and O.J.T. Harris (2016) 'Posthuman Archaeologies, Archaeological Posthumanism', *Journal of Posthumanism* 1(1), pp. 5-21.
- Delanda, M. (2016) *Assemblage Theory*. Edinburgh: University of Edinburgh Press.
- Deleuze, G. and F. Guattari (1987). *A Thousand Plateaus*, Brian Massumi (trans.). Minneapolis: University of Minnesota Press.
- Dolphijn, R., and I. Van der Tuin (2012) *New Materialism: Interviews and Cartographies*. Ann Arbor: Open Humanities Press.
- Dolwick, J.S. (2008) 'In Search of the Social: Steamboats, Square Wheels, Reindeer and Other Things', *Journal of Maritime Archaeology* 3(1), pp. 15-41.
- Dolwick, J.S. (2009) 'The Social' and Beyond: Introducing Actor-Network Theory', *Journal of Maritime Archaeology* 4(1), pp. 21-49.
- Edgeworth, M. (2014) 'Enmeshments of Shifting Landscapes and Embodied Movements of People and Animals', in J. Leary (ed.), *Past Mobilities: Archaeological Approaches to Movement and Mobility*. Farnham: Ashgate, pp. 83-97.

- Flatman, J. (2003) 'Cultural Biographies, Cognitive Landscapes and Dirty Old Bits of Boat: Theory in Maritime Archaeology', *International Journal of Nautical Archaeology* 32, pp. 143-157.
- Flusser, V. (1999) 'About the Word Design', trans. A. Mathews, *The Shape of Things: A Philosophy of Design*. London: Reaktion, pp. 17-21.
- Fowles, S. (2016) 'The Perfect Subject (Postcolonial Object Studies)', *Journal of Material Culture* 21, pp. 9-27.
- Gan, E., A. Tsing, H. Swanson, and N. Bubant (2017) 'Introduction: Haunted landscapes of the Anthropocene', in A. Tsing, H. Swanson, E. Gan, and N. Bubant (eds), *Arts of Living on a Damaged Planet*, Minneapolis: University of Minnesota Press, pp. G1-G14.
- Gell, A. (1998) *Art and Agency: An Anthropological Theory*. Oxford: Clarendon Press.
- Greene, K. (1986) *The Archaeology of the Roman Economy*. Berkeley: University of California Press.
- Harman, G. (2009) 'Zero-Person and the Psyche', in D. Skrbina (ed.), *The Mind that Abides: Panpsychism in the New Millennium*. Amsterdam: John Benjamins Publishing Co., pp. 253-282.
- Harman, G. (2011) *The Quadruple Object*. Winchester: Zero Books.
- Harman, G. (2016) *Immaterialism: Objects and Social Theory*. Cambridge: Polity Press.
- Harman, G. (2018) *Object-Oriented Ontology: A New Theory of Everything*. London: Penguin.
- Harman, G. (2019) 'The Coldness of Forgetting: OOO in Philosophy, Archaeology, and History', *Open Philosophy* 2, pp. 270-279.
- Harman, G. and C. Witmore (2023) *Objects Untimely: Object-Oriented Philosophy and Archaeology, in Conversation*. Cambridge: Polity Press.
- Harpster, M. (2013) 'Shipwreck Identity, Methodology, and Nautical Archaeology', *Journal of Archaeological Method and Theory* 20, pp. 588-622.
- Helmreich, S. (2009) *Ocean: Anthropological Voyages in Microbial Seas*. Berkeley: University of California Press.
- Helmreich, S. (2016) *Sounding the Limits of Life: Essays in the Anthropology of Biology and Beyond*. Princeton: Princeton University Press.
- Hodder, I. (2012) *Entangled: An Archaeology of the Relationships Between Humans and Things*. Oxford: Wiley-Blackwell.
- Ingersoll, K. A. (2016) *Waves of Knowing: A Seascape Epistemology*. Durham: Duke University Press.
- Kant, I. (1998 [1781]) *Critique of Pure Reason*, P. Guyer and A.W. Wood (trans.). Cambridge: Cambridge University Press.
- Kimmerer, R.W. (2013) *Braiding Sweetgrass: Indigenous Wisdom, Scientific Knowledge, and the Teachings of Plants*. Minneapolis: Milkweed Editions.
- Lucas, G. (1997) 'Forgetting the Past', *Archaeology Today* 13, pp. 8-13.
- Lucas, G. (2005) *The Archaeology of Time*. London: Routledge.
- Keller, C. and M.-J. Rubenstein (2017) 'Tangled Matters', in C. Keller and M.-J. Rubenstein (eds), *Entangled Worlds: Religion, Science and New Materialisms*. New York: Fordham University Press, pp. 1-18.
- Malm, A. (2018) *The Progress of this Storm*. London: Verso.

- Marín-Aguilera, B. (2021) 'Ceci N'Est Pas un Subalterne. A Comment on Indigenous Erasure in Ontology-Related Archaeologies', *Archaeological Dialogues* 28(2), pp. 133-139.
- Meillassoux, Q. (2010) *After Finitude: An Essay on the Necessity of Contingency*. London: Continuum.
- Mentz, S. (2009) 'Toward a Blue Cultural Studies: The Sea, Maritime Culture, and Early Modern English Literature', *Literature Compass* 6/5, pp. 997-1013.
- Mentz, S. (2010) 'Toward a Cultural Poetics of Early Modern Shipwreck', *The Humanities Review* 8(2), pp. 108-115.
- Mentz, S. (2014) 'Shipwreck', in J.J. Cohen (ed.), *Inhuman Nature*. Washington D.C.: Oliphaunt Books, pp. 1-15.
- Mentz, S. (2015) *Shipwreck Modernity: Ecologies of Globalization, 1550-1719*. Minneapolis: University of Minnesota Press.
- Moore, J.W. (2015) *Capitalism in the Web of Life: Ecology and the Accumulation of Capital*. London: Verso.
- Morton, T. (2007) *Ecology Without Nature: Rethinking Environmental Aesthetics*. Cambridge: Harvard University Press.
- Morton, T. (2013a) *Realist Magic: Objects, Ontology & Causality*. Ann Arbor: Open Humanities Press.
- Morton, T. (2013b) *Hyperobjects: Philosophy and Ecology After the End of the World*. Minneapolis: University of Minnesota Press.
- Morton, T. (2016) *Dark Ecology: For a Logic of Future Coexistence*. New York: Columbia University Press.
- Morton, T. (2017) *Humankind: Solidarity With Nonhuman People*. London: Verso.
- Morton, T. (2021). 'Inheritance', in T.R. Bangstad and Þ. Pétursdóttir (eds), *Heritage Ecologies*. London: Routledge, pp. 383-390.
- Nagel, T. (1974) 'What Is It Like to Be a Bat?' *The Philosophical Review* 83, pp. 435-450.
- Nativ, A. and G. Lucas (2020) 'Archaeology Without Antiquity', *Antiquity* 94 (376), pp. 852-863.
- Normark, J. (2014) 'Water as a Hyperfact', *Current Swedish Archaeology* 22, pp. 183-206.
- Nunn, P.D. (2020) 'In Anticipation of Extirpation: How Ancient Peoples Rationalized and Responded to Postglacial Sea Level Rise', *Environmental Humanities* 12(1), pp. 113-131.
- Olsen, B. (2010) *In defense of things: Archaeology and the ontology of objects*. Lanham: AltaMira.
- Olsen, B., M. Shanks, T. Webmoor, and C. Witmore (2012) *Archaeology: The Discipline of Things*. Berkeley: University of California Press.
- Papadopoulou, C. (2016) 'The Phenomenon of the Phantom Place: Archaeology and Ships', *Journal of Material Culture* 21, pp. 367-382.
- Pétursdóttir, Þ. (2017) 'Climate Change? Archaeology and Anthropocene', *Archaeological Dialogues* 24, pp. 175-205.
- Pétursdóttir, Þ., and B. Olsen (2018) 'Theory Adrift. The Matter of Archaeological Theorizing', *The Journal of Social Archaeology* 18, pp. 97-117.
- Plutarch (1914) *The Parallel Lives*, B. Perrin (trans.). Cambridge: Cambridge University Press.

- Ransley, J. (2005) 'Boats are for Boys: Queering Maritime Archaeology', *World Archaeology* 37, pp. 621-629.
- Ribeiro, A., and G. Wollentz (2020) 'Ethics in the Practice of Archaeology and the Making of Heritage: Understanding Beyond the Material', in J. Müller and A. Ricci (eds), *Past Societies: Human Development in Landscapes*. Leiden: Sidestone Press, pp. 191-202.
- Rich, S.A. (2017) *Cedar Forests, Cedar Ships: Allure, Lore and Metaphor in the Mediterranean Near East*. Oxford: Archaeopress.
- Rich, S.A. (2021) *Shipwreck Hauntography: Underwater Ruins and the Uncanny*. Amsterdam: Amsterdam University Press.
- Rich, S.A., C. Sievers-Cail, and K. Patterson (2022) 'What Is there to Do if You Find an Old Indian Canoe? Anti-Colonialism in Maritime Archaeology', *Heritage* 5(4), pp. 3664-3679.
- Steinberg, P., and K. Peters (2015) 'Wet Ontologies, Fluid Spaces: Giving Depth to Volume Through Oceanic Thinking', *Environment and Planning D: Society and Space* 33, pp. 247-264.
- Strang, V. (2015) *Water: Nature and Culture*. London: Reaktion.
- Tilley, C. (1994) *A Phenomenology of Landscape: Places, Paths and Monuments*. Oxford: Oxford University Press.
- Tilley, C. (1999) *Metaphor and Material Culture*. Oxford: Oxford University Press.
- Tilley, C. (2004) *The Materiality of Stone*. Oxford: Berg.
- Todd, Z. (2015) 'Indigenizing the Anthropocene', in H. Davis and E. Turpin (eds), *Art in the Anthropocene: Encounters Among Aesthetics, Politics, Environment and Epistemology*. Ann Arbor: Open Humanities Press, pp. 241-254.
- Todd, Z. (2016) 'An Indigenous Feminist's Take on the Ontological Turn: 'Ontology' is Just Another Word for Colonialism', *Journal of Historical Sociology* 29(1), pp. 4-22.
- Tuck, E. and M. McKenzie (2015) *Place in Research: Theory, Methodology, and Methods*. London: Routledge.
- Tuddenham, D.B. (2012) 'Cyborgs and Shipwrecks: The Management of Norwegian Underwater Cultural Heritage in the Light of Actor Network Theory', in P. Nymoen (ed.), *Årbok 2011*, Oslo, pp. 99-148.
- Watts, V. (2013) 'Indigenous Place-Thought and Agency Amongst Humans and Non-humans (First Woman and Sky Woman go on a European Tour!)', *Decolonization, Indigeneity, Education and Society* 2(1), pp. 20-34.
- Webmoor, T. (2007) 'What About 'One More Turn After the Social' in Archaeological Reasoning? Taking Things Seriously', *World Archaeology* 39, pp. 563-578.
- Whyte, K.P. (2017) 'Our Ancestors' Dystopia Now: Indigenous Conservation and the Anthropocene', in U.K. Heise, J. Christensen, and M. Niemann (eds), *The Routledge Companion to the Environmental Humanities*. London: Routledge, pp. 206-215.
- Witmore, C. (2007) 'Symmetrical Archaeology: Excerpts of a Manifesto', *World Archaeology* 39, pp. 546-562.
- Witmore, C., M. Edgeworth, I. Hodder, T. Ingold, and M. Lazzari (2014) 'Archaeology and the New Materialisms (and Comments)', *Journal of Contemporary Archaeology* 1, pp. 203-246.



# The Shipwreck of Theseus

## Philosophy and Maritime Archaeology

Graham Harman

### Abstract

This paper takes its title from a lecture by Sara Rich, and draws further inspiration from Rich's stirring book, *Shipwreck Hauntography*. 'The ship of Theseus' is an old chestnut in philosophy which asks us to imagine the gradual replacement of each piece of a ship with a new but functionally equivalent piece. Ultimately, the new ship of Theseus looks exactly the same as the old one but retains none of its original pieces; meanwhile, in a further twist, the old pieces are reassembled into a different ship. Which of the two, if either, is the real ship of Theseus? This chapter contends that the paradox relies too heavily on the model of objects as sum totals of parts or qualities. If we follow instead the notion of Aristotle and Edmund Husserl that an object can lose any number of transient features while still remaining the same, then stripping parts away from the ship of Theseus becomes a positive rather than negative event in attempting to preserve it. So it is with shipwrecks. Following Rich's critique of the goal of resurrecting shipwrecks and restoring them into actual museum-piece ships, I claim that the shipwreck at the bottom of the sea gets us closer to what the ship always was in the first place: a 'cold' object denuded of information, which is precisely what archaeology deals with best. Here I conclude with a response to Tim Flohr Sørensen's recent claim that object-oriented ontology (OOO) misreads the meaning of archaeology.

### Introduction

This article takes its title from a lecture by Sara Rich (Rich, 2016) and draws further inspiration from her stirring new book *Shipwreck Hauntography* (Rich, 2021). At issue, of course, is the archaeological and even philosophical status of shipwrecks. In such cases, full restoration of the wreck is often seen as the end goal: as with the popular Stockholm museum dedicated to the *Vasa*, which sank on its maiden voyage in 1628 and was not raised and restored until 1961. In this way the *Vasa* was apparently rescued from a state of ruin and returned to a fully recognizable state, admirable for its picturesque historical exemplarity. I happen to be one of the millions of tourists who have visited and enjoyed

this salvaged Swedish warship; the hours my wife and I spent circling all levels of the vessel, feeling ourselves present once more in the Sweden of Gustavus Adolphus, were both happy and intellectually fruitful. Nonetheless, in *Shipwreck Hauntography* Rich advances some archaeological reasons for why restoration is not always the proper end goal. As it turns out, I have philosophical grounds for taking the same position. There is a value to wrecks and ruins that goes well beyond Romantic sentiment.

## The Ship of Theseus

The so-called ‘Ship of Theseus’ paradox is one of the oldest in Western philosophy, and is especially prominent in Plutarch’s life of that possibly mythical hero of Bronze Age Athens (Plutarch, 2015). It is said that the ship of Theseus was preserved for centuries by his home city, which kept it in good order by replacing each rotting piece of wood on the vessel with a new and identical piece. If we imagine a point in time at which none of the original pieces of wood remain, can we still consider it to be the actual ship of Theseus? If we conclude that it is no longer the same ship, then at what point did it lose its authentic status? Did this happen after replacing a single piece of wood, or did it take some other definite number of replacements to turn it into a different ship altogether? Numerous variants on the basic paradox have also been offered. For instance, what if a clever entrepreneur were to salvage each piece of original wood as it is discarded, and reassemble them all into a second ship of Theseus made solely of the original wooden pieces? Would there now be two different ships with equal claims to be the real one? If not, then which should we select as the true historic object? The paradox resurfaces frequently in present-day philosophy, especially when questions are posed about the identity of a person over time. Given that the atoms in one’s body are constantly changing, not to mention one’s memories and personal list of deeds, to what extent can we speak of a single life belonging to one and the same person? Perhaps David Macey was right to call his biography *The Lives of Michel Foucault* (Macey, 1995) in the plural: not due to any unique multi-sidedness of Foucault as a person, but simply because anything and anyone will have multiple lives rather than one.

So much has been written by philosophers on the Ship of Theseus paradox, and so much of it is good – or at least prudent and respectable – that to grasp its main themes we can simply examine almost any randomly chosen article on the topic. When I enter ‘Ship of Theseus’ into a Google Scholar search window, the first result is a relatively old article from *Analysis* by the then-youthful analytic philosopher Theodore Scaltsas of Wolfson College, Oxford (Scaltsas, 1980), now Professor Emeritus at Edinburgh. Graced with the straight-to-the-point title ‘The Ship of Theseus’, the article holds that the paradox is not as easily solved as many seemed to think at the time.

Scaltsas’s primary concern in this article is to reject the apparent professional consensus of 1980 that a thing remains the same if its *form* remains the same, regardless of how many changes there may have been in its pieces. Prominent among his opponents is the philosopher Brian Smart, who concludes that ‘the continuity of the form condition is non-defeasible [i.e., cannot be voided], while the identity of original parts condition is defeasible [i.e., can be voided]’ (Smart, 1973, p. 26). Scaltsas confronts this claim with a lively counter-example: ‘Consider that there are two identically constructed ships that make the sacred voyage from Piraeus [the port of Athens] to [the sacred island of] Delos every year’ (Scaltsas, 1980, p. 153), a voyage promised by Athens *in perpetuum* to honor Theseus for slaying the

fearsome Cretan Minotaur. The two ships are clearly differentiated by their respective colors, so let's refer to them as Theseus Red and Theseus Blue. During the homeward journey, the head priest of the mission tries a philosophical experiment by exchanging each and every plank of the two ships. The only trace of the original situation is that Theseus Red was entrusted -by custom- with the mission's holy relics, which were placed in a special cabin on board. But even though the head priest exchanged each and every piece of wood between the two ships, he left the relics in their original place. As a result, when the mission returns to Piraeus, the relics are now on board the blue-colored ship instead of the red one. Upon learning this, the crowd of Athenians cries out in horror that a great sacrilege has been committed. The head priest tries to calm the mob by explaining his philosophical game, but the crowd is unconvinced and continues to howl in outrage. For even though the head priest shares Smart's conviction that form always trumps matter in defining identity, the crowd will hear nothing of it, since it has a different intuition of what constitutes the same ship over time: the identity of the original parts of the two ships.

Scaltsas draws several inferences from this example. The first is that there are multiple possible criteria for what constitutes the identity of the Ship of Theseus:

1. We can follow Smart in thinking that as long as the form of the ship remains the same, then it remains the same ship as the original even if all of its pieces have been replaced. Although the exact meaning of 'form' would need further clarification, it is clear from the example that the head priest does not think that color belongs to the category of form, since he plainly does not care whether the ship that carries the holy relics is red or blue.
2. We can go along with the crowd and define the ship by the identity of its original parts. On this basis, since all of the red planks have step-by-step become parts of the *other* ship, the holy relics – simply by remaining stationary – have effectively switched between the two ships, and therein lies the sacrilege.
3. Scaltsas notes there are other cases in which the identity of *matter* might be used as the chief criterion. Consider the famous example of the chemist George de Hevesy, who protected the Nobel Medals of his fellow Laureates James Franck and Max von Laue during World War II in unusual fashion. When the Nazis invaded Denmark, the export of gold outside the country was forbidden, so de Hevesy had no choice but to keep his friends' Nobel medallions inside the country. Yet if they were discovered by the Nazis, they would no doubt have been confiscated and sold, and hence forever lost to their rightful owners. The clever solution adopted by de Hevesy was to dissolve the medals in *aqua regia* and preserve the resulting jars of gold particles on his shelf until after the war. The Nobel Foundation then restruck the medals and returned them to Franck and von Laue. Although there was no 'continuity of form' in this case, the use of the original gold presumably made the new medals feel more like the real thing than replacements would have.
4. Although Scaltsas does not develop the point, he adds that 'the origin and history of the object' (Scaltsas, 1980, p. 152) might also play a role in determining whether something has remained identical. An obvious example here would be Saul Kripke's 'causal' theory of names, which is better described as a 'historical' theory (Kripke, 1980). If we say that Christopher Columbus was the first European to discover the

Western Hemisphere, we do not cease to call him Columbus once it is proven that the Vikings long predated him. We still call this person ‘Columbus’ because that is what he has always been called, even if much of what we thought we knew about him was wrong. In a more extreme example, Kripke argues that even the discovery of a fully preserved skeleton of a horse with a horn would not prove that unicorns once existed. His reasoning is that a unicorn is not just a collection of widely reputed unicorn properties, such as ‘looking like a horse with a horn’. Instead, a unicorn is whatever those people far back in history were originally referring to with the word. More concretely, the just-discovered skeleton might belong to a different evolutionary species hailing from much further back in time than any Medieval chronicler could have witnessed, though the Middle Ages may have had different horned horses of their own. According to Kripke, only these latter should be called ‘unicorns’.

This clarification of different possible criteria for the Ship of Theseus is helpful, though perhaps incomplete. Yet the other inferences made by Scaltsas are less convincing. The reason there is no clear hierarchy among these criteria, he asserts, is that ‘cases of conflict [such as the identity of the Ship of Theseus] are so rare in everyday life that we have not had need to compare’ the standards listed above, and therefore ‘our intuitions are blunt’ when it comes to such cases (Scaltsas, 1980, p. 152). While this seems like a good explanation for people’s initial clumsiness in deciding which is the real Ship of Theseus, Scaltsas is also devoted to the implausible notion that human history might one day force us to develop a sharper ability to answer such questions: ‘only the need for making such decisions in everyday life will force us to develop a functionally acceptable code of artifact reidentification’ (Scaltsas, 1980, p. 157). We might well imagine a short story -science fiction or otherwise- in which humans are compelled by circumstance to improve their rough-and-ready sense of priorities among identity criteria. What is harder to imagine is that such rugged historical experience could ever lead to any sort of philosophical consensus on the matter. In the year 2023 we can have philosophical disagreement as to whether form, parts, matter, history or something else should have the upper hand in determining identity, and the inhabitants of our imagined short story could no doubt have similar debates in whatever real or unreal century they occupy. Experience can help us learn the best way to mix a drink or balance a household budget, but it would take an extreme form of pragmatism to conclude that any imagined set of life conditions could settle the problem of identity once and for all.

In any case, the fact that we have not yet gained such illumination from everyday experience leads Scaltsas to absolute certainty on at least one point: given our lack of a foolproof code of identification for objects over time, we cannot ‘assume or impose a code which we happen to find appealing or convincing’ (Scaltsas, 1980, p. 157). Yet it seems to me that Scaltsas is mixing two very different things: the first a praiseworthy cultural-political tolerance, and the second a somewhat trite form of relativism. Let’s consider his main example. The head priest thinks the holy relics are aboard the same ship where they have always been, while the crowd thinks the relics have shifted between vessels, with severe religious crime as the result. While it is true that the crowd uses the colors blue and red to identify which ship is which, color is not their ultimate criterion: Scaltsas stipulates that if the head priest had told the crowd (whether truthfully or not) that he had merely

repainted the two ships *en route*, the crowd would have been satisfied and calmed down. In other words, the head priest finds the (still imprecisely defined) ‘form’ of the ship most significant, while the crowd is devoted to the importance of its original parts. Ultimately, neither side cares about the color.

Politically speaking, the wisest and fairest thing to do with such a controversy would be to cool down passions on both sides and assure everyone that it was all a simple misunderstanding. No one should be sure enough that they fully understand transtemporal identity criteria as to boldly accuse others of a capital crime. Let tolerance prevail, and let humans be cautious and humble about their innate capacity for error. But barring his hypothesized case where humans might learn what identity is through the labor of everyday experience, Scaltsas seems willing to push things further and claim that no answer to the Theseus problem is better than any other. As he puts it, ‘Theseus’ ship as well as other similarly constructed cases are actual paradoxes’ (Scaltsas, 1980, p. 152). by which he seems to mean not just that they are puzzles, but that they do not have a correct answer aside from whatever collective human experience might someday come up with.

It is worth noting that philosophical relativism is often defended for political reasons of this very sort. If we take the side of the high priest then we seem to defend the claims of a narrow religious elite against those of the Athenian *demos*, while if we take the side of the crowd we seem to endorse violent condemnation of a flippant but basically well-meaning official. Rather than choosing either position, it seems politically safer to hold that everyone has their own private perspective and hence no one should be too judgmental. Although this conciliatory attitude is probably the best stance in most such cases, its gross philosophical insufficiency becomes clear as soon as we de-politicize it. To do so, we need only remove the Athenian crowd from the story altogether. In our new version of the tale, the priest still performs the exchange of all the wooden planks between the two ships on their way back to Piraeus. But instead of purposely leaving the holy relics in their original place, he does so by mistake, and realizes in horror that he may have committed sacrilege without anyone else knowing it. Initially, the priest was convinced that his changing of the planks was a harmless philosophical stunt that affected nothing; after all, the ‘forms’ of both ships remained the same, even though their colors had switched places. But now he grasps the other side of the argument, that perhaps the identity of each ship is defined by its original pieces. The priest is now wracked with uncertainty. A deep believer in the truth of Greek polytheism, he seriously considers taking his own life, so deep is his shame and horror at this inadvertent misplacement of the holy relics.

Stated differently, it strikes me as admirable to listen to all sides in a discussion and suspend judgment as to which position is right, if any. Human tact and diplomacy require nothing less of us. But once we shift the situation to the inside of our own heads, this sort of studied indifference as to which option is true is often callow or cowardly. Albert Einstein may or may not have been tolerant during debates with others about gravity, depending on his mood at the time and the demeanor of his opponents. But it would be absurd to expect Einstein to appreciate equally all the diverse perspectives on General Relativity that he himself had passed through on his way to the eventual solution. In other words, while tolerance toward others is praiseworthy, serious pursuit of an intellectual goal requires a supreme form of intolerance toward oneself. Although we should always

remain cautious and avoid any fanatical commitment to our current beliefs, a flabby or soggy perspectivism ('all identity criteria are equally valid perspectives') will not pass muster with anyone who takes the question seriously. At any given moment in our development, we must and do take a stand on such issues, drawing on whatever reasons we have discovered up to that point.

The time has come to say where I think Object-Oriented Ontology (OOO) fits on Scaltsas's list of possible identity criteria. There are possible contexts in which every criterion seems valid: the head priest's position in the case of form, the crowd's view in the case of the holy relics, de Hevesy's materialist outlook in his strategy of dissolving the Nobel Medals, and Kripke's historical one in certifying the identity of Columbus despite factual errors about him. Nonetheless, it is also possible to make a more general decision. OOO is often described as a type of materialism, presumably because it is interested in what entities are in their own right, beyond the human head. But OOO is not a materialism, for the simple reason that it denies the existence of matter altogether (Harman, 2014). For not only has no one ever *seen* formless matter: more than this, there is no good reason to think it exists. This is not, as George Berkeley holds, because there are no grounds for assuming that anything exists beyond images in the mind (Berkeley, 1982). Instead, it is because the primary motivation for holding that matter exists is a bad one. Namely, what is the difference between a rose and possible perfect knowledge of that rose? Aside from Berkeley, few will claim there is no difference at all. What will either be said or simply assumed is that the rose is a form inhering in matter, so that our senses or thought extract the form from the rose while leaving its matter behind. Not everyone will openly admit to this straightforwardly classical approach, but the basic materialist assumption is usually that the world is filled with solid resisting stuff, from which the mind siphons away ghostly copies of the forms in the things. The main reason for rejecting this view is that there is no reason to think, even in the case of a hypothesized perfect knowledge, that the form in the mind will be identical with the form in the thing. A process of translation is needed to move anything from one place to another; in Bruno Latour's phrase, there is 'no transportation without transformation' (Latour, 1996, p. 119). The form in the rose and the form in my knowledge of the rose are already different, so that no 'matter' is needed to explain the gap between the thing and our knowledge of it.

In short, the identity of OOO's objects has much to do with form and nothing to do with matter. Yet 'form' means different things to different people. In the old architectural dualism of form and function, form is often taken to mean the visual look of a building. However, this cuts against the grain of what aesthetic formalism usually means by form. Note that the look of a building exists only in relation to a human observer, while for classical Kantian formalism the form of a thing is supposed to be autonomous, independent of its relations to anything beyond itself. Although I have criticized several mistakes of formalist aesthetics (Harman, 2020), autonomy seems like an excellent criterion for identity, since without it a thing's own identity will depend on things other than itself.

As for Scaltsas, his priest's preferred identity criterion – physical shape – clearly cannot do the job. We can imagine the Ship of Theseus permanently buckled by a severe storm, or increased in size while remaining the same ship. We now see that what the head priest and the Athenian crowd have in common is that both want to preserve something in the ship that can be detected *with the eye*: the ship looks the same as before, or the parts seem to be the same as before. But OOO, with its well-known commitment

to the withdrawn character of real objects, must sacrifice any surface signals of identity. Another point in common between the priest and the crowd is that both could be called ‘detail preservationists’, in the sense that neither allows for much if any change in the parameters of its preferred criterion. The priest would be troubled if he were to alter the shape of the ships accidentally, while the crowd would be bothered if some of the wooden planks needed replacement. As will be seen in what follows, OOO differs from the priest and the crowd on both points. First, the identity of the ship can never be confirmed with absolute certitude. Second, according to OOO the ship must be capable of a wide range of variations while still remaining the same. But to get closer to this OOO model of identity, it is helpful to enter the world of maritime archaeology.

## Shipwreck

On this note we turn to Rich’s beautifully written *Shipwreck Hauntography*, with special focus on Chapter 2 and its ominous title ‘Broken Ship, Dead Ship’ (Rich, 2021). It might only seem natural that if a shipwreck is discovered, the end goal should be to salvage and restore it, eventually giving it new life in a museum as in the case of the *Vasa* mentioned above. Rich first calls our attention to the possible gender dynamics in play with this assumption, and refers to the ‘ancient, deep-seated associations of the sea with the primordial, the feminine, and chaotic’, which has apparently ‘called for a dry, masculine presence to intervene, to bind the chaos and control it through fragmentation and confinement’ (Rich, 2021, p. 102). Here she acknowledges the critiques of ‘masculinism’ made by Jesse Ransley (2005) and acknowledged to a lesser extent by David Berg Tuddenham (2012). She even reminds us of the colonialist undercurrents in archaeology: ‘the discipline was established with the discrete mission of preserving the material culture of the colonized Other because that Other was doomed to extinction through eventual assimilation’ (Rich, 2021, p. 85). Even so, Rich is ultimately more interested in the religious aspect of the problem: ‘I suggest that the multitude of resurrective practices within nautical archaeology is not only an expression of masculinity, but [is] especially indicative of Western masculinity and its Judeo-Christian entanglements’ (Rich, 2021, p. 87).

This is no passing remark, but expresses one of the most intense concerns of Rich’s book. For instance: ‘As ruins underwater, wrecks are not just in danger of extinction or annihilation; they are already conceived of as dead ships, particularly humiliated architectural monuments whose glory might only be reinstated through acts of salvation performed by the savior-scholar’ (Rich, 2021, pp. 85-86). Along with these religious themes, Rich also notes a strong modern psychic pressure to revive and restore whatever is lost. Reversing Sigmund Freud’s famous maxim in *Beyond the Pleasure Principle* (Freud, 1990), she suggests that ‘even if, ultimately, *the goal of all life is death*’, there is a latent modernist instinct to deny Thanatos in favor of Eros’ (Rich, 2021, p. 77). This remains true even when the practice of salvage appears to be discouraged. For although the 2001 UNESCO Convention on the Protection of Underwater Cultural Heritage ‘advises that *in situ* preservation ought to be considered as the first option’, this is only so that ‘future generations with better technological and financial abilities for recovery will be able to achieve this ultimate end, which is bodily resurrection’ (Rich, 2021, p. 87). In short, the archaeological consensus is apparently a ‘detail preservationist’ one, as seen above in the cases of the head priest and Athenian crowd alike.

But what would the alternative be? As mentioned, the raised and restored *Vasa* is a grand historical artifact that has served as a valuable historical and educational resource for millions. Whatever the masculinist, Judeo-Christian, or meta-psychological drives of those who restored it, the end product of their labors would appear to be not only helpful, but inevitable. Against this, there are certain points in the book where Rich seems to toy with the notion of just letting everything melt obscurely into its watery grave, a maneuver that I would assume is merely rhetorical: after all, she is a professional marine archaeologist! When Rich cites Mary Douglas's grim maxim that 'in the end, all identity is gone' (Douglas, 2002, p. 197) and Mircea Eliade's prose ode to Thanatos-Poseidon ('in water, everything is "dissolved", every "form" is broken up, everything that has happened ceases to exist'; Eliade, 1958, p. 194), I surmise that these are not cited as actual battle cries, but as useful fenceposts to stake out a position of dissolute oceanic non-identity that she does not herself endorse (see Rich et al., this volume). In developing her own position, Rich makes generous reference to the standpoint of OOO. One such reference is to Heidegger's celebrated tool-analysis in *Being and Time* (Heidegger, 2008) and my own interpretation of it (Harman, 2002). For Heidegger, the obscure condition of the tool when unconsciously used is different from (and superior to) the same tool once it is broken and thus explicitly noticed. But in that case a question still remains: is the shipwreck on the ocean floor just a Heideggerian broken tool, and therefore something merely 'present-at-hand' in the pejorative sense of a mere shadow of its true functional self?

Not at all. Rather than being directly present to the mind, the shipwreck has settled into what Timothy Morton calls a 'weird crack' in reality (Morton, 2016, p. 31), though it is real precisely because it is 'beyond concept' (Morton, 2013a, p. 74). Weirdness is actually a technical term in OOO, drawn from a reading of the horror writer H.P. Lovecraft (Lovecraft, 2005; Harman, 2013a). It is defined as what happens not only when the deep reality of an object is hidden beneath its phenomenal surface, but more generally whenever an object has a loose relationship with its own qualities. In terms of the Ship of Theseus this even becomes a 'weird mereology', as Levi Bryant calls it, since an object is partially independent even of its own parts (Bryant, 2011, pp. 213-214). Continuing the OOO theme, Rich aptly cites a relevant mereological passage from Ian Bogost's *Alien Phenomenology*:

The container ship is a unit as much as the cargo holds, the shipping containers, the hydraulic rams, the ballast water, the twist locks, the lashing rods, the crew, their sweaters, and the yarn out of which those garments are knit. The ship erects a boundary in which everything it contains withdraws within it, while those individual units that compose it do so similarly, simultaneously, and at the same fundamental level of existence (Bogost, 2012, p. 245).

In this respect, a functioning container ship already makes the same point about parts and wholes that we find in a shipwreck's eerie relation to its own half-ending pieces (Fisher, 2016). Why, then, should we consider shipwrecks a special topic at all?

The public has long been accustomed to appreciating damaged ancient artworks. The Louvre in Paris houses two especially famous mutilated works: the *Venus de Milo* has no arms, and the *Winged Victory of Samothrace* has no head and just one wing, though both are regarded as sculptural masterpieces. On a similar note, the American painter and critic Fairfield Porter cites John Graham as praising the damaged condition of many Classical

works, since otherwise they ‘are over-crowded with irrelevant details’. More humorously put, ‘noses are superfluous because they obstruct the vision of the head’ (Porter, 2014, p. 682). Restated in archaeological terms, we might surmise that a functional ship is ‘over-crowded with irrelevant details’, or speculate that ‘hulls are superfluous because they obstruct the vision of the ship’s interior’. What UNESCO apparently has in common with the head priest and the Athenian crowd is an attitude of detail preservationism. Admittedly, this may be desirable in certain cases. I was initially one of those who hoped that the bombed-out Frauenkirche in Dresden would be left in ruins as a powerful anti-war symbol. But having visited the church both as rubble in 1994 and as fully restored in 2012, it is clear that I should not have offered my unsolicited view on behalf of the citizens of Dresden; it is now perfectly understandable why they wished to rebuild this important monument of the Protestant Baroque. The same holds for Notre-Dame after the terrible fire of 2019. However intriguing it might be to leave ‘weird’ ruins in the heart of Paris, Notre-Dame was a functioning religious building as well as a monument in a living rather than ruined city. We need only read the Italian architect Aldo Rossi to understand the importance of such monuments to ongoing civic life (Rossi, 1982). In a famous case like the *Titanic*, one’s hand may be checked by the surviving relatives of the deceased, or by the technological challenge of salvaging that wreck at a crushing depth of two-and-a-half miles. But even assuming that technology could one day make all salvage easy, there might be other reasons not to pursue it in all cases.

We saw that both the head priest and the Athenian crowd can be considered detail preservationists in their approach to the ship of Theseus. The priest cares only that the *arrangement* of wooden planks remains the same, regardless of whether the planks themselves are different. The crowd apparently does not mind if the ship is repainted during its voyage, as long as the *exact same planks* are retained. (Left undiscussed is whether the crowd would feel disturbed if the ship had been thoroughly renovated into a different shape, even if only the original wood was used.) We can be confident, however, that both the priest and the crowd would regard a wrecked Ship of Theseus at the bottom of the sea as something altogether deficient. The ‘ontological relationship between ship and wreck’, as Rich (2021, p. 95) puts it, would in that case be very much in doubt. This would be true even if the wreck were fresh and undamaged, with the physical form and the wooden planks remaining exactly as they were. In Rich’s words again: ‘Ontologically, ships differ from wrecks most vividly in their utility for human purposes’ (Rich, 2021, p. 78). Although we have not yet discussed utility as a proper part of an object’s identity, this scenario of an intact Ship of Theseus at the bottom of the sea strongly suggests that ‘formalists’ like the head priest and ‘materialists’ like the Athenian crowd share an unstated requirement that the ship remain able to transport cargo across the waves.

Even so, we know that an object often becomes most itself when stripped from its usual context: when decontextualized or defamiliarized. This is the guiding intuition of much aesthetic formalism, and in particular that of the great Russian critic Viktor Shklovsky (1990). It is in this connection that the New York architect Michael Young tries to rethink the meaning of abstraction (Young, 2019). He begins with the puzzling fact that abstraction, like so many key intellectual terms, has numerous conflicting definitions: ‘abstraction is the reduction toward an essence, the transcendence of appearances toward an underlying idea, the rejection of visual similitude between [an] art form and the way

in which the world visually appears, the objective logic of mathematics, the autonomy of a work from its social and material contingencies... the list could go on' (Young, 2019, p. 127). He proceeds to reject many of these definitions as belonging to an ethical or epistemological register of abstraction rather than a strictly aesthetic one. In particular, the epistemological type of abstraction seeks *knowledge*, and knowledge may not deserve the monopoly on cognitive life that we too easily concede it. For OOO knowledge always entails a reduction of objects either downward to their pieces (undermining), upward to their effects (overmining), or in both directions simultaneously (duomining) (Harman 2013b). Young concurs on this point, while also deploying Jacques Rancière's notion of aesthetics as a 'distribution of the sensible', which is a much less restrictive use of aesthetics than found in OOO (Rancière, 2004).

What should interest us most about Young's article is his rejection of the four key features of abstraction itemized by the German art theorist Stefan Heidenreich (2015). According to the latter, abstraction is: 1. a subtraction or taking away of something, 2. performed on something that was already there, 3. a refinement of the superfluous, and 4. a process or movement rather than a trait. Young refuses each of these points, while dismissing the first two as epistemological in character and the third as moral. Aesthetic abstraction, he objects to Heidenreich, might well add rather than subtract something, produce tension in an object with its own background rather than with a precedent, add inessential qualities rather than removing them, and exist in a single moment of heightened attention rather than through a process of transformation (Young, 2019, pp. 133-136). A good example of abstraction by adding rather than subtracting can be seen in the architect Bernard Tschumi's design for the Le Fresnoy arts center in northern France, which rather than culling or razing the pre-existent 1920s buildings at the site, 'enveloped the entire complex within a partially enclosed modern roof to create a cohesive graft' (Kipnis, 2013, p. 298). A kind of abstraction resulted nonetheless, due to the new and unfamiliar roof-context added to the buildings. Abstraction detached from an original object can occur, for instance, when minimal background intervention puts an entire collection of objects in a new light: as when the subtle redesign of a museum transforms everything it houses (see Han, this volume). Abstraction without dispelling the accidental can happen when an object is painted over with the qualities of a different object, as happens in the OOO account of metaphor (Harman, 2018, pp. 59-102; see Killian and Rich, this volume). And finally, abstraction without a prolonged process of transformation can be found in cases when we are instantaneously struck by the strangeness of a thing that once seemed familiar or predictable.

My purpose here is to indicate, in a manner of which Rich herself might approve, that a shipwreck can in some sense be *more* than the original, fully functional ship. It can be treated as an abstraction in the aesthetic rather than epistemological and ethical senses. Against the detail preservationist account of the Ship of Theseus upheld by the two antagonists in Scalsas's article, the ship might become even more itself when stripped of detail (pieces rot away), combined with something else (sea life encrusts the hulk of the wreck), or deprived of functionality (see Cohen, this volume). As Young indicates, rather than producing knowledge in the usual sense, the shipwreck provides the case of an object in tension with its own qualities and its own environmental background. This is how I would define aesthetics: as a cognitive experience central to human existence that nonetheless resists the paraphrase – via prose or data or equations – on which all knowledge is based.

## The Virtue of Wrecks and Ruins

This brings us back to some thoughts on archaeology that I published previously. (Harman, 2019) Þora Pétursdóttir and Bjørnar Olsen are two archaeologists whose theoretical interests overlap to some extent with my own. In their article ‘Theory Adrift’ (Pétursdóttir and Olsen 2018; see also Pétursdóttir, this volume), they address an issue that they find missing in my account of the Dutch East India Company in *Immaterialism* (2016). Namely, in writing it my sole resource was published books, rather than the material artifacts that archaeologists are so fond of studying. In my response to ‘Theory Adrift’, entitled ‘The Coldness of Forgetting’ (Harman, 2019a), I argued that *Immaterialism* is already very much an archaeological book, despite my lack of fieldwork on objects or other physical remnants hailing from the primary sites in Indonesia, Malaysia, or the Netherlands. My claim, made on philosophical rather than archaeological grounds, was that material objects might not be what is most characteristic of architecture. I claimed instead that archaeology might best be understood as a *low-information* approach to the past: one whose relative paucity of historical detail yields the compensatory advantage of a heightened awareness of slow-moving or general trends, which are typically hidden in the background of the historian’s or journalist’s factual busyness. We do not know the exact date when glass was first blown, beer first brewed, or dogs first domesticated, but the fact that archaeology can try to put such events in a general order allows us to notice glacially-paced and recurring patterns that might easily be drowned out by detailed narrative accounts of battles and king’s mistresses. One of the major precedents for this approach is Marshall McLuhan’s beleaguered distinction between hot and cold media. (McLuhan, 1994) In a related article of the same year entitled ‘Hyperobjects and Prehistory’ (Harman, 2019b), I dealt with similar issues by way of Timothy Morton’s important notion of ‘hyperobjects’ (Morton, 2013b), meaning objects that last too long or move too slowly to be noticed frequently or clearly.

In answer to my reply to Pétursdóttir and Olsen, Tim Flohr Sørensen has penned a rich and challenging article entitled ‘That Raw and Ancient Cold’ (Sørensen, 2020). He makes several points that deserve a response at the present juncture, due to their direct relevance to the topic of this article. One welcome aspect of Sørensen’s article is that he does not dismiss McLuhan out of course; this often happens in intellectual life, and I have found it especially so in the United Kingdom, possibly due to the critical attitude of Raymond Williams and the Birmingham School (Williams, 2003). What Sørensen questions is whether an entire discipline or medium can be defined sweepingly as either ‘hot’ or ‘cold’, as I seem to have done in my article when defining archaeology as an inherently cold medium and history as an inherently hot one. This is a crucial point to which I will turn in the next paragraph. Before doing so, I want to note that by the end of Sørensen’s article we seem to be more in agreement than seemed the case at the outset. Early in his piece, Sørensen portrays my hot vs. cold way of differentiating history and archaeology as a ‘somewhat surprising spin’ in view of ‘the otherwise widespread notion that history is associated with the study of written sources, whereas archaeology works with material traces’ (Sørensen, 2020, p. 2). By his closing paragraph, however, he comes by his own path to the view that ‘in an archaeological perspective, things and words are not categorically different’ (Sørensen, 2020, p. 16). I agree with this last point, and will now explain why we are closer on the question of hotness and coldness than might seem possible at first.

As noted in my response to Pétursdóttir and Olsen (Harman, 2019, p. 273), one of the central paradoxes of McLuhan's work is that his distinction between 'hot' and 'cold' plays both a structural and a dynamic role simultaneously (Harman, 2012). Or rather, to use the actual terminology of McLuhan and his son Eric, artifacts have both 'morphological' and 'metamorphic' characteristics (McLuhan and McLuhan, 1992; see also Harman, 2009). For instance, the standard McLuhan example is that television is a 'cold' medium since it provides less determinate information than radio; it therefore requires extensive viewer participation to fill in the missing information, and hence favors understated personalities whereas radio is a medium more conducive to talkative hotheads. Yet even so, McLuhan's entire theory of how media change revolves around the notion that any medium can become *hotter* as it is filled with an increasing amount of information, with the result that it eventually flips into something like its opposite. For instance, cable and satellite television with their vast proliferation of channels have led to an overheated, oversaturated information landscape that has recently begun to collapse under its own weight. Thus I agree with Sørensen that 'hot' and 'cold' can be slippery terms. This is not for the hyper-nominalist reason that reality is so complex that we cannot risk definite assertions about anything, but simply because hotness and coldness refer both to structures *and* processes in a way that McLuhan himself is not always helpful in reconciling. On this basis, I agree with Sørensen's view that we should be careful about distinguishing the two varying roles of temperature in media.

Yet there is another important point where we do not agree. In the second section of his article, Sørensen writes as follows:

I suspect [that] Harman's portrayal of archaeology may come across as somewhat peculiar. Contending that historical sources are replete with information and detail, while archaeology is restricted to making general statements, seems to omit the literary genre known as archaeological excavation reports. Frequently, these are endless volumes of information, describing in mind-numbing detail each and every single artifact- or, more often, fragments of artifacts- discovered during fieldwork, but they also include observations about the composition of soil, its consistence and color, and details pertaining to the interfaces between stratigraphic horizons (Sørensen, 2020, p. 4).

The fact that archaeologists must so often process reams of data to reach their goal, Sørensen concludes, means that archaeology is just as saturated with information as history normally is. But here we should distinguish between (a) the internal processes utilized by any field and (b) the character of its ultimate object. For example, I agree with McLuhan's characterization of television as a basically cold medium, even though television technicians must be conversant with hundreds of different models and the technical intricacies of countless electronic components. That is to say, on the back end of any medium there will always be a tremendous amount of detailed labor, but this does not mean that all media are equally hot. I would argue that philosophy-like archaeology- is a basically cold discipline, forced to compress the swarm of details in the world into a handful of basic structures. This does not preclude the ability of philosophers to pay close attention to the details of a given case, nor does it mean that philosophers are lazy generalizers who

speculate from an armchair without getting their hands dirty. For instance, I would say that my interpretation of Heidegger's philosophy is notably 'cold', given my claim that this famously difficult philosopher really boils down to just a small handful of basic insights (Harman, 2007). This does not contradict the fact that to reach this conclusion, I had to spend seven years of toil studying all of Heidegger's tens of thousands of pages of writings. Indeed, that 'hot' detail work was merely the precondition of the 'cold' implosion of all those pages into a small number of core insights.

What I mean to say is that although one can always find points of both low-density and high-density information in any sphere of human activity, they are not really intermixed, and are not all that difficult to distinguish from one another. We must focus above all on the ultimate character of what any given discipline produces or aims to produce. Since Sørensen takes the trouble to discuss my account of duomining (Sørensen, 2020, p. 5; Harman, 2013b), it is worth restating the hot/cold distinction in OOO's 'mining' terminology. By treating detailed information as its basic currency, a hot medium produces knowledge by either undermining or overmining its object: which means by *literalizing* its object, or in terms of British Empiricism, treating its object as a bundle of palpable qualities. The cold or anti-literal alternative, by contrast, involves the more aesthetic approach of purposely cutting a rift between an object and its qualities. Now, we can certainly find instances where art or philosophy (both 'cold' disciplines in my view) also produce knowledge and detail, but this does not change the fact that they basically tend in the opposite direction. Likewise, it is true that a 'hot' medium like science, which generally aims at the production of literal knowledge, often makes use of poetic suggestiveness: especially in moments of theoretical crisis when a major transition seems to be in store. But if a discipline lingers too long in a temperature foreign to its nature, it starts to become something else. Philosophy that becomes deeply involved in the gory details of thought process begins to shade into neuroscience, while science that approaches theoretical paradox -such as quantum theory- begins to resemble philosophical speculation rather than science, even when rooted in experimentally verified data. All this is meant as a defense of McLuhan's notion that something can be basically hot or basically cold, even if various processes tend to press everything in the direction of its opposite. By no means are all human activities part of a finely shaded continuum where everything resembles everything else and nothing has definite qualities, as if names were purely arbitrary. Although grey areas always exist, any form of cognition will either have high-information literal aims, or low-information aesthetic aims. The contemporary suspicion of dualisms too often leads to a refusal to make sharp distinctions where needed.

Nonetheless, one of the strengths of Sørensen's article is his keen recognition of cases where one discipline seems to flip suddenly into its opposite. As he reminds us, 'historical sources are co-created by decomposition, mold, fire, water, paper mites, hackers, digital data degradation... or some form of obscurity, for instance, in the case of cuneiform tablets of Near Eastern antiquity...' (Sørensen, 2020, p. 7). Indeed, this is precisely why I would not wish to see archaeology defined as a discipline that deals primarily with material things as opposed to language. When written language is cooled by gaps or historical mystery, as in the case of cuneiform tablets or Egyptian hieroglyphics even in the post-Rosetta Stone period, the public correctly associates such language with the archaeologist rather than the historian. An even stronger aspect of Sørensen's piece is his awareness that even cases of high information density are not without a deeper coldness, as when he tells us that he

‘considers uncertainty to be an [inherent] aspect of information’ (Sørensen, 2020, p. 13). Indeed, uncertainty and coldness go hand in hand. More concretely, Sørensen notes that even detailed written texts require readers, and that the act of interpretation must wrestle with the existence of what Roman Ingarden calls ‘empty places’ and Wolfgang Iser ‘places of indeterminacy’ (Ingarden, 1973; Iser, 1978). Since the text ‘compels participation’ in this way, what seems to be the pre-eminently hot medium of written texts is actually a cold one filled with lacunae and reader absorption (Sørensen, 2020, p. 9). However, I would point out that interpretation and involvement need not occur to any discernible degree, and that readings need not be close enough to compel participation. The mere recognition of empty and indeterminate places in a text already indicates the active participation of a reader, and this means we are no longer speaking simply of the text, but of a new hybrid entity composed of both text and reader. Yet this does not occur in all cases of encounter between human and work, as I argued in *Art and Objects* (Harman, 2020). In sum, the fact that lacunae can always be found in a text does not refute the notion that standard written prose – poetry, aphorism, and fine style are special cases – is essentially an information-dense medium.

More could be said about Sørensen’s article, but here I wished only to defend my earlier claim that archaeology deals with situations of coldness, in the sense of low information density, even when this involves relatively recent phenomena such as with Olsen’s World War II excavation site. When Rich objects to the notion that ships should always be resurrected and restored, even if at some distant future point, what she may be telling us is that the *telos* of archaeology need not always be history. The sinking of a ship admits it to the realm of archaeology, and there is a special cognitive opportunity when studying a ship that has been stripped of often superfluous detail, as with the earlier example of an ancient sculpture stripped of its distracting nose.

This brings us to a final point where Sørensen and I remain in disagreement. The case involves the remnants of a dog: ‘A single canine bone fragment from [a] 12,000-year old burial in Ain Mallaha surely will not be able to offer much information on e.g., multispecies relations in the distant past’ (Sørensen, 2020, p. 9). For this reason, he argues, the details of the context are all-important: where was the fragment of dog bone found, and in proximity to what other remains? Yet my interpretation is precisely the reverse. The principal value of context, as I see it, is to fix the way in which this was a specific bone fragment belonging to an individual dog, and not to some Platonic form of dogness. But by no means does this entail that archaeology’s primary concern is with individual specimens rather than broader trends. Presumably the Ain Mallaha canine was just a run-of-the-mill, mediocre dog of around 10,000 B.C.E., not an especially noteworthy creature in its own right. What it can teach us, especially in conjunction with other such finds, is precisely ‘something about multispecies relations in the distant past’. The same no doubt holds for underwater archaeology. A particular Spanish galleon at the fringe of the Isle of Wight might not be an important vessel in historical terms. Yet in the very coldness of its limited information draws our attention to general background features that we might recognize as belonging to a period, a style, or a nation under a specific king. When dealing with a regular high-information object in everyday life, we are too preoccupied with its content to notice recurring background forms. It is like the student of Louis Agassiz who spent hours and days of frustration while studying a fish, before realizing the stupefyingly basic answer his professor was seeking: the fish was symmetrical, with paired organs (Nordquist, 2020). I think of archaeology, like philosophy, as speaking in a similar cold register.

## Return to Theseus

In closing, I would like to return briefly to the ideas of Young (2019). By contrast with Heidenreich, Young imagined a type of abstraction – namely, decontextualization – that would add rather than subtract, create tension with an unnoticed background rather than a pre-existent object, add inessential qualities rather than removing them, and emerge to view in a single moment rather than through a lengthy process. What this means is that Young's position is possible for anyone – like me – who disagrees with Scalsas's priest and Athenian mob that for the Ship of Theseus to remain identical, all of its details must be preserved. The very possibility of abstraction suggests the opposite.

The OOO notion of objects has much in common, *mutatis mutandis*, with Aristotle's concept of primary substance: meaning individual things, rather than the concepts or categories through which they are known. Aristotle is sometimes accused of reducing things to what can be known or said about them, but this overlooks a key passage in the *Metaphysics* where we read that individual things are concrete, but definitions only speak in universals (Aristotle, 1999, p. 145). In other words, individual things are not commensurate with anything that can be said or known about them, which – of course – is precisely what Immanuel Kant says about artworks (Kant, 1987). There is something aesthetic rather than conceptual, then, about Aristotle's notion of substance. This notion also entails the view that a substance is that which can have different qualities at different times: Socrates can be happy and sad at different moments, although happy is always happy and sad is always sad. In other words, substance is more fully itself when it *loses* details from one moment to the next. An individual is more robust the more capable it is of losing and gaining qualities than it is when remaining the same in all details, as the priest and the Athenians both wish.

Another point made by Young was that abstraction can also mean adding rather than subtracting; Tschumi's Le Fresnoy arts center was given as an example of this. But another example was given in *Immaterialism*, where I discussed the Dutch East India Company in terms of its rare symbioses (Margulis, 1999) rather than the exact details of its various historical effects – the latter being the stock in trade of Latourian Actor-Network Theory (Latour, 2005). In other words, not only is Socrates more Socrates when he is able to lose his mood of the moment and pass through others in succession, but the Dutch East India Company is more itself when it enters into a half-dozen or so irreversible bonds with other objects. Likewise, rather than restoring a shipwreck in all its detail, to leave it in ruins brings us into the specific cognitive space of archaeology, one that is not so different from that of philosophy.

## Works Cited

- Aristotle (1999) *Metaphysics*, J. Sachs (trans.). Santa Fe: Green Lion Press.
- Berkeley, G. (1982) *A Treatise Concerning the Principles of Human Knowledge*. Indianapolis: Hackett Publishing.
- Bogost, I. (2012) *Alien Phenomenology: Or, What It's Like to be a Thing*. Minneapolis: University of Minnesota Press.
- Bryant, L. (2011) *The Democracy of Objects*. Ann Arbor: Open Humanities Press.
- Douglas, M. (2002) *Purity and Danger*. New York: Norton.
- Eliade, M. (1958) *Patterns in Comparative Religion*. London: Sheed and Ward.

- Fisher, M. (2016) *The Weird and the Eerie*. London: Repeater Books.
- Freud, S. (1990) *Beyond the Pleasure Principle*, trans. J. Strachey. New York: Norton.
- Harman, G. (2002) *Tool-Being: Heidegger and the Metaphysics of Objects*. Chicago: Open Court.
- Harman, G. (2007) *Heidegger Explained: From Phenomenon to Thing*. Chicago: Open Court.
- Harman, G. (2009) 'The McLuhans and Metaphysics', in J. Olsen, E. Selinger, and S. Riis (eds), *New Waves in Philosophy of Technology*. London: Palgrave. pp. 100-122.
- Harman, G. (2012) 'Some Paradoxes of McLuhan's Tetrad', *Umbr(a)* 1, pp. 77-95.
- Harman, G. (2013a) *Weird Realism: Lovecraft and Philosophy*. Winchester: Zero.
- Harman, G. (2013b) 'Undermining, Overmining, and Duomining: A Critique', in J. Sutela (ed.), *ADD Metaphysics*. Aalto: Aalto Design Laboratory, pp. 40-51.
- Harman, G. (2014) 'Materialism is Not the Solution: On Matter, Form, and Mimesis', *Nordic Journal of Aesthetics* 47, pp. 94-110.
- Harman, G. (2016) *Immaterialism: Objects and Social Theory*. Cambridge: Polity.
- Harman, G. (2018) *Object-Oriented Ontology: A New Theory of Everything*. London: Pelican.
- Harman, G. (2019a) 'The Coldness of Forgetting: OOO in Philosophy, Archaeology, and History', *Open Philosophy* 2, pp. 270-279.
- Harman, G. (2019b) 'Hyperobjects and Prehistory', in S. Souvatzi, A. Baysal, and E. Baysal (eds) *Time and History in Prehistory*. London: Routledge. pp. 195-209.
- Harman, G. (2020) *Art and Objects*. Cambridge: Polity.
- Heidegger, M. (2008) *Being and Time*, J. Macquarrie and E. Robinson (trans.). New York: Harper.
- Heidenreich, S. (2015) 'Abstraction With and Without Modernism', in V. Velkov (ed.), *Public Abstraction*. Cologne: Walther Koenig.
- Ingarden, R. (1973) *The Literary Work of Art: An Investigation on the Borderlines of Ontology, Logic, and the Theory of Literature*, G. Grabowicz (trans.). Evanston: Northwestern University Press.
- Iser, W. (1978) *The Act of Reading: A Theory of Aesthetic Response*. Baltimore: Johns Hopkins University Press.
- Kant, I. (1987) *Critique of Judgment*, W. Pluhar (trans.). Indianapolis: Hackett.
- Kipnis, J. (2013) *A Question of Qualities: Essays on Architecture*. Cambridge: MIT Press.
- Kripke, S. (1980) *Naming and Necessity*, 4<sup>th</sup> ed. Cambridge: Harvard University Press.
- Latour, B. (1996) *Aramis, or The Love of Technology*, C. Porter (trans.). Cambridge: Harvard University Press.
- Latour, B. (2005) *Reassembling the Social: An Introduction to Actor-Network Theory*. Oxford: Oxford University Press.
- Lovecraft, H.P. (2005) *Tales*. New York: Library of America.
- Macey, D. (1995) *The Lives of Michel Foucault*. New York: Vintage.
- Margulis, L. (1999) *Symbiotic Planet: A New Look at Evolution*. New York: Basic Books.
- McLuhan, M. (1994) *Understanding Media: The Extensions of Man*. Cambridge: MIT Press.
- McLuhan, M. and E. McLuhan (1992) *Laws of Media: The New Science*. Toronto: University of Toronto Press.
- Morton, T. (2013a) *Realist Magic: Objects, Ontology, Causality*. Ann Arbor: Open Humanities Press.

- Morton, T. (2013b) *Hyperobjects: Philosophy and Ecology After the End of the World*. Minneapolis: University of Minnesota Press.
- Morton, T. (2016) 'Weird Embodiment', in L. Hunter, E. Krimmer, and P. Lichtenfels (eds), *Sentient Performativities of Embodiment: Thinking Alongside the Human*. Lanham: Lexington Books, pp. 19-34.
- Nordquist, R. (2020) 'Classic Essay on Observation: "Look at Your Fish"', *ThoughtCo*, August 26. Available at: <https://www.thoughtco.com/look-at-your-fish-by-scudder-1690049> (Accessed: 28 September 2022).
- Pétursdóttir, Þ. and B. Olsen (2018) 'Theory Adrift: The Matter of Archaeological Theorizing', *Journal of Social Archaeology* 18(1), pp. 97-117.
- Plutarch (2015) *Plutarch's Lives: The Life of Theseus*, J. Dryden (trans.). New York: Oia Press.
- Porter, F. (2014) 'John Graham', in J. Perl (ed.), *Art in America 1945-1970*. New York: Library of America, pp. 680-685.
- Rancière, J. (2004) *The Politics of Aesthetics: The Distribution of the Sensible*, G. Rockhill (trans.). London: Continuum.
- Ransley, J. (2005) 'Boats Are for Boys: Queering Maritime Archaeology', *World Archaeology* 37(4), pp. 621-629.
- Rich, S. (2016) 'The Shipwreck of Theseus: Provenance & Mereology in the East Mediterranean', Presentation at Humanities Research Seminar, University of Wales Trinity St. David, Lampeter, UK, May 18.
- Rich, S.A. (2021) *Shipwreck Hauntography: Underwater Ruins and the Uncanny*. Amsterdam: Amsterdam University Press.
- Rossi, A. (1982) *The Architecture of the City*, L. Venuti (trans.). Cambridge: MIT Press.
- Scalsas, T. (1980) 'The Ship of Theseus', *Analysis* 40(3), pp. 152-157.
- Shklovsky, V. (1990) *Theory of Prose*. Champaign: Dalkey Archive Press.
- Smart, B. (1973) 'The Ship of Theseus, the Parthenon and Disassembled Objects', *Analysis* 34(1), pp. 24-27.
- Sørensen, T.F. (2021) 'That Raw and Ancient Cold: On Graham Harman's Recasting of Archaeology', *Open Philosophy* 4, pp. 1-19.
- Tuddenham, D.B. (2012) 'Cyborgs and Shipwrecks: The Management of Norwegian Underwater Cultural Heritage in the Light of Actor Network Theory', in P. Nymoen (ed.) *Årbok 2011*. Oslo: Norsk Maritimt Museum, pp. 99-148.
- Williams, R. (2003) *Television: Technology and Cultural Form*, 3<sup>rd</sup> ed. London: Routledge.
- Young, M. (2019) 'The Aesthetics of Abstraction', in M. Gage (ed.), *Aesthetics Equals Politics: New Discourses Across Art, Architecture, and Philosophy*. Cambridge: MIT Press.



# What Washes Up on the Beach

## Shipwreck, Literary Culture, and Objects of Interpretation

Steve Mentz

### Introduction

After the wreck, things wash up on the beach. It can be hard to know just what these objects mean, scattered across the sand's emptiness. It is, however, always possible to list them. Driftwood twists itself into small piles. Sailcloth lies buried in the sand. Bits of rope appear in tangles. Each of these pieces of meaningful detritus bears the marks of human hands. These broken objects together comprise fragments of the once-working system that was the formerly sailing ship. They scatter themselves across the blank canvas of the shoreline, waiting to be interpreted.

The stories objects tell and the stories we tell about objects have come into new focus in recent years through the efforts of the philosophical school known as 'Object-Oriented Ontology'. Variouslly associated with influential figures such as the American Heideggerian scholar Graham Harman, French philosopher Quentin Messailloux, and American ecocritic Timothy Morton, OOO describes what is sometimes called a 'flat ontology' in which all objects, living or not, human or non-human, assume similar ontological opacity.<sup>1</sup> All objects exist and have meanings which are never exhausted by their interpretations. All objects thus assume equal status, on some fundamental level. Digital media scholar and computer game theorist Ian Bogost, whose work I will use as my primary example of OOO thinking in what follows, treats the anti-hierarchical insights of OOO as an opportunity to compose lists of unlike things, none of which is 'more real'

---

1 Many other important figures have written from within, and sometimes at the margins of, OOO: Levi Bryant, Manuel DeLanda, Alphonso Lingis, and others. Parallel thinking also appears in the Actor-Network Theory of Bruno Latour, about whom Harman writes compellingly, in Jane Bennett's *Vibrant Matter*, and in Bill Brown's "Thing Theory," among other thinkers. Many of these figures drawn on earlier philosophical thinking by Martin Heidegger, Edmund Husserl, Alfred North Whitehead, and others. Bogost's *Alien Phenomenology*, my main intertext here, comprises a helpful introduction to the discourse. The male-centered nature of the OOO community has given rise to important eco-feminist critiques, including for example Katherine Behar's 2016 collection *Object-Oriented Feminism*.

than any other. The pleasure and beauty of Bogost's lists speak for themselves: quarks, Harry Potter, keynote speeches, single-malt scotch, Land Rovers, lychee fruit, love affairs, dereferenced pointers, Mike 'The Situation' Sorrentino, bozons, horticulturists, Mozambique, *Super Mario Bros.* [...] (Bogost, 2012, p. 12).

This infinitely-expandable and wonderfully-strange list becomes for Bogost a handy mimetic for the intellectual experience that OOO generates. As we encounter the world in its full diversity, the only order we can fashion is the seemingly-random list. Further on in his book-length introduction to OOO, *Alien Phenomenology*, Bogost coins the term 'Latour Litanies' to describe cascading lists of 'surprisingly contrasted curiosities' (Bogost, 2012, p. 38) that he locates in the writing of Bruno Latour and of the primary inventor of OOO, Graham Harman. For Bogost, the composition of a Latour Litany represents 'real philosophical work' (Bogost, 2012, p. 39) because the sudden juxtapositions and contrasts in the list impress upon us the variety and opacity of the objects we encounter in the world. Litanies and lists do not create or define relationships among the listed objects, but that open-ness is exactly their value. 'Lists are perfect tools', writes Bogost, 'to free us from the prison of representation precisely *because* they are so inexpressive' (Bogost, 2012, p. 40). The list or Latour Litany, like the scattered objects washed up on the beach after a shipwreck, represents a truer picture of the world of things than the always-humanizing efforts of literary narrative or political theory. To understand 'What It's Like to Be a Thing', as Bogost's sub-title intones, requires seeing all things in their independent and opaque glory.

The disparate things that make up Latour Litanies appear widely in the writings of Bogost, Harman, Latour himself, and many others. I have previously suggested a family resemblance between these lists and the famously opaque catalog in Argentine writer Jorge Luis Borges's fictionalized Chinese encyclopedia, the *Heavenly Emporium of Benevolent Knowledge* (see Mentz, 2013, pp. 208-10). In a passage influentially cited by Michel Foucault in *The Order of Things*, Borges presents an impossible list of categories that taken together rupture the idea of categorization itself (Foucault, 1994, pp. xv-xix). As Borges concludes the essay which contains the *Heavenly Emporium's* list, there is 'no classification of the universe that is not arbitrary and speculative' (Borges, 1999, p. 231). For OOO-thinkers, this explosive insight creates the radical freedom that philosopher Levi Bryant calls the 'democracy of objects' (Bryant, 2011). Bogost, drawing on his coding skills, even created a web-based 'Latour Litanizer' to auto-generate randomized lists, though the program, like so many no-longer-new web applications, appears to be non-functional at present.<sup>2</sup> Is it too much to call the web-Litanizer shipwrecked?

Objects scattered on beaches after shipwrecks comprise historically painful examples of partly-randomized gatherings that can be listed. In both historical and fictional representations of shipwreck, survivors or bystanders pore over the fragmented texts that wash up on the shore. To treat these objects in OOO terms as philosophical ontographies – lists that in are in a literal sense carved into the sand – emphasizes, as Bogost notes, 'distinction instead of flow' (Bogost, 2012, p. 40; see Edgeworth, this volume). Treating these objects as interpretable or symbolic may, of course, risk re-assimilating them into the mental continuity or narrative of 'becoming' that Bogost asks us to refuse. In reading a half-

---

2 At the moment, Bogost's website contains the note, "The litanizer is temporarily down for maintenance." See [http://bogost.com/writing/blog/latour\\_litanizer/](http://bogost.com/writing/blog/latour_litanizer/). Accessed 2 April 2021.

dozen salvageable objects on shipwrecked beaches across a wide variety of shipwreck texts from the sixteenth through the twentieth centuries, I aim to test Bogost's OOO-claim that lists are defamiliarizing structures that enable us to peer into the radically alien nature of our universe. Some tension between literary representations, in which authorial efforts sometimes attempt to represent continuity behind apparent randomness, and historical testimony, in which similar efforts may not always be quite as coherent, remains visible across my six examples. In assembling, exploring, and juxtaposing these objects, I hope to suggest ways in which the master-narrative of shipwreck, among the most widely-circulated and deeply loved story-forms from *The Odyssey* through to the present day, both highlights and refuses the radical separation of OOO. In shipwreck context, objects necessarily separate themselves, and they also bear traces of a former now-broken unity.

This interpretive project starts, naturally, with a list. Here are six things that may or may not become fully interpretable. This chapter will explore and attempt to understand these objects:

1. Three broken pintles of the *Great Galleon S. João*, wrecked on the southeastern coast of Africa in 1552
2. Ariel's Song, sung to the shipwrecked Prince Ferdinand of Naples in William Shakespeare's *The Tempest* in 1611
3. 'My Son Willes Coat', listed by Anthony Thacher as one of the things he finds on the beach after his ship wrecked on what is now called Thacher Island, Massachusetts, in 1635
4. Ten dollars paid by the Governor of Havana for Briton Hammon in Havana in 1747
5. Several lemon trees planted on a small key in the Bahamas by Olaudah Equiano in 1767
6. A verse from Bob Dylan's song 'Tempest', about the wreck of the *Titanic*. The great ship wrecked in 1912, and Bob sang about it a century later in 2012.

These six objects, scattered widely across seashores real and fictional, from the North Atlantic to the Indian Ocean, form a rigid spine that structures this chapter's investigation of shipwreck, OOO, and the place of the object in critical analysis. To interpret objects as disparately collected as these requires a certain imaginative flexibility, and in this regard OOO's speculative flair proves especially useful. The challenge of OOO, however, resides in conceptualizing connections among infinitely receding objects in order to support a larger structure. My analysis of these six shipwrecked objects concludes by briefly touching on some recent collaborative thinking by Timothy Morton, one of OOO's founders, that previews a possible turn away from objects toward a politicized and pluralized view of subjects. To be a 'hyposubject', as Morton and his co-author, the anthropologist Dominic Boyer, assert, means to accept diminution and embrace the experience of change. To some extent this new theory modifies the OOO-orthodoxy established by the earlier work of Morton and his collaborators. I hope to suggest that the point of view of the beach flotsam implies a connection between the (hyper)object and the (hypo)subject.

## The Shipwreck and the Book

An initial clarification can help reveal the interpretations that these six objects aim to make possible. Shipwrecks move in two directions at once; they are both scatterings and formations. They rupture and also suture. The objects that once comprised the boat, its

crew, or its cargo, creature new forms and patterns when they break and then wash up on the beach. In the glare of the next day's sunrise, they reveal them as objects, withdrawn in the OOO sense, sufficient unto themselves (see Pétursdóttir, this volume). But as they dry and we continue to look, they become legible and even narratable.

Josiah Blackmore, a scholar of the literature of Portuguese maritime expansion, has made this point memorably: 'out of shipwreck, the poet tells us, come texts' (Blackmore, 2002, p. 27). Blackmore's resonant maxim emerges from his careful observation of how ships and books are constructed during the early modern period. These two objects are materially and symbolically parallel:

Each is made of boards and cords, iron (bosses and nails); there is paper and writing in each (Blackmore, 2002, p. 102).

Both ships and books require technical expertise to operate. Both generate systems out of formerly isolated fragments. The shipwreck, Blackmore emphasizes, 'is both event and text' (Blackmore, 2002, p. 29). The book in your hands, reader, is also both shipwreck and text. These events-and-objects demand but also defy interpretation.

The list of shipwrecked objects that follows in this chapter aims to test the OOO-thesis about the opacity of objects while entertaining Blackmore's counterproposal that the disaster always becomes to an extent legible. Shipwrecks break ships as they also make books. The shipwreck-book – the shipwreck-as-book – may end up as both a demonstration of the withdrawn nature of each object and an example of the will to interpret that generates texts from each bit of beach-borne flotsam.

## **A List of Shipwrecked Objects, Washed Up on the Beach**

### **Three pintles, from the rudder of the *Great Galleon S. João* (1552)**

Discarded and broken, nestled into wet sand, sit 'the part of [the ship] on which the entire salvation or perdition of a ship depends' (Boxer, 2001, p. 5). Pintles are the pins or bolts that slide into cylindrical sockets (or gudgeons) in order to hang a rudder onto the stern of a sailing ship. The *Great Galleon S. João*, overloaded for the homeward voyage from India to Portugal, famously wrecked off the coast of southeast Africa in 1552. Many scholars have written about this resonant shipwreck and its wide currency in multiple narratives and genres throughout early modern Portuguese culture (Blackmore, 2002, pp. xiv, xviii-xix, *passim*; Mentz, 2015, pp. 11-18; Cohen, 2010, pp. 46-47). I have argued previously that the distinguishing feature of this archetypical shipwreck narrative is the excessive number of causes for the disaster; I list thirteen major possible causes, from the poorly chosen date of embarkation to the heavy hand of Fate (Mentz, 2015, pp. 13-14). The pintles, however, as their description in the prose narrative account demonstrates, occupy a special place. Small pieces of precisely formed metal designed to hang the rudder in place, these objects are essential, difficult to repair, and likely impossible to replace at sea. They represent the object as hinge, not so much powerful in themselves but the cause by which human hands can exert power over the great ship.

By opening this list with the image of the pintles, rendered useless when they are buried in the African sand after the ship has wrecked, I aim to stress the opacity of the object. In the absence of their matching gudgeons on the ship's keel, pintles become so

much metal detritus. In OOO's Heideggerian terms, their ready-to-hand functionality has vanished; they are no longer tools to use but waste to overlook. As survivors scavenge the beach searching for supplies to support their long trek toward a new port, it seems likely that the pintles will be overlooked. These objects cease to function absent their networks. As objects they sit, ignored and opaque, no longer part of the story.

### **Ariel's Song (1611)**

The 'anthem of postmodernity' (Baucom, 1999, p. 301) needs no introduction. These key lines in one of the most famous English playwright's most famous plays have long served as a shorthand for how poetry makes beauty out of disaster. The lyric sung by the unseen spirit Ariel to the despondent shipwrecked prince Ferdinand in Shakespeare's *The Tempest* remains today a favorite anthology piece for students of English literature, as well as transcendent vision of poetics for modern writers from T.S. Eliot to Derek Walcott. At the center of the song sit death and transfiguration, the harrowing beauty of the drowned world:

Full fathom five thy father lies  
Of his bones are coral made.  
Those are pearls that were his eyes  
Nothing of him that doth fade  
But doth suffer a sea change  
Into something rich and strange (Shakespeare, 2011, p. 200).

For my purposes here, Ariel's song can be considered as an object-making machine. It takes a living system, the King's body, and remakes its flesh into deathly inhuman beauty. The crucial objects that replace and remake the King's bones and eyes are the exotic treasures of the sea, coral and pearls. Shipwreck becomes beauty-maker, transformer of life into aesthetic objects.

Ariel's song haunts the shipwreck beach because its origins, like the spirit who sings it, remain unknown. 'Where should this music be', wonders disoriented Prince Ferdinand, 'T'th'air, or th'earth?' (Shakespeare, 2011, p. 200). An invisible object that is the source of idealized beauty, Ariel's 'ditty' may represent the churning power of the surf, as well as the powers of poetry, theater, imperial conquest, and perhaps early modern science, to pick just a few of the nearly-endless allegories that have attached themselves to this short lyric (see Shakespeare, 2011, pp. 62-67, on the meanings associated with music in the play). Thinking the song as object, however, can perhaps liberate it from its own hypercanonicity. As beach-goer and sand smoother, this song represents the transformation that it also enacts. It makes human bodies into objects and puts those objects to work in telling a story.

### **'My Son Willes Coat' (1635)**

Anthony Thacher, a religious Separatist who had recently arrived in Massachusetts from England, barely survived a harrowing shipwreck during the Great Storm of 1635. In a now-well known letter directed to his cousin in England, Thacher describes his experience of wandering the shoreline after the wreck. His enumeration of what he found washed up on the beach comprises a heartbreaking Latour Litany of broken and displaced objects:

I found Cast one the Shore a Snapsacke in which I had a Steele and a flint & a powder horne, goeing further I found a drowned goate, then I found a hat and my Sonne Willes Coat, both of which I put on. I found also tow Cheeses and some butter driven ashore (Wharton, 1979, p. 63).

The objects combine perishable items such as butter and cheese with now-useless tools including flint, powder, and a ‘Snapsacke’. The most emotionally wrenching objects, however, are the trio at the center of his list, a dead goat, a hat, and the coat of his son. All of Thacher’s children died in the wreck, and no explanation is offered for how Will’s coat appears without the boy’s body. Thacher has already on the previous page reported his last view of ‘my poor William’ next to the boy’s siblings Edith and Peter, ‘Looking ruefully at mee on the Rocke, there very Countenance Calling unto mee to help them, Whom I Could not goe unto neither Could they Come at me’ (Wharton, 1979, p. 52). When Thacher puts on the hat and his dead boy’s coat, he takes onto his own person the horror of the disaster, perhaps with a view of imagining the Providential reunion the devout Thacher desperately craves.<sup>3</sup>

Few imaginable objects scattered on beaches after disasters can be more emotionally resonant than Will Thacher’s empty and waterlogged coat. Perhaps only the boy’s young body itself could be more tragically potent, though in a poetic sense the presence of the drowned goat serves in Thacher’s carefully crafted letter as a kind of gesture toward ruined physical flesh. In putting on his son’s coat, Thacher may be responding to his own cold and fatigue after immersion, but he may also be engaging in what Bogost might term carpentry: an interpretation of an object that relies on physical substance, not abstract representation. To wear Will’s coat means to wrap its object-ness, and the absence of the living boy himself, around Thacher’s paternal body. If any action of reading flotsam on the beach always aspires to being an act of re-memembering what has been lost at sea, Thacher’s interpretive gesture must be judged futile. But it also seems possible that in that act of being embraced by alien cloth, the bereaved father may be understood as an especially astute reader of what shipwreck leaves behind. In these disasters, human bodies become objects, and they leave objects in their wake. Out of objects, Thacher tells us, we make texts.

### Ten dollars (1747)

At a crucial moment in the thirteen-years voyage of the enslaved Black sailor Britton Hammon, ten dollars was paid for Hammon’s person. Interestingly, this price was not paid to or on behalf of Hammon’s legal owner in Massachusetts. Instead, ten dollars was the price paid by the Governor of Havana to a group of Indians from Florida, in order to prevent them recapturing or seizing the able seaman whom they had previously captured. Hamman remained throughout his travels the legal property of General John Winslow of Marshfield, Massachusetts. For a legal object with no substantive rights, however, Hammon

---

3 The story of Thacher’s preservation and the deaths of his family would become a central myth of the seventeenth-century English colony in Massachusetts. It is central in Increase Mather’s *Remarkable Providences*, published in Boston in 1684. For an extended reading of this passage in terms of its eco-theology, see Mentz, 2015, pp. 18-21.

displayed considerable agency, in large part due to his prodigious skill as a mariner as well as his literacy and knowledge of Christian doctrine. As historian Jeff Bolster observes in his influential study of African-American mariners, *Black Jacks*, Hammon's travels locate him in numerous subject positions:

Among a ship's crew of black and white sailors...Briton Hammon defined himself as one of 'the people' collectively chiding the captain; in Spanish Cuba, as an Englishman and slave desperate to escape; in Indian camps, a civilized man; in New England, 'a Negro Man'; and aboard the slaver on which he enlisted, a free seaman on wages or a Briton – not a captive African (Bolster, 1997, p. 35).

Despite his enslaved status, Hammon, as Bolster's summary emphasizes, presents himself throughout his narrative as subject, not object. Hammon went to sea in December 1747 'with the leave of my Master' (Wharton, 1979, p. 252), though presumably, as Bolster notes, his master intended to pocket Hammon's wages (Bolster, 1997, p. 9). Hammon was subsequently cast away on *Cape-Florida* (modern Key Biscayne) in June 1748, captured by Indians, carried to Havana by the Master of a Spanish schooner – Hammon had previously met the Master when the latter was a prisoner in Jamaica during the 'last war' (Wharton, 1979, p. 254) – purchased by the Governor of Havana, and jailed because he would not serve on Spanish ships. Hammon was later brought to Jamaica by an English captain, thence to London, and eventually he took ship back to Boston. On board that final ship he was reunited with General Winslow, '*my Good Master*' (Wharton, 1979, p. 258), and they returned to Massachusetts after Hammon had been absent for thirteen years. He closes his autobiographical account with his 'desire to retain a *grateful Remembrance*, as long as I live in the World' (Wharton, 1979, p. 258). Against the emblematic notion of confinement as the central reality of slavery, Hammon's peripatetic travels around North America, the Caribbean, and Europe make a suggestive counter-example. He shows himself to be legal object but maritime subject.

The legal structures of slavery render even this skilled seaman into a mere object, but in focusing on the ten dollars that changed hands on Havana as the price of Hammon's partial-freedom (he would soon descend into a Spanish jail for more than four years) I aim to conceive of the maritime fringe of the Anglo-American slave system in the eighteenth century as circulatory, somewhat porous, and to a large extent uncontrolled. Hammon as a circulating subject and object rarely controls his own destiny between his shipwreck in 1748 to his seeking out a ship from London to Boston nearly thirteen years later. During this time he acts as semi-free, both object and subject, subject to imprisonment and random chance, but only marked as objectified by the price paid by the Governor of Havana to the Indians seeking his return. Those ten dollars serve as symbol of the life of Britton Hammon the sailor. At most other moments in his story, especially in his published writing, he constructs himself as a subject capable of agency and self-control. Somewhat paradoxically, however, he describes his return to slavery and reunion with his master as a joyful occasion. The slave economy in which he circulates as a skilled mariner continues to clog his heels, requiring financial exchange between two parties – the Spanish Governor of Havana who has Hammon captive, and the Indians who had formerly taken him prisoner – neither of whom had any legal right to the seaman's body. The ambivalently

mobile position that Bolster characterizes as Hammon's 'multiple identities' (Bolster, 1997, p. 35) parallel the ambivalently opaque and withdrawn position of the object in OOO. To be human in a world of objects means, at least some of the time, also being an object.

### Several citrus trees planted in the Bahamas (1767)

'I was a kind of chieftain among them' (Equiano, 2003, p. 151) proclaims the ex-slave Olaudah Equiano after he has masterminded the preserving of a ship and crew in a storm off the Bahamas. The storm scene carries a strong allegorical flavor, as Paul Gilroy has emphasized in his 2019 Holberg Lecture, 'Never Again: Refusing Race and Salvaging the Human'.<sup>4</sup> The ship strikes aground, and as Equiano contemplates his own sinfulness and the captain asks that the hatches be nailed down to prevent the cargo of enslaved persons from escaping, the bulk of the crew 'abandoned all care of the ship, and themselves, and fell to drinking' (Equiano, 2003, p. 150). Using both his maritime expertise and his natural leadership capabilities, Equiano directs the safe grounding of the ship, unloads supplies and persons onto the beach, and eventually organizes a rescue operation to seek help from nearby Abaco Key. As Gilroy emphasizes, and as Bolster has also observed, Equiano's maritime skills represent the driving force of his abolitionist autobiography. Bolster describes Equiano as creating himself through his travels, his labor, and in particular his published autobiography, as part of an 'international black community' (Bolster, 1997, p. 37) that advocated and agitated for the abolitionist cause.<sup>5</sup>

The objects from Equiano's shipwreck in the Bahamas that I will scatter on my metaphorical beach are the 'limes, oranges, and lemons' he caused to be brought onshore onto the nameless Bahamian key from the wrecked ship. Later Equiano 'planted several of them as a token to any one that might be cast away hereafter' (Equiano, 2003, pp. 151-152). In providing through these trees edible objects for future shipwrecked sailors, Equiano was both following a long-established tradition of long-haul mariners – Spanish sailors had been seeding uninhabited Caribbean islands with feral hogs for more than a century, often with disastrous ecological results – and also replacing the violent world of shipwreck with a more human and hospitable landscape.

### A verse from Bob Dylan's 'Tempest' (2012)

The final object on my speculative beach-of-objects returns to song, in this case through the gravelly strains of late-period Bob Dylan, who in 2012 crooned a long waltz about the loss of the great ship *Titanic*. It's a slow, patient, rambling song, with shout outs to the movie's Kate and Leo, and perhaps as many gestures to Hollywood as to Shakespeare.<sup>6</sup> The verse I'll engage with connects the experience of shipwreck to supernatural encounters:

---

4 For a YouTube recording of Gilroy's lecture, see <https://www.youtube.com/watch?v=Ta6UkmlXtVo>. For a transcript, see <https://www.newframe.com/long-read-refusing-race-and-salvaging-the-human/>. Both websites accessed 2 April 2021.

5 Bolster emphasizes that Equiano was prominent but not unique as a Black maritime abolitionist. Other examples include Prince Hall, James Forten, Denmark Vesey, and Paul Cuffe, among others (Bolster, 1997, p. 36).

6 For a more substantial consideration of Dylan's song 'Tempest' as a shipwreck narrative, see Mentz, 2015, pp. 162-166.

The ship was going under  
The universe had opened wide  
The roll was called up yonder  
The angels turned aside<sup>7</sup>

The way down is the way up, so when the ship sinks into the cold Atlantic, it opens up transcendent vision. The moment when the ‘universe’ opens itself, and heaven’s roll calls ‘up yonder’, indicates a separate route, imaginary and invisible, for doomed souls to ascend rather than sink. Dylan’s verse provides an unusually clear division between interpreting the victims of shipwreck as objects and as subjects. As objects, the drowned bodies will sink to the ocean floors. As subjects, the souls rise with heavenly music.

The theological vision that Dylan presents sits somewhat outside normal the range of OOO’s empirical focus. Souls, perhaps, are too rarified to be objects in the same sense as pintles and coats. Harman for his part might classify souls as object because they cannot be further reduced to their parts. The key point for Bogost, however, recalls that the objects that surround and influence us are not limited to the real or the tangible. He includes fictional beings as ‘objects’, as also does Bruno Latour in his magisterial volume *An Inquiry into Modes of Existence* (Latour, 2013). Dylan’s expansiveness at this moment of mortal ambiguity, as he is singing into the boundary between life and death, captures the extremity of shipwreck and the two-facedness of OOO as method. The ascending souls, no less than the sinking bodies, represent objects in the wide universe of things. The singer, artist, and philosopher make space on the beach for all of them.

### **After the Next Tide: the Rise of the Hyposubjects**

As the rock ‘n roller’s waltz echoes into deepwater silence, it may be possible to glimpse in the great ship’s bifurcated wake the outlines of a new order assembling itself out of the beach’s flotsam. By way of conclusion, I will turn briefly to a recent experimental work co-written by one of OOO’s most influential voices to trace a faint unifying refrain that gathers together the pintles, the songs, the coat, the man’s price, and the lemon trees. These objects remain legible as objects, but may also have a life-to-come as subjects.

The demands of living in the present Anthropocene age, according to a co-authored book by OOO-theorist Timothy Morton and anthropologist Dominic Boyer, require that humans, we who bear the mark of Old Man Anthropos, should invest ourselves in ‘becoming less’ rather than seeking more (Morton and Boyer, 2021, p. 11).<sup>8</sup> In their 2021 book *Hyposubjects: On becoming human*, these authors invert the figure that may be Morton’s most ambitious OOO concept, the hyperobject. Hyperobjects are objects that are massively distributed in time and space and that, in Morton’s influential formulation, dominate our experience of the early twenty-first century Anthropocene (Morton, 2013). The prototypical hyperobject may well be global warming itself, though Morton makes cases for Styrofoam, plastics, the Pacific Garbage Patch, and even the

---

7 For the song’s lyrics, see the official Bob Dylan website <https://www.bobdylan.com/songs/tempest/>. Accessed 2 April 2021.

8 Old Man Anthropos is my coinage for the titular figure of the Anthropocene, destroyer of worlds and monopolizer of attention. On plural ways to respond to this figure, see Mentz, 2019.

entire agrological project on which human civilization have been embarked for the past twelve-thousand years. In *Hyposubjects*, Morton and Boyer flip this massive script and aim to diminutize their sense of what humans should hope to be. To become a hyposubject, however, requires that we not just follow the familiar OOO move of defamiliarization and treating humans as simply members of a ‘democracy of objects’. Instead, the hyposubject distinguishes itself by accepting its position as just a bit of flotsam on the beach and embracing its ‘susceptibility’ (Morton and Boyer, 2021, p. 64) to external events. Rather than resist shipwreck, the hyposubject floats onto a crowded beach. It’s an object that craves only to remain an object.

The two suggestive maxims that Morton and Boyer propose in their experimental book emphasize directed or purposeful withdrawal from any version of anthropocentric dominion. ‘Hyposubjects subscend’, they intone (2021, p. 70). To subscend means to reduce one’s own power or centrality purposefully, toward a particular (usually political) aim. Morton and Boyer further note that the idea of subscendence has for some religious thinkers a theological resonance, as the act of divinity humbling itself into flesh (2021, p. 76; see Killian and Rich, this volume). The act of subscending, retreating into diminution and anti-domination, becomes for these theorists a way not to resist the neoliberal system but to dissent from within, or perhaps beneath, it. The ecological shipwreck of the Anthropocene perhaps can no longer be prevented or overturned. But one hopes it can still be subscended.

The further benefits of lessoning-oneself into hyposubjectivity appear in the second of Morton and Boyer’s maxims. Here they mediate between the opposed poles of passive-objects and active-subjects, seeking instead a third composite path. If the hyperobject approaches subject-hood, and the hyposubject recedes toward mere object-status, a quasi-Aristotelian mean may be an apt way to describe Morton and Boyer’s final vision. Their goal as hyposubjects is not revolution or rebellion, nor even a blocking of the most destructive tendencies of the present eco-catastrophic age. Instead, the hyposubject refuses the fire at the end of time. ‘Dismantle the apocalypse’, sing the OOO philosopher and the anthropologist (Morton and Boyer, 2021, p. 76). The point here is not to inhabit Marx’s proletariat or even to speak in a Latourian or OOO mode on behalf of the vast universe of things. Instead, to dis-mantle the tragic vision of end-times means to dis-robe catastrophe, to remove its shimmering veil and fiery crown. A dismantled apocalypse may still burn slowly, but it won’t require all of our attention all of the time. We can turn away from the disaster, turn our backs to the doomed ship of modernity, and read the flotsam on the beach.

The shipwreck that makes books also makes the stories of our unfolding and undirected present age. Following the subscended path of the hyposubject might help us remember that the Anthropocene is not an age for epics of conquest or the eco-tyrant’s wrathful struggle. The wreck-book of the present emerges from scattered objects in unbounded spaces. Pintles that can no longer steer the ship mark the edge of high tide. A transformative song yearns for pearl eyes that can no longer see and unmoving coral bones. The arms of a young boy’s coat fold themselves about his father’s shoulders, wet and tender. Loose dollars and fruits that have been spoiled by the sea gesture toward the profits of navigation. An old man’s voice, gravel-rusted, warbles out the last night of a younger and brighter world. Onto these objects we cast our eyes. We gather them

together, we interpret, and we subscend. Refusing the lure of apocalypse means knowing shipwreck as an ecological baseline, a shared re-fashioning of the story we never really knew, and a turning into futures that may be more various than formerly suspected.

## Acknowledgements

I wrote this chapter from my home in Branford, Connecticut, during the pandemic time of 2020-21. I want to acknowledge the Indigenous peoples and nations who have stewarded and loved these lands and waters for many generations, including Mohegan, Mashantucket Pequot, Eastern Pequot, Schaghticoke, Golden Hill Paugussett, Niantic, Quinnipiac and other Algonquian speaking peoples. I honor the enduring relationships that exist between these peoples and nations and this land and water, and I respect generations past, present, and emerging.

## Works Cited

- Baucom, I. (1999) 'Hydrographies', *Geographical Review* 89(2), pp. 301-313.
- Behar, K. (ed.) (2016) *Object Oriented Feminism*. Minneapolis: University of Minnesota Press.
- Blackmore, J. (2002) *Manifest Perdition: Shipwreck Narrative and the Disruption of Empire*. Minneapolis: University of Minnesota Press.
- Bogost, I. (2012) *Alien Phenomenology, Or What It's Like to Be a Thing*. Minneapolis: University of Minnesota Press.
- Bolster, W.J. (1997) *Black Jacks: African-American Seamen in the Age of Sail*. Cambridge: Harvard University Press.
- Borges, J.L. (1999 [1942]) 'John Wilkins's Analytical Language', in E. Wineberger (ed. and trans.) *Selected Non-Fictions*. New York: Viking, pp. 229-232.
- Boxer, C.W. (2001) *The Tragic History of the Sea*, J. Blackmore (trans.). Minneapolis: University of Minnesota Press.
- Bryant, L. (2011). *The Democracy of Objects*. Ann Arbor: Open Humanities Press.
- Cohen, M. (2010) *The Novel and the Sea*. Princeton: Princeton University Press.
- Equiano, O. (2003 [1789]) *The Interesting Narrative and Other Writings*, V. Carretta (ed.). New York: Penguin.
- Foucault, M. (1994) *The Order of Things: An Archeology of Human Knowledge*. New York: Vintage.
- Hammon, B. (1979 [1760]) 'A Narrative of the Uncommon Sufferings', in D.P. Wharton (ed.) *In the Trough of the Sea: Selected American Sea-Deliverance Narratives, 1610-1766*. Westport: Greenwood Press, pp. 252-258.
- Latour, B. (2013) *An Inquiry into Modes of Existence: An Anthropology of the Moderns*, C. Porter (trans.). Cambridge: MIT Press.
- Mentz, S. (2012) 'Brown', in J.J. Cohen (ed.), *Prismatic Ecology: Ecotheory Beyond Green*. Minneapolis: University of Minnesota Press, pp. 193-212.
- Mentz, S. (2015) *Shipwreck Modernity: Ecologies of Globalization, 1550-1719*. Minneapolis: University of Minnesota Press.
- Mentz, S. (2019) *Break Up the Anthropocene*. Minneapolis: University of Minnesota Press.
- Morton, T. (2013) *Hyperobjects: Philosophy and Ecology After the End of the World*. Minneapolis: University of Minnesota Press.

- Morton, T. and D. Boyer (2021) *Hyposubjects: On Becoming Human*. Ann Arbor: Open Humanities Press.
- Shakespeare, W. (2011) *The Tempest*, in V.M. Vaughan and A. Vaughan (eds.), *The Tempest: A Critical Reader*. London: Bloomsbury.
- Thacher, A. (1979 [1635]) 'Great Deliverance Out of the Sea', in D.P. Wharton (ed.), *In the Trough of the Sea: Selected American Sea-Deliverance Narratives, 1610-1766*. Westport: Greenwood Press, pp. 56-64.

# An Anthropocene Section

Matt Edgeworth

## Abstract

Recent anthropogenic deposits at a landfill site next to the lower reaches of the River Thames, downstream of London, are being eroded by tidal surges. As material is washed away by the tides, the edge of the remaining mass of human-modified ground takes the form of a receding near-vertical face or ‘section’. In one sense the section provides a stratigraphic record of twentieth-century landfill deposits. But it also represents something more than just a static record. It is a frontier between two material domains – a dynamic interface between the archaeosphere and the hydrosphere. This is where the hydrosphere inundates the archaeosphere, and where the archaeosphere overflows, seeps, teems or cascades into the hydrosphere.

## Introduction

Let us begin with an introduction to sections. A section is a vertical or near-vertical face exposed naturally or artificially cut in the ground to show patterns of layering of strata. In archaeological excavation, these are usually cut by archaeologists themselves. By taking out the fill of one half of a feature only (‘half-sectioning’), for example, the order or sequence of fills can be revealed in the vertical face presented by the other half. By cutting sections through larger areas of ground, archaeologists can discern relationships between inter-cutting features and the more extensive layers which overlay them or through which they are cut. The drawing of sections is thus an important part of the recording of archaeological evidence on a variety of scales (Carver, 2009). Whereas plans typically show a site in its horizontal aspects, section-drawings depict it on a vertical plane, with depth (both spatial depth and time depth) as the crucial dimension being recorded.

Geologists also make use of sections, sometimes utilising naturally-exposed as well as artificially-cut faces. For example, stratigraphers of the AWG (Anthropocene Working Group) are currently searching for a suitable site to serve as a GSSP (Global Boundary Stratotype Section and Point) marking the date of start of the Anthropocene. Finding a section in which the transition to the new epoch can be identified in stratigraphic

successions is a necessary requirement if the Anthropocene is to be formalized as an accepted part of geological time (Zalasiewicz et al., 2019) and to be added to the International Chronostratigraphic Chart (Cohen, 2010).

This chapter is about a section somewhat similar to these, but distinct from both. The place where it is located – a modern landfill next to the lower reaches of the Thames – would not normally be considered as archaeological because of its very recent date (though see Rathje, 1992). But it is without any doubt a section through archaeosphere deposits. The archaeosphere (a term first deployed, as far as I can tell, by Capelotti 2010) is understood here to be comprised of human-modified ground whatever the date of deposition may be (Edgeworth, 2014, 2016a, 2016b, 2017, 2018, 2021). Though starting to form in patches thousands of years ago, it has grown through processes of accumulation and coalescence into a global-scale entity – a hyperobject (Morton, 2013), no less – which is still very much in the process of formation today. It includes both ancient strata and recent and contemporary layers and cut features, often as part of the same stratigraphic sequences. Arguably it can be taken to be forming a new geological layer on the surface of the Earth, consisting of multiple cuts and deposits which are the traces and residues of human activities. Here we are concerned with a section through just one very small and recently deposited part of the archaeosphere. The layers visible in the section, and the many objects and materials contained therein, are less than a hundred years old.

Moreover the section has not been artificially cut by archaeologists, or indeed by any human or human-controlled agency. On the contrary, it is being exposed ‘naturally’ by tidal surges and other forces largely out of human control (I put the term in inverted commas because the forces in question, though mainly non-human, have been partly influenced by anthropogenic factors – as explained below). In an important sense, this stratigraphic evidence is presenting itself.

Furthermore, the section is not one of several candidate sites being investigated by geologists with a view to providing an Anthropocene GSSP. This is because natural archives are preferred over anthropogenic archives by geologists when it comes to marking the start of the proposed new epoch (Waters, 2018). Also, stable sections are preferred to unstable ones. This section is highly unstable. As an active participant in environmental processes, it dynamically changes its visible stratigraphic configurations as it erodes and discharges its contents into the estuary.

It presents itself as an Anthropocene section all the same, and in more ways than one:

1. the abundance of Anthropocene objects and novel materials – ‘technofossils’ (Zalasiewicz et al., 2014) – in the process of transition from land to sea. Some of these items, already effectively ‘fossilized’ by human manufacturing processes, will eventually be encased as fossils within marine sedimentary strata. Others left behind in un-eroded landfill may be preserved within the stratigraphic sequences of the archaeosphere itself.
2. the cutting of the section by environmental forces commonly associated with the Anthropocene. Increased amounts of greenhouse gases pumped into the atmosphere through industrial and other human activities are bringing about higher global temperatures which are melting ice-sheets in Greenland and Antarctica, leading to rising sea-levels causing erosion of land around coasts and estuaries (Spencer and O’Shea, 2014). Between 1990 and 2018 sea level in the Thames estuary rose by an

average of 3.6 mm per year, and the rate of increase is accelerating. It is estimated that between now and the year 2100 the estuary will experience sea level rise of between 1 and 4.2 m (Humphries, 2018), leading to much greater erosion of landfill deposits. As melting of glacial ice continues to exceed predictions, such estimates may have to be revised upwards.

3. the involvement of human-technological modifications of rivers entangled with other Anthropocene phenomena (Kelly et al., 2017) in the erosion of the section. Adding to the effects of climate change and rising sea-levels, the construction of the Thames Barrier further upstream to protect London from floods (completed 1982) brings about reflected tidal surges that significantly increase high tide levels in the estuary when floodgates are closed.
4. the contribution of the eroding section to pollution of marine environments – a problem widely held to be connected with the Anthropocene. Amongst the more visible materials released and carried away by the tides are plastics (Zalasiewicz et al., 2016), which are so highly mobile they travel not just locally into the river estuary (van Emmerik and Schwarz, 2020) but are also carried on ocean currents presumably to find their way into mid-sea gyres and coastal drifts (Pétursdóttir, 2020; George and Edgeworth, 2018; see Pétursdóttir, this volume) considerable distances away.

It is interesting to note, with regard to the four characteristics listed above, that the section has a double-aspect. On the one hand it is shaped by Anthropocene forces (2 and 3). On the other hand it contributes to the making of Anthropocene phenomena (1 and 4). It is at once a residue or material effect while at the same time generating its own effects, leaving traces and residues on other things and in other places. The section simultaneously *produces* and is *produced by* the Anthropocene.

Note that the paper takes no position with regard to the question of when the Anthropocene should be taken to start (Zalasiewicz et al., 2019), or indeed whether it should be held to have diachronous beginnings (Edgeworth et al., 2015). My purpose in recording and discussing the eroding section is to tackle other critical issues, and specifically to explore the hitherto neglected role of archaeosphere deposits in Anthropocene processes and transformations.

## **The Site: An Initial Reconnaissance**

The site is located on the north side of the lower reaches of the River Thames at East Tilbury, about 40 km east of the centre of London (Fig. 4.1).

Historic maps show the site to have consisted of saltmarsh and creeks up to the 1920s, when it started to be used as a dumping ground for landfill. The intention behind this was probably to raise the ground level as a protection against floods. Two basic types of material were used. The first was mud dredged from the River Thames. The second was household waste from London, much of it carried by barge along the river and unloaded on wharves (now demolished) built especially for the purpose. A retaining wall was built with a travelling crane running along it. Although some distance away from London and in a rural location, the dump can be regarded as part of the larger trace fossil of the city. A third category of material was industrial waste from power stations constructed close to the site. Landfilling seems to have been curtailed in the late 1980s or early 1990s. Now closed, the site was called Goshams Farm landfill.

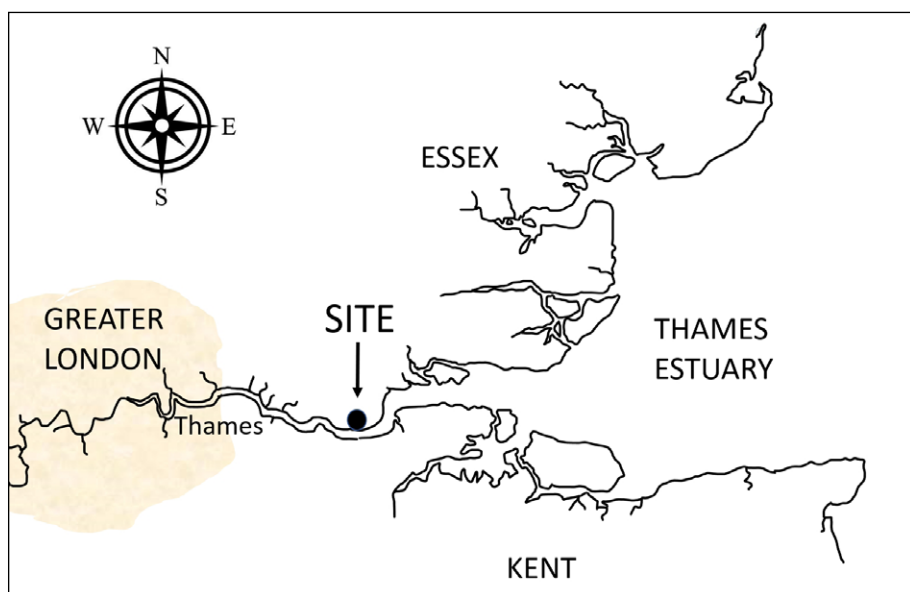


Fig. 4.1. Location map.

Of particular interest is the 500-m-long low cliff-face of eroding material – referred to in this paper as the eroding section – running along the northern shore of the river on the southern side of the dump. Also a focus of attention is the raised beach known locally as Bottle Beach that runs between the section and the river. As will be explained in due course, the eroding section and the adjacent beach are really elements of the same landscape feature. Flanked by the eroding section on one side, the beach is separated from the larger expanse of river mud at low tide by the retaining wall. I visited the site to conduct an initial walkover survey in July 2020.

Walking along the beach is an unusual experience. The ground crunches underfoot and it seems at first as though one is climbing over groups of small rocks and treading on small seashells. That impression is soon proven to be mistaken. On closer inspection it becomes apparent that what seemed to be rocks are actually lumps of concrete or brick masonry and the supposed seashells are a mixture of objects made mostly of glass or ceramics, half embedded in a matrix of mud or sand. Bottles, vases, jugs, teapots, jars, inkpots, cups, glasses and many other small to medium sized vessels can be discerned, most at least partially broken and often surviving only in fragments. There are lids, handles, spouts, rims, bases, stoppers, body-sherds, and so on, mixed in with the occasional animal bone. Some seem quite fresh, as though only recently emerged from the earth and cleaned by water, still partly embedded in the mud. Others are worn smooth with rounded edges, indicating that they have been rolled about loosely by river forces for some time. Interspersed with these in haphazard fashion are numerous tiles and bricks, sometimes with date of manufacture or name of manufacturer stamped upon them. In spaces between all of these are many small and blackened batteries, badly corroded. Elsewhere, by way of contrast, are attractive groups of small fragments of polished glass – blue, green, yellow, brown – that catch the eye.



Fig. 4.2. Bottle Beach.



Fig. 4.3. The eroding east-west section.

These have been graded by the action of water and deposited between larger objects. Here and there an old car tyre waits for waves to float it out into the estuary. Further out, partly wrapped in seaweed, the rubber sole of a shoe stands out like a human footprint stamped into the mud. Views of the beach and some of its constituent materials are shown in Fig. 4.2.

Running roughly east-west alongside the upper beach is the eroding section which is the main subject of this paper. It is about 500 m long and 2 to 2.5 m high, slightly undercut in places, elsewhere sloping down at an angle of 20 to 40 degrees towards the beach. Plastic sheeting, textiles, lift- or crane-cables and other Anthropocene objects protrude from upper portions of the section, as though freeze-framed while teeming out into the tidal river, like frozen waterfalls. At the base of the section, a series of irregular holes have been dug by bottle-collectors. Fig. 4.3 shows the eroding section along different parts of its length.

Images of plastic cascading out of the upper part of the eroding section can be contrasted with the relative absence of plastic on the beach itself. That is because the tides have carried the more mobile and buoyant material away, leaving heavier materials such as brick, tile, concrete, ceramic, glass or metal behind – the opposite of situations where drift material has been transported from other places to be cast up onto a beach by the waves (see Pétursdóttir, this volume). Lighter material is effectively being taken away by the tides, probably to form part of drifts and gyres elsewhere.

I had assumed initially that the tides had washed away landfill deposits to their full depth, and that the objects on the beach all originated from the receding section as it eroded. While that is undoubtedly the case with some of the dis-embedded objects, many items are still embedded in the matrix of mud, almost as though in the process of emergence from it, and only coming to light as the soil around them is removed. The realization gradually dawns, in walking over such evidence, that these embedded objects are *in-situ*, in the sense that they still reside in the places where they were deposited or dumped. On the seaward side of the section the river tides have skimmed the top two meters or so from landfill deposits but left the rest in the ground. Lower levels of the landfill survive, the beach itself constituting its upper surface.

This can be confirmed by examining holes dug by bottle-collectors at the base of the eroding section. In search of older items, the bottle-diggers have excavated both horizontally into the section and vertically down into the underlying landfill strata, sometimes to the depth of several feet. The base of the landfill had not been reached in any of the holes.

Some of the larger objects such as lumps of concrete or brick masonry that are not embedded in the beach probably originated from higher up. These have retained their position in the two dimensions of longitude and latitude but have dropped down in the third spatial dimension of depth as the lighter objects and soil matrix that surrounded them were washed away. Notwithstanding the fallen or scattered objects on top, however, Bottle Beach and the objects embedded therein present us with a roughly horizontal plane view of the landfill deposits. Just as tidal surges have sliced the eroding section into a vertical face, so they have sliced horizontally through middle parts of the landfill to create the surface known as Bottle Beach.

Fig. 4.4a sketches the probable relationships between eroding section, retaining wall, landfill and beach in a hypothetical south-north cross-section, while Fig. 4.4b shows the view southwards from the section, looking over the beach, the wall and the river muds.

It was on this initial reconnaissance that the potential value of returning to examine the beach and section in more detail was identified. There were many questions arising from the brief walk-over described above, some of which would be beyond the scope of a small-scale investigation carried out by a single investigator using hand-tools. For example, the full depth of the landfill and dates of all phases of deposition could not be established without major excavation work involving use of an earthmoving machine – deemed beyond the scope of this project.

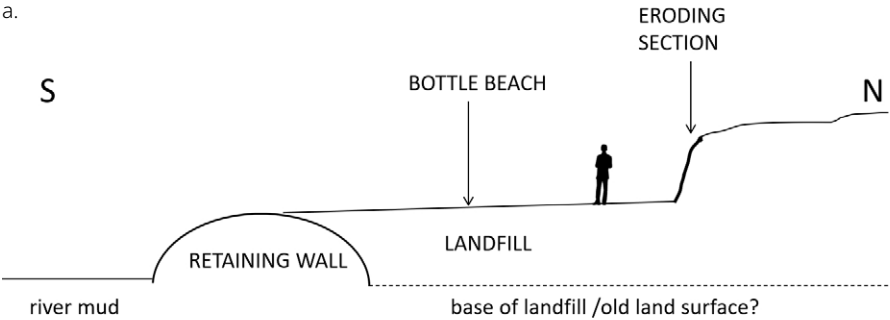


Fig. 4.4. a: Hypothetical cross-section of landfill from south-north; b: View from eroding section looking south over Bottle Beach, the retaining wall and the mud of the river at low tide, to the open shipping channels beyond.

Bearing in mind the constraints on what was possible to achieve, it was decided to come back another day with the limited aim of cleaning a small portion of the section, recording it archaeologically, and trying to answer the following questions:

- Is the landfill chaotically organized or does it have stratigraphic structure to it?
- Would it be possible, on cleaning the section, to distinguish between different phases of landfill dumps?
- If so, could those phases be dated by inclusions of artefacts and novel materials?

## **An Archaeological Investigation of the Eroding Section**

Returning to Bottle Beach with excavation and recording equipment on a fine day at the end of March, 2021, it was with some surprise to find that a small portion of the upper part of the eroding section had already been cut back and scraped clean in the recent past, almost certainly by a geologist or archaeologist or soil scientist, their identity unknown. Whoever did it clearly had an eye for strata because they had delineated soil boundaries and then traced specific layers of interest along to other parts of the section containing plastics several meters away – exactly the techniques a practitioner in the stratigraphic sciences would deploy in making sense of the evidence. I mention this in case the same section should appear in some other report, and also because it is remarkable that any earth scientist should take an interest in such a hitherto neglected category of evidence. At any rate, grateful to be saved some heavy manual labour and prolonged contact with the material, I made use of that already worked-upon part of the section. Scraping it back into as smooth and vertical a surface as possible to make soil boundaries stand out more clearly, I extended it down to greater depth (Fig. 4.5), stepping it out by a meter for safety reasons, before drawing and photographing it.

The recording of the section was done quickly so that time spent in proximity to landfill strata could be kept to a minimum. Types of material dumped in this landfill are unrecorded, and could theoretically include pesticides, PCBs, asbestos, viruses, medical waste, contaminated vaccination needles, animal carcasses, corroded batteries, cyanide, arsenic, other chemical toxins, heavy metals, discarded munitions such as canisters of mustard gas, even low-level radioactive waste – all known to have been buried on other landfill sites. The strong smell of hydrogen sulphide emanating from the section was another reason for not sticking around too long. Unlike most archaeological or geological objects, items in this stratigraphic sequence had the potential for actively emanating or radiating harmful effects on the human body. For that reason I wore a protective suit with mask, goggles and gloves. No attempt was made to dig down to the base of the landfill, since this was inferred to be some way below the level of the beach. No soil samples were taken. However, artefacts and novel materials were collected as dating evidence.

The questions posed at the outset were soon resolved. It was established that the landfill – far from being chaotically organized – has a well-ordered if somewhat simple stratigraphic structure. It also proved possible to distinguish different phases of landfill dumping, and to give rough dates of deposition for these on the basis of artefacts and manufactured materials contained as inclusions within layers.

In the small part of the section cleaned and recorded, stratification consisted of a series of layers deposited one on top of another, with no cuts or re-cuts encountered (Fig. 4.6).



Fig. 4.5. Working on the section.

On the basis of the stratigraphic sequence and an abundance of dateable artefacts from all the layers, three phases of dumping (listed from latest to earliest) can be identified in the section at this point:

- **Phase Z:** 1980s-1990s. Beneath the topsoil layer 101, layers 102-103 in upper parts of the sequence were comprised of a mixture of industrial waste materials compacted

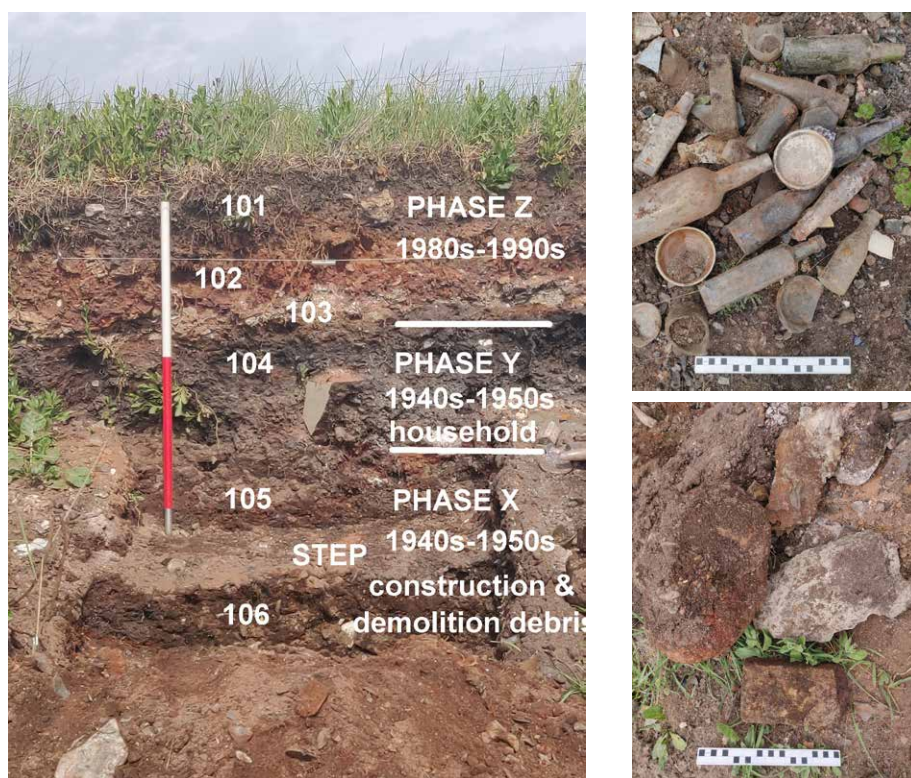


Fig. 4.6. The stratigraphic sequence.

down by machine with the layer of topsoil 101 spread over the top. Large amounts of partially decayed sheet plastic were contained in continuations of layer 103 further along the section to the east. The purpose of this most recent phase of dumping may have been to roughly seal the landfill and provide soil structure for vegetation growth on top (the raised area of landfill is now covered with grass and scrub and provides grazing for a large herd of ponies).

- **Phase Y:** 1940s-1950s. Household waste layer 104 was un-compacted and contained abundant inclusions of ceramic vessels, plates, glass bottles, jars, and a large fragment of vitreous clay, which provided ample dating evidence. No plastic was found.
- **Phase X:** 1940s-1950s. Layers 105 and 106 contained bricks and lumps of concrete from demolition debris in a matrix of industrial waste in the form of ash from furnaces. The (relatively few) datable artefacts were similar to those in Phase Y assemblages.

The artefact-studded beach adjacent to this part of the section represents the upper surface of material deposited in an earlier phase:

- **Phase W:** 1940s. Objects embedded in the mud of the beach (as opposed to those scattered on top originating from later layers) were mostly glass bottles and ceramic vessels, indicating a phase of dumping of household waste.

If one were to dig into the beach, even earlier phases of dumping would be encountered down to an unknown depth, probably dating back to the 1920s. Evidence from historic maps and aerial photos indicates that landfill material was dumped directly onto the pre-existing saltmarsh sediments, filling in the creeks. The base of the landfill is therefore likely to take the form of a bedding-plane rather than an unconformity, and to be about 2 m below the level of the beach (the level of the old land surface).

The possibility remains that further layers will be added on top of the existing layers of landfill in the future. Millions of tonnes of excavated spoil from deep tube excavations under London have been deposited on historic landfills nearby as a capping and landscaping layer. Similar material could be dumped here too in the near future. The archaeosphere is a still-forming entity – its stratigraphic sequences open and as yet incomplete.

## **Plastics, 'Media Fossils' and Emergent Objects**

The recorded sequence described above contains within it the first appearance of modern plastics – a novel material often taken to be emblematic of the Anthropocene and perhaps as a marker of it (Zalasiewicz et al., 2016). These first appear here in layers of Phase Z, dated to the 1980s-1990s. There were no layers in the part of the section I looked at that could be dated securely to the 1960s or 1970s, indicating a gap in the depositional sequence there. However, this break may not be typical, and might only relate to the specific location where recording was undertaken. From informal observations made while walking along the beach, pre-1980s plastics seem to be present in other parts of the eroding section (perhaps to be verified by a future investigation). This suggests that dumping could well have taken place continuously from the 1920s to 1990s across the site as a whole, with different phases of deposition concentrated in specific areas. Taken in its entirety, then, the eroding section may present an unbroken sequence of strata from the Late Holocene saltmarsh sediments below right up to the 1990s, covering almost the whole of the 'plastic age'. A few items of Bakelite – an early form of plastic – can be seen embedded in the mud of the beach.

But the presence of plastics should not distract from the many other types of artificial materials emerging from the beach and the eroding section. Objects of ceramic, glass, brick, tile and concrete also proliferate. They form part of larger assemblages of objects and novel materials contained within particular layers. To assign a date to a landfill layer (and the deposition of all the objects within it, including those made of plastic), glass bottles are especially useful. There are several reasons for this. Firstly, bottles tend to be discarded as waste and buried in landfill shortly after manufacture and use. The date of the bottle is usually not that different from the date of the layer in which it is to be found. By way of comparison, many types of ceramic are kept by households for considerable periods of time: their entry into strata may be delayed by several years or even decades, rendering them less useful for precision dating purposes.

A second reason why glass bottles are excellent resources for dating 20th century strata is the existence of comprehensive typologies – based on shape, size, colour, type of glass, and so on – against which any specific find can be checked (see, for example, the SHA typology of bottles manufactured in America: <https://sha.org/bottle/typing.htm>).

A third reason is the evidence provided by maker's marks – in the form of embossed words, numbers and designs – which may indicate brand, batch number, trademark, date

of manufacture, identity of manufacturer, etc. These are most usually found on the base of bottles. They afford a much greater degree of dating precision than natural fossils.

Maker's marks on bottles are part of a wider class of technofossil evidence abundantly present as inclusions in modern strata but absent completely from pre-human geological layers. I borrow the useful term 'media fossils' (Parikka, 2012). But whereas the term was originally intended to denote the remains of media culture such as CDs, game cassettes, computer disks and hard drives, I widen it out to encompass any technofossil that can convey linguistic, coded or symbolic information.

That includes objects with paper labels affixed to them. It is true that, where such labels survive, a huge range of information about objects and their contents may be conveyed. But potential for long-term survival of labels in the archaeological and geological record is poor. Most of the objects recovered from the eroding section had traces of labels on them but these had already been corroded by salt water and chemical contaminants and were in all cases unreadable. Maker's marks by contrast have been embossed into the very form of the bottle itself, during the manufacturing process. Such marks stand out in relief and can be touched as well as seen. As integral parts of the object, these have much greater potential to survive into the distant future.

Media fossils on this site include bottles with maker's marks, stamped bricks, ceramic vessels with designs and logos incised, transfer-printed, stamped or slip-trailed upon them. The key point here is that such linguistic and symbolic information is 'fossilized' along with the object itself through the processes of manufacture such as firing in a kiln or glass-furnace, so that it becomes an integral part of the object.

Media fossils are not new. What distinguishes those in modern landfills from more ancient examples known in the archaeological record such as inscribed clay tablets is the fact that the media in question are mass-produced by machine rather than inscribed or stamped by hand, and in some cases then distributed globally. That gives incredible potential not only for precision in dating layers but also for correlations to be drawn between sites throughout the world. A landfill deposit containing Schweppes bottles dated to the mid-1960s, for example, can be correlated with other landfill deposits thousands of miles away containing the same bottles.

It should be remembered that objects such as these are not just 'inclusions' within a stratigraphic context: they are also 'emergent' from it. That makes them active rather than passive, existing in time rather than in some non-temporal state. They are mobile rather than static – susceptible to analysis in terms of an archaeology of movement (Aldred, 2021) or an archaeology of flow (Edgeworth, 2011). Timescale is relevant here. Objects that appear to be stationary from hour to hour may move considerable distances over days or weeks. A seemingly static object clearly in the process of emerging out of the middle of layer 104 (refer back to Fig. 4.6), for example, is a large fragment of vitreous china from a washbasin or bath. One side is shiny and smooth because it has been coated in glass-based enamel and fired to fuse the glaze and porcelain clay together. After a period of use in the human world it has been broken into pieces and dumped in the ground. The life-history of the fragment is not over, however. It is still unfolding. At present the object is half-in and half-out of the section. It is delicately poised at a point of transition between the archaeosphere (where it has been buried for several decades) and the hydrosphere/atmosphere. At the next tidal surge the soil matrix around it will be eroded away by the

waves, and the fragment will tumble onto the beach. It is however much too heavy to be transported far by the water. Unlike lighter materials in the same assemblage which will be swept away, it will remain on the beach for a considerable period of time, exposed to the air and the water, eventually to be submerged (if present trends of climate warming and rates of melting ice continue) by rising water levels.

## Discussion

This, then, is no ordinary section. In some ways it is a truly extraordinary one – at least in relation to standard archaeological and geological sections, which tend to be regarded just as stratigraphic records of past events rather than as active entities in their own right. The section stands (or rather moves, in the sense of gradually receding landwards) as a dynamic interface or intermesh between the archaeosphere and the hydrosphere. This is a site where the hydrosphere floods and inundates the archaeosphere and where multiple archaeosphere objects and materials overflow, cascade, seep, or teem into the hydrosphere – a place where land (or landfill) flows into sea.

At the same time it must be acknowledged that, in a wider sense, it is not unusual at all. A walk along the foreshore of the Thames estuary reveals other landfills close by which have also been breached, or likely to be breached in the future. In some cases the breaches have been plugged with concrete or rubble, but such measures hardly seem sufficient to prevent the huge masses of landfill from releasing materials and toxins into the estuary in the long term, especially in the face of anticipated rises in sea-level brought about by climate change. Brand et al. (2018) identify over a thousand low-lying historic landfills at risk from erosion in Britain alone, and estimate there must be tens of thousands of such sites around the world. Most are unlined, with insufficient protection against floods or tidal surges. No doubt sections like the one described here could be found along estuary foreshores and coastlines close to heavily populated urban centres on almost every continent. So while evidence presented by the section is specific to this one locality and to the particular historical circumstances of waste deposition at the site, it is at the same time broadly representative of an existential threat to ocean ecosystems (and all the other parts of the Earth system interconnected with these) emerging on a global scale (see Rich et al., this volume).

The problem of pollution of rivers and oceans by plastics, and the impact on marine life, has recently become a matter of great environmental concern, yet a common misconception is that most of the plastic in gyres and drifts is dumped directly into water (Lebreton et al., 2018). What the eroding section shows us is that inundated landfills can be a major source of ocean plastics too – that material dumped and buried twenty or thirty years ago can be re-mobilized by Anthropocene forces after a time-lag of several decades (George and Edgeworth, 2018). Hopefully this chapter will play a small part – following on from excellent work by others (Spencer and O'Shea, 2014, Brand et al., 2018) – in bringing these hidden sources to light.

Looking into the future, the evidence also raises the disturbing prospect that some of the plastic buried in low-lying landfills today will re-emerge into the marine environment decades down the line. As climate change and rising sea-levels increasingly take effect, release of more and more buried plastics (and the cocktail of other less visible pollutants and toxins held in landfills) is inevitable. Spencer and O'Shea call the situation a 'ticking time-bomb'.

It might be thought that plastic emerging from the eroding section is the opposite situation to that of drifts of plastic along coastlines described by Pétursdóttir, in that direction of travel, from land to sea rather than sea to land, is entirely different (see Pétursdóttir, this volume). But the two cases are clearly connected, and not only in the sense that plastics from inundated landfills may contribute to drifts. Both are part of the same planetary phenomenon of ‘things adrift’ (Szerszynski, 2018), whatever their direction of movement or current position within larger cycles of material flow.

Using the timeshift function on Google Earth to view satellite images of East Tilbury in sequence, I estimate that from 1960 to 2020 there has been a loss of about 10 m of landfill material to an average depth of 2 m over a length of shoreline nearly 500 m long – amounting to roughly 10,000 m<sup>3</sup> in all, with more being eroded away at every exceptionally high tide. And that is just the ‘solid’ material. Unseen below the surface an interchange of more fluid materials can be inferred. Estuary waters must be infiltrating the lower levels of landfill deposits and mixing with leachate – a bacteriological soup and liquid mix of chemical toxins and plastic microparticles derived from decomposing rubbish. As high tides recede those pollutants are carried out into the estuary and ultimately out to sea.

Why is the intermediary role of archaeosphere deposits in holding on to buried material and then releasing it into the ocean several decades later so rarely considered? The reason is partly a political one: authorities find it hard to face up to the problem, not to mention the expense that would be required to resolve it. Since much of the material is buried below the surface, out of sight and out of mind, or washed away by tides, it is much easier to ignore than acknowledge the gathering crisis. Indeed the absence of viable sea-defences at East Tilbury to protect the site from inundation and erosion is testament to the fact that relevant local and national authorities are unwilling or unable to properly engage with the challenges presented by such sites.

There are other reasons. The burgeoning mass of humanly-modified ground – of which the landfill at East Tilbury is but a tiny part – is not generally held to be part of the Earth system, and rarely figures in Earth System Science analyses. When it figures in such discussions at all it tends to be seen simply as a stratigraphic record of past events and processes, rather than an ecological entity (or set of entities) in its own right with active effects and influences on other parts of the environment.

In its totality it is not claimed as the object of study by any of the more traditional academic disciplines, though parts are divided up and apportioned to each. Thus archaeology mostly deals with those portions old enough to be considered ‘archaeological’, but overlooks the rapidly growing mass of recently-formed archaeosphere formations. Geology, conversely, deals with recent deposits in the form of ‘artificial ground’, but neglects older accumulations which are more the outcome of an entanglement of cultural and natural forces, thereby falling outside the category of artificial material. Geography maps the rapidly accelerating spread of anthropogenic ground on land surfaces but largely misses out on the crucial dimension of depth. And so on. Relevant to multiple subject domains, substantial parts of it fall into the interstitial spaces or ‘no-man’s land’ between them. The manifold interactions of the archaeosphere with the hydrosphere, atmosphere, biosphere and geosphere (outlined in Edgeworth, 2018) go largely unrecognized and unaccounted for.

## Postscript: Notes on Theory

This chapter has avoided placing landfill strata and their object inclusions within the frame of any particular philosophical approach. That is partly because, as intimated above, there is a theoretical vacuum as far as the archaeosphere is concerned. Useful correspondences could have been drawn with aspects of Harman's object-oriented ontology, Deleuze and Guattari's assemblage theory, Morton's dark ecology, Bennett's vibrant materialism, Witmore's new materialism, Olsen's material turn, and so on. All of these are relevant, without providing a framework of ideas that can encompass the vast and multi-scalar material reality of the archaeosphere. Instead I have chosen to engage physically with a small part of that material reality through an archaeological investigation, using a practical methodology and basic principles of stratigraphy to make sense of it, carrying as little theoretical baggage as possible.

A second reason for avoiding an over-reliance on theory is that the material entities being investigated in question are strong and vibrant enough to stand up for themselves, with influence on our thought and action. Archaeosphere objects from the East Tilbury site turn out to be powerful and sometimes dangerous entities that actively emanate effects on other things, including humans and other living beings. Far from being inert objects that require a framing ideology to enliven or activate them, they can be taken to constitute a basis on which new theory might be generated or established theory transformed.

For example, a much-needed theoretical model of how buried plastic gets into the ocean and contributes to ocean gyres and drifts and micro-particle pollution could be constructed from observations made on this and similar sites. The plastic emerging from the eroding section is in the actual process of transitioning from land to water. If you visited the site during a tidal surge at a spring tide when the Thames barrier is closed you could witness it being washed from one realm into another. The basis of a theory, then, is already there in actuality, even prior to any widely-held conception of it.

One of the main functions of theory is to bring order to a mass of unconnected material, to make things more meaningful by placing them in a field of conceptual relationships. But most of the objects encountered during the investigation, as suggested above, already exist in a dynamic field of environmental relations. In the case of the moving plastic, for example, the relational context consists in part of interactions between land and river, the tidal flows which carry material in the river out to sea, even the position of celestial bodies such as the moon and sun in relation to the Earth and their gravitational effect on tides. A characteristic of Anthropocene objects, it might be said, is that they are situated within planetary as well as local fields of relations.

Objects are situated and linked to each other within fields of stratigraphic relations too. The sheer abundance of things of human manufacture issuing from the section or embedded in the beach should not be confused with randomness or absence of order. As has already been shown, landfill deposits are highly structured into sequences of layers of different dates, with objects contained within those layers ordered into assemblages or groups of associated items. Each assemblage, or layer containing an assemblage of objects, can itself be treated as an object, and its stratigraphic relationship to other such objects ascertained, both spatially (above, below) and temporally (later than, earlier than) through the application of archaeological method. The same applies to the sum total of all

such layers and assemblages constituting the landfill as a whole. This too can be treated as a single object, correlated with other landfills containing similar assemblages.

An encounter with even a small part of the archaeosphere can have substantial impact on ideas. Emerging material can resist categorization, defy expectations, contradict theories, undermine assumptions, force readjustment of existing theories, set ideas in motion, spark off creative insights and send lines of thought spinning off in multiple unexpected directions. It can surprise, shock, appall, astonish. Walking along Bottle Beach, the material residue of human existence that is normally buried and hidden from view is suddenly there in our field of perception. Such material is almost universally taken for granted or forgotten in everyday life, but here it is impossible to ignore. It discharges its innards at our feet. It announces its own presence. Anyone seeing the eroding section for the first time is likely to be changed emotionally and intellectually by the experience.

For all that this chapter has tried to accord evidence of emergent objects some degree of primacy over pre-formed ideas, however, it has to be acknowledged that the archaeosphere as a whole fits uncannily with Morton's part-literary, part-philosophical characterization of a hyperobject (Morton, 2013). Hyperobjects are so immense that it is virtually impossible to grasp them in anything like their totality. It is rather the case that they phase in and out of human perception. We live in and on the archaeosphere, yet hardly notice it most of the time, only ever encountering it in its local manifestations. Created in large part by human activity, it is nevertheless largely out of human control and has its own independent agency, sometimes operating on spatial scales and timescales outside of human experience. Bottle Beach is one of those places where the archaeosphere phases in to our perception to reveal a small part of itself and provide us with the merest glimmering of its larger existence.

In so far as the eroding section can be correlated with thousands of similar archaeosphere-hydrosphere interfaces throughout the world, this site and others like it are of planetary as well as oceanic significance. Study of such places enables us to think *through* rather than merely *about* the Earth (Clarke and Szerszynski, 2021), with strata and objects of the archaeosphere teaching us something about the transforming state of the Earth system and the role of humans and their material residue within it. In that sense, it is truly a section of the Anthropocene.

## Acknowledgements

Thanks to the editors and two anonymous peer reviewers for their insightful comments and suggestions. I also circulated an early draft to wider Anthropocene research networks and received useful feedback from many. Information about the history of the site was provided by Louise Fowler at Museum of London Archaeology. Zeb Ediah provided invaluable help with fieldwork and took all the photos.

Objects collected from the beach adjacent to the eroding section form part of an artwork by visual artist Katie Paterson, on display in the Ingleby Gallery, Edinburgh, and Durham Cathedral in 2022. The artwork consists of a glass urn containing 380 layers of dust in a stratigraphic sequence. Each layer comprises the pounded remains of fossils, artefacts or other material from the earliest known rock strata to the most recent human-modified strata. The layer of dust derived from the pulverised objects from Bottle Beach is near the top.

## Works Cited

- Aldred, O. (2021) *The Archaeology of Movement*. London: Routledge.
- Brand, J.H., K.L. Spencer, F.T. O'Shea, and J.E. Lindsay (2018) 'Potential Pollution Risks of Historic Landfills on Low-Lying Coasts and Estuaries', *WIREs Water* 5, e1264.
- Capelotti, P.J. (2010) *The Human Archaeology of Space: Lunar, Planetary and Interstellar Relics of Exploration*. Jefferson: McFarland.
- Carver, M. (2009) *Archaeological Investigation*. London: Routledge.
- Clarke, N. and B. Szerszynski (2021) *Planetary Social Thought: The Anthropocene Challenge to the Social Sciences*. Cambridge: Polity Press.
- Cohen, K.M., S.C. Finney, P.L. Gibbard, and J.X. Fan (2013) 'The ICS International Chronostratigraphic Chart', *Episodes* 36, pp. 199-204.
- Edgeworth, M. (2011) *Fluid Pasts: Archaeology of Flow*. London: Bloomsbury Academic.
- Edgeworth, M. (2014) 'The relationship between archaeological stratigraphy and artificial ground and its significance in the Anthropocene', in C.N. Waters *et al.* (eds), *A Stratigraphical Basis for the Anthropocene*. Lyell Collection Special Publications 395. London: Geological Society of London, pp. 91-108.
- Edgeworth, M. (2016a) 'The Ground Beneath Our Feet: Beyond Surface Appearances', in G. Mackert and P. Petritsch (eds), *Mensch Macht Natur. Landschaft im Anthropozän*. Berlin: Walter de Gruyter.
- Edgeworth, M. (2016b) 'Grounded Objects: Archaeology and Speculative Realism', *Archaeological Dialogues* 23(1), pp. 93-113.
- Edgeworth, M. (2017) 'Humanly Modified Ground', in A. Dominick and M.I. Goldstein (eds), *The Encyclopedia of the Anthropocene*. Oxford: Elsevier, pp. 157-161.
- Edgeworth, M. (2018) 'More Than Just a Record: Active Ecological Effects of Archaeological Strata', in M.A. Torre de Souza and D.M. Costa (eds.), *Historical Archaeology and Environment*. Cham: Springer, pp. 19-40.
- Edgeworth, M. (2021) 'Transgressing Time: Archaeological Evidence in/of the Anthropocene', *Annual Review of Anthropology* 50, pp. 93-108.
- Edgeworth, M., D. Richter, C. Waters, P. Haff, C. Neal, S.J. Price (2015) 'Diachronous Beginnings of the Anthropocene: The Lower Bounding Surface of Anthropogenic Deposits', *Anthropocene Review* 2(1), pp. 33-58.
- George, S. and M. Edgeworth (2018) 'Plastic is Now Part of Our Planet's Fabric', *The Conversation*. Available at: <https://theconversation.com/plastic-is-now-part-of-our-planets-fabric-a-scientist-and-archaeologist-discuss-what-happens-next-106019> (Accessed: 17 December 2022).
- Humphries, D. (2018) 'Climate Change, Coastal Erosion and Flooding: The Thames Gateway and London'. Available at: <https://www.open.edu/openlearn/society-politics-law/geography/climate-change-coastal-erosion-and-flooding-the-thames-gateway-and-london> (Accessed: 17 December 2022).
- Kelly, J.M., P. Scarpino, H. Berry, J. Syvitski, and M. Meybeck (eds) (2017) *Rivers of the Anthropocene*. Oakland: University of California Press.
- Lebreton, L., B. Slat, F. Ferrari, B. Sainte-Rose, J. Aitken, R. Marthouse, S. Hajbane, S. Cunsolo, A. Schwarz, A. Levivier, K. Noble, P. Debeljak, H. Maral, R. Schoeneich-Argent, R. Brambini and J. Reisser (2018) 'Evidence That the Great Pacific Garbage Patch is Rapidly Accumulating Plastic', *Scientific Reports* 8, 4666.

- Morton, T. (2013) *Hyperobjects: Philosophy and Ecology After the End of the World*. Minneapolis: University of Minnesota Press.
- Parikka, J. (2012) *What Is Media Archaeology?* Cambridge: Polity Press.
- Pétursdóttir, Þ. (2017) 'Climate Change? Archaeology and Anthropocene', *Archaeological Dialogues* 24(2), pp. 175-205.
- Pétursdóttir, Þ. (2020) 'Anticipated Futures? Knowing the Heritage of Drift Matter', *International Journal of Heritage Studies* 26(1), pp. 87-103.
- Rathje, W. (1992) *Rubbish! The Archaeology of Garbage*. New York: HarperCollins.
- Spencer, K. and F.T. O'Shea (2014) 'The Hidden Threat of Historical Landfills on Eroding and Low-Lying Coasts', *ECSA Bulletin* 63, pp. 16-17.
- Szerszynski, B. (2018) 'Drift as a Planetary Phenomenon', *Performance Research* 23(7), pp. 136-144.
- Turner, B.L., R.E. Kasperson, W.B. Meyer, K.M. Dow, D. Golding, J.X. Kasperson, R.C. Mitchell, and S.J. Ratick (1990) 'Two Types of Global Environmental Change: Definitional and Spatial-Scale Issues in Their Human Dimensions', *Global Environmental Change* 1(1), pp. 14-22.
- Van Emmerik, T. and A. Schwarz (2020) 'Plastic Debris in Rivers', *WIRE's Water* 7, e1398.
- Waters, C.N., I.J. Fairchild, F.M. McCarthy, C.S.M. Turney, J. Zalasiewicz, and M. Williams (2018) 'How to Date Natural Archives of the Anthropocene', *Geology Today* 34, pp. 182-187.

# Maritime Christening

## Anthropomorphism and the Engender(bend)ing of Metaphor

Jeremy Killian and Sara A. Rich

### Abstract

Metaphorical associations of boats and ships with human bodies have been widespread and well documented. Historically, in Christian Europe, watercraft were not just metaphorical counterparts of any human body but rather that of Christ, as attested in iconography and literature from the Early Roman to Early Modern eras, and in the evangelical nature of Christian imperial seafaring. However, this particular conflation of body and hull, blood and wood, seems to conflict with the frequency of watercraft christened in the name of the Virgin Mary and her various manifestations. How could the masculinity of the ship-as-Christ coexist with the feminization of the vessel by name and pronoun? By analyzing Christian mysticism alongside speculative realism, this paper addresses the question of gender-bending in nautical architecture by considering anthropomorphism – and its limitations – more broadly.

### Metaphor/ism

Wood for blood, keel for spine, planking for skin, yardarms for limbs, the boat is a body afloat. Ships and boats have long carried with them bodily metaphors, such that this connection between human and nautical forms seems to transcend time (Blackmore, 2002; Rich, 2017; Tilley, 1999). Spatially, too, the relationship is widespread, apparent from the Asmat people of New Guinea whose canoes are phalluses, to the commonplace application of the gendered pronoun ‘she’ in reference to ships and boats in the West (e.g., Voorhoeve, 1969, p. 473; Daeli, 2012, pp. 127-130; O’Connor, 2019; Mellefont, 2000). This latter example is an ancient remnant in the ‘Western’ tradition, most recently of the anthropomorphosis evident within the maritime history and archaeology of Early Modern Europe, where ships were frequently christened with epithets of the Virgin Mary (*Santa María*, *Mary Rose*). However, ships were commonly named for male saints too (*San Juan*, *HMS St. George*). A close examination of the maritime iconography and literature from this period betrays a breadth of bodily metaphors that goes far beyond the curious naming conventions of Christendom (Blackmore, 2002; Mentz, 2015; Rich, 2021).

Indeed, the Early Modern ship was not analogous to any human or even saintly body; it was understood as the divine body, the body of Christ as God humanated (Rich,

2021, pp. 84-94; Neuman, 2015, p. 258). All the maritime christenings after saints were really Christenings after the Almighty in the flesh. But if this is true, how is it possible to reconcile the masculinity of Christ, which Renaissance artists labored to depict (Steinberg, 1983), with the feminization of so many vessels in the Western tradition? Following the analysis of Caroline Walker Bynum (1992), we argue that the lingering mysticism of Medieval Christianity directly affected how Early Modern ships embodied the humanity of Christ: particularly the suffering, nurturing, and self-sacrificing aspects of Christ that conflated him with his mother. To make this argument, we will also analyze the place of metaphor in personification and consider whether or not, as Jane Bennett (2010) suggests, anthropomorphism really is the best we can do to empathize with extrahuman things.

Rooted in the doctrine of incarnation, the Early Modern conflation of ship and Christ is already evident in the iconography of Early Christianity, which frequently includes scenes of devotees in boats representing the Galilean miracles as well as the sense of safety and security found through faith in Christ (Jensen, 2000). Noah's ark also frequently appears in the iconography, where Noah is understood as a precursor to Christ, and where the ark and messiah are conflated into the singular mechanism of salvation. This metaphor is also apparent in Early Christian texts. For the 5th-century North African theologian Augustine of Hippo, Christ as vessel is the only hope for safe passage over dangerous waterways: 'So it's essential we should stay in the boat, that is, that we should be carried on wood, to be enabled to cross this sea. Now this wood, on which our feebleness is carried, is the Lord's cross, with which we are stamped and reclaimed from submersion in this world' (Augustine, 2007, p. 120). With the ensuing centuries of religious warfare, much of which was naval, the ship-as-Christ metaphor assumed profound spiritual importance, particularly as the crusading milieu endured well into the Early Modern era and its transatlantic voyages (Hamdani, 1997). Even the early 16th-century English poet and cleric John Donne (1896, p. 215) identified Christ with the ship's anchor:

The Cross – my seal at baptism – spread below  
Does, by that form, into an Anchor grow.  
Crosses grow Anchors; bear, as thou shouldest do  
Thy Cross, and that Cross grows an Anchor too.  
But He that makes our Crosses Anchors thus,  
Is Christ, who there is crucified for us.

In an iconographic example of this enduring metaphor, a 1596 portrait of a young sailor features an inset with a ship sailing under the red cross of the English flag. The hand of God reaches from the clouds, gesturing toward the ship, above which are the words *Le Semblable* ('the same'; Fig. 5.1). The symbolism indicates unambiguously the equivalence between ship and divine. As the life-preserver against tempests of all manners, the ship was salvation for the seafarer (Blackmore, 2002, p. 10; Neumann, 2015, p. 258).

While specific examples of art and literature from this period clearly testify to the persevering metaphorical relationship between Christ and the sailing ship at sea, one could argue that the symbolism employed was merely the result of rhetorical and artistic license rather than an overarching religious ideology. So perhaps the more convincing evidence is the extent to which conquistadors and other sailors conceived of themselves in an evangelical



Fig. 5.1. Portrait of a Gentleman, ca. 1596 (with detail of inset), anonymous artist. Accession no. BHC3152, National Maritime Museum, Greenwich, London, Creative Commons CC-BY-NC-SA-3.0 license. Detail of inset photographed and reproduced with permission from the National Maritime Museum.



capacity. Their mission, from God, was to Christianize the globe through colonization (e.g., Sweet, 1986; Hamdani, 1997). To do so, they had first to traverse demonic waters so that they might cast out the demons from possessed ‘savages’, which, they believed, would fulfill the prophecy of the New Earth and culminate in Christian paradise (Isaiah 65:17, Revelation 21:1; cf. Connery, 2006). These colonizing expeditions were crusading missions, and those faring the seas by way of Christ’s body – wooden like the substance of his crucifixion – saw themselves as exorcising the oceans, the foreign lands, and the peoples inhabiting them (Cañizares-Esguerra, 2006). To initiate demon eviction, Iberian seafarers would purify the oceans of their evils by immersing holy relics in the water (Corbin, 1994, pp. 7-8). This pervasive ideology of exorcism permeated into that of the pioneers going west across the New World to manifest their destiny (Cañizares-Esguerra, 2006).

Some of these ships enlisted into the violent agendas of Christian empires leave little doubt as to whom they represented. Many were christened *Jesus* and variations thereof. However, many others were not, most notably those numerous ships and boats who were (and still often are) named after his mother (cf. Neumann, 2015, pp. 257-258). If ships and boats were identified with the savior, why were they so often named after Mary, or, if christened with a masculine name, why referenced using feminine pronouns? The question is more complex than it appears, and its answer requires the work of object-oriented ontology alongside Christian theology. As philosopher Levi Bryant has argued (2011), ships themselves are allopoietic machines, meaning that they are actualized through other forces rather than self-actualizing; put simply, they are inanimate, at least as far as we can tell. As such, they do not care which names are attached to them (Bryant, 2011, pp. 167-168; cf. Rich, 2022). Rather like Adam and Eve in the Garden of Eden, it is humans who do the naming and expect other beings to respond accordingly. And yet, this futile act of naming is indicative of the way that humans try, not just to label and to categorize, but to relate to those other beings, and to draw out the identifying features that make them remarkable – to and for us. But as both Bryant and fellow object-oriented philosopher Graham Harman (2018) maintain, an object is much more than a collection of its qualities.

As Harman explains, metaphor brings us beyond the qualities, features, and properties of a thing. Drawing from José Ortega y Gasset’s 1914 essay, Harman reasons that metaphor is at the heart of all aesthetic experience, and that theatricality is at the heart of all metaphor. By *theatrical*, Harman has in mind the practice that actors often utilize to prepare for a role. The actor does not have access to the interior life of the object she portrays, so she works to ‘become’ that object, ‘not digging downward but *building upward* to a higher layer’ (Harman, 2018, p. 83, original emphasis). In our metaphor ‘the ship is Christ’, the ship is a *real object* equated with the *sensual qualities* of Christ (Harman, 2018, p. 82). But as a *real object*, the ship is withdrawn and inaccessible from contact, including even the peripheral contact of knowledge. So if the ship is absent from the formula, as it is absent epistemically, then the only candidate for the completion of the metaphor and its execution is the perceiver herself, who stands in for the ship in its equation with Christ. Harman summarizes by saying that ‘in art the part of the image which looks towards the object is subordinated by our efforts, as basically thespian beings, to become the new object generated by the metaphor’ (Harman, 2018, p. 85). Acting as the ship’s proxy, we begin to sidle up to the thing-in-itself, posing as the *real* ship who plays the role of the *sensual* savior. This performative formulation composes a new object, as a

compound of thespian relations comes into being, and the effects are powerful – magical even. This is the only way we can even partially disclose the ontology of a fellow object.

Though not informed by Harman's conception of metaphor, Paul Woodruff has asserted that theatre is making a human action worth watching, but following Harman, one might extend Woodruff's description to assert that *theatricality* is the practice of paying attention to any object, and recognizing its worth (Woodruff, 2008, p. 18). In order to accomplish this, one must engage imaginatively with the object itself, and it appears that the process of metaphor-generation is similar. By standing in for the object in question, the thespian (or metaphorician), is making a value claim about the object of the metaphor – that it is worth watching. And she is correct, in part because objects have intrinsic value apart from our perceptions of them, but also because *she is*, in a sense, the object.

In response to Thomas Nagel's (1974) question of 'what is it like to be a bat?' (or a ship, or a Christ), the ontological difference between self and other cannot be reconciled by an objective removal of distortion; to the contrary, the separation can only be resolved by welcoming distortion and its illusory mechanics (Bogost, 2012, pp. 62-66). Smoke, magic, and mirrors are what make metaphors work, and this compound is at the heart of all aesthetic experience – and indeed, of all causality (Morton, 2013). This process of using metaphor to understand other objects and the way they interact with still others is referred to as 'metaphorism'. According to Ian Bogost, to begin the process of phenomenal metaphorism, we must be able to break with at least some of our own modes of perception, which first requires the acknowledgement that our relations with other objects are not really first-person but removed into the order of perception, or aesthetics (Bogost, 2012, p. 67). Encountering other objects and their perceptions metaphysically is to encounter them metaphorically is to encounter them mystically.

## **Mystic/ism**

The Incarnation of the Almighty in the body of Jesus of Nazareth is the core tenet of Christianity. His birth into a human body, and its death and resurrection, are the skeleton keys to redemption. However, the nature of that body has been debated for two millennia. Although the doctrine of the Incarnation of Christ is one of the last fully codified doctrines in Christian history, it has made the greatest cultural impact (Ranft, 2012, p. 19). Though there was likely an early understanding of something resembling the hypostatic union of God and man in the early era of Christian history, the 'fleshing-out' of the idea that the 'Word became flesh' took nearly four centuries, and was not complete until the Council of Chalcedon in 451, trickling down to the laity in the sixth century.

It appears that some concepts, once articulated, have the power to open new horizons of human imagination and exploration. Such 'revolutionary ideas', as Thomas Torrance has called them, reshape human thinking (Torrance, 1980, p. 62). For example, Torrance points to the origin of concepts like 'time' or 'relativity' as having brought scientific, cultural, and social innovation in areas well beyond the domains for which the terms were originally engendered. It appears that the Incarnation was such a concept. Meant originally to describe a miraculous theological moment, the Incarnation opened new horizons across Western culture, from philosophy to art and architecture, and from science to economics and military, and there is a wealth of literature in Early Modern Studies exploring this phenomenon (e.g., Calcagno, 2004; Harris, 1990; Luoma, 2002; Raff,

2000; Ranft, 2006; Raw, 1997; Smith, 2002; Torrance, 1969). In a culture where nearly all art, architecture, music, and literature was religious in nature, it should not be surprising that shipbuilding was too, and that the conflation of vessel and body of God would have been a product of the Incarnation.

One of the fundamental modes of thinking that the doctrine of incarnation altered was the Christian understanding of the believer's relationship to the creation. Early Christians were wary of what they regarded as Pagan practices of nature worship, drawing many to Gnostic teachings that emphasized the spiritual above the physical. Unfortunately for those attracted to such teachings, Gnosticism was ultimately deemed heretical by the Church. However, as the doctrine of the Incarnation emerged, Christians had access to a newfound relationship to the creation and the non-physical world. Clement of Alexandria, for instance, reflecting upon the opening of the Gospel of John, wrote in the third century that 'the Word issuing forth was the cause of creation, then also he generated himself, when "the Word became flesh" that He might be seen' (quoted in Ranft, 2012, p. 24). Later theologians, such as fourth century Nemesius, made the connection more explicit: 'God created both an intelligible and a phenomenal order, and required some one creature to link these two together in such a way that the entire universe should form one agreeable unity, unbroken by internal incoherences' (Nemesius, 1955, p. 229). With the Incarnation, because the metaphysical became physical, believers could regard both the spiritual and physical worlds as redeemed, unified, and good. Believers were then theologically justified in their appreciation for and scientific study of this redeemed world, an orderly creation transformed by the Logos becoming flesh.

Artistic portrayals of Christ reflected this unity of flesh and spirit. Instead of depictions as an otherworldly, haloed figure, Medieval and Early Modern artistic traditions often portrayed Christ as literally down to earth, as a common man with common sensations and sorrows. In her essay 'The Body of Christ in the Later Middle Ages', Caroline Walker Bynum (1992) challenges Leo Steinberg's (1983) famous thesis on the sexualization of Jesus' genitals in religious iconography of the Renaissance. Acknowledging that sculptors and painters did emphasize Jesus' reproductive organs, she counters Steinberg by asserting that it was not in order to sexualize him or to demonstrate his divinity through sexual restraint. Broadening the evidence to literary sources, she argues instead that the careful articulations and symbolic allusions to Christ's genitalia were meant to overwhelm the believer with the extent of his humanity by depicting the sources of his suffering. Portrayals of Christ's penis were indicative of his circumcision, which was understood to foreshadow his crucifixion. Stigmata bleed into the absence of foreskin.

But her thesis does not end there; she goes on to assert that 'there is both iconographic and textual evidence for the argument that late medieval people sometimes saw the body of Christ as female' (Bynum, 1992, p. 92). She then provides numerous fascinating examples of texts describing suppliants feeding from Christ's breasts, imagery of Christ lactating from the wound in his ribs and giving birth to the female personification of Church. People of this period saw 'the flesh of God as a clothing taken from Mary's flesh', which helps to explain why 'the wound of Christ and the breast of Mary are clearly parallel in picture after picture' (Bynum, 1992, p. 102). According to mystics and theologians of this time, the body of Christ could be seen as Aristotle's paradigmatic male but also as the womanly, nurturing body that fed believers, the way that the church fed them spiritually through

the eucharist. Bynum's analysis offers a new metaphorizing equation: the body of Christ is the body of Mary is the body of Church.

The idea of Mary as Church – nurturing and forgiving – has a precedent elsewhere among Near Eastern religions. Christianity emerged from Judaism which syncretized and condensed Canaanite and, to a lesser extent, Egyptian religions (e.g., Gabriel, 2002). The important point here is that there is a mysterious female goddess of Canaan and Egypt named Qudshu, which, translated from the Semitic root *qds*, means 'holiness', 'temple' or 'sanctuary'. Given the presence of shipboard deities and altars in numerous excavated ancient shipwrecks, Qudshu as the personified temple may also have been embodied onboard ships – or, put differently, ships may have embodied the goddess as temple (Rich, 2017, pp. 148-165 and refs; cf. Brody, 1998). Whether family resemblance or theological coincidence, in the Early Modern period, the ship was also understood at times as homologous to the Church, helmed by the Holy Spirit (Corbin, 1994, pp. 7-8).

Mary as Church and Ship is also reasonable from the perspective of materiality. Following Aristotelian biology, women were associated with the flesh, with physicality. This is in part because, on Aristotle's account, within the reproductive process, women contribute raw *hyle*, while men contribute *psyche* with which the formless matter offered by the mother takes shape (*On the Generation of Animals* 4.765.b8-14). This idea remains evident even today by considering the etymology of 'material', and its relationship with Latin *mater*, or mother. But for Aristotle, who spoke Greek, the word for material and its unformed, feminine potential, *hyle*, also means wood (see Normark, this volume). This is the material from which ships, much more so than churches, were constructed (although see Watson, this volume, on ships as transporters of church construction materials). As Erich Neumann (2015, p. 258) summarizes,

As place of birth, as way of salvation, and as ship of the dead, the ship is the wood of the beginning, the middle, and the end. It is the threefold goddess as mistress of fate and tree mother, who shelters the life of man and leads him from earth to earth, from wood to wood, but always back to herself.

The perfectly formed Christ was born of the raw material of Mary, which shares strong linguistic and cultural ties with the material that crucified her son.

In descriptions of the crucifixion, the Greek texts of the Gospels unanimously use the word *stauros*, which means simply wooden pole, post or rod – like a mast; the Greek word's translation into Latin as *crux*, originally meaning lynching tree, may be significant as well. The raw material of wood, of tree, was apparently more important in the Middle Ages than the cruciform shape that would later take ideological preeminence. That said, a lingering material focus can be recognized in Christian hymns such as Isaac Watts' 1707 'Alas and Did My Savior Bleed', in which the singer laments, 'Was it for crimes that I have done, he groaned upon the tree?' Still today, some Easter celebrations involve 'flowering the cross', during which worshipers decorate the cross as a vivid tree, draped in Spanish moss, pine or palm fronds, and fresh flowers, as a symbol of the resurrection, of the wood coming to life (Fig. 5.2). The tradition has its roots in sixth-century Christian theology, evidenced by Venantius Fortunatus' hymn (translated from Latin by John Mason Meale in the mid-nineteenth century):

Faithful cross! above all other,  
one and only noble tree!  
None in foliage, none in blossom,  
none in fruit thy peer may be:  
sweetest wood and sweetest iron!  
sweetest weight is hung on thee.

Bend thy boughs, O tree of glory!  
Thy relaxing sinews bend;  
for awhile the ancient rigor  
that thy birth bestowed, suspend;  
and the King of heavenly beauty  
gently on thine arms extend.

Later in the Middle Ages, the importance of the material of wood, over the shape of the cross, is most poetically evidenced in the Anglo-Saxon poem, 'Dream of the Rood', where *rood* means 'rod', akin to Greek *stauros*. However, throughout the poem, the gallows-tree (*gealgtreowe*) is also invoked, as the dreaming narrator first encounters the glorified tree that was the source of the *stauros* in Jesus' execution (Fig. 5.3). Bridging poetic traditions of Germanic heroicism and Christian mysticism, the crucifixion story is told from the perspective of that tree, which, bearing stigmata and drenched with sacrificial blood, becomes one with the Redeemer. From gallows-tree to glory tree (*wuldres beam*) the *rood* is the mirror image of the god. And yet, at times, when the rood and the dead god weep in unison (line 70), the reader senses the *rood* cradling the god, perhaps anticipating the later Germanic iconographic tradition of the Vesperbild, which would become popular in Italy as the *pietà* motif. Here, Mary cradles her son's body after its removal from the cross, substituting her own body where the wood had once been. Building on linguistic ties, the unity of mother, son, and wood may be witnessed in the visual and literary records of Medieval Europe.

Perhaps a more strictly theological reason why Christ was often feminized and equated visually with Mary is found in his unlikely relationship with the domain of menstruation. In the Gospel accounts of Jesus' life, there are two examples of Jesus transcending Jewish cultural taboos surrounding female menstrual cycles. John 4 recounts that in Sychar, Jesus asks a Samaritan woman for a drink of water, despite the Jewish tradition maintaining that all women from Samaria should be regarded as equally unclean as menstruating Jewish women (Delaney et al., 1988, p. 39). Additionally, Jesus is described as healing a woman 'with an issue of blood', a woman who had been menstruating for twelve years (Matthew 9:20-22; Mark 5:25-34; Luke 8:43-48). Instead of berating her for defiling his garment with her touch, Jesus praises her for her faith and heals her. In both instances, Jesus does not behave with the expected masculine repugnance to women's reproductive cycles, and perhaps these accounts contributed to a feminization of Christ in the Medieval and Early Modern religious experience.

Additional to the Biblical accounts of Christ's relationship to women's monthly cycles, there may have been an enduring medical reason to bind the sacrificial Savior to female menstrual blood. Hippocratic medicine of the fourth and fifth centuries BCE compare



Fig. 5.2. Wooden crosses are reanimated as living trees in anticipation of Easter celebrations of the resurrection in Conway, South Carolina (USA). There is an enduring emphasis on the material, rather than the shape, of the implement used in Christ's martyrdom, and of the interchangeability of the tree with the god. Clockwise from top left: Kingston Presbyterian Church, First Baptist Church, Trinity Methodist Church. Photographs by the authors, 2022.

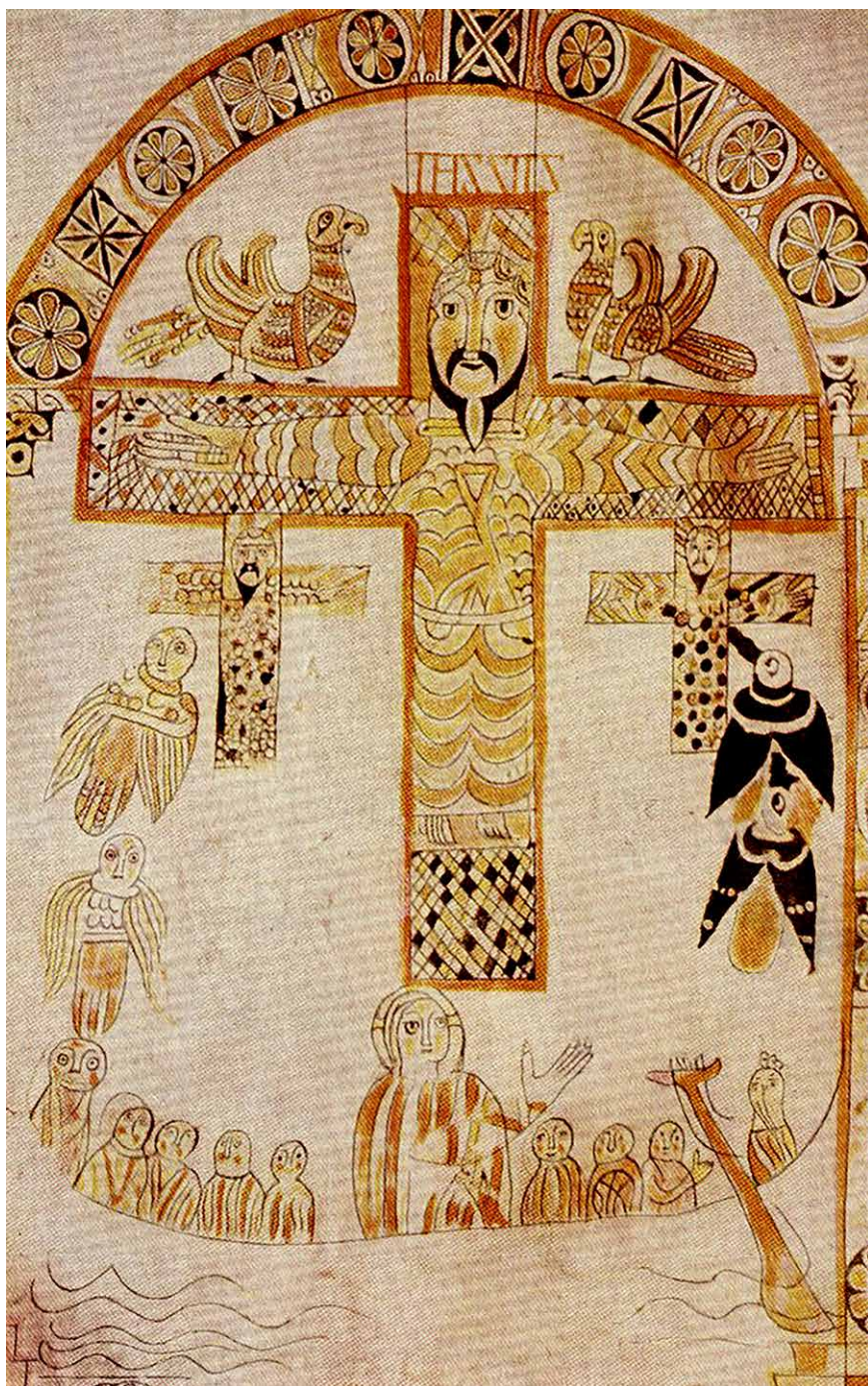


Fig. 5.3. Maritime crucifixion scene from an Anglo-Saxon illuminated manuscript. The illustrations, from an Irish original, recall popular descriptions from the 'Dream of the Rood'. Epistles of St. Paul, folio 7, ca. 800, Würzburg: Lib., Universitätsbibliothek; Cod. M. p. th. 69 (acc. 5Bk.051). Artstor.

menstrual blood to the blood of animals sacrificed in religious rites. Lesley Dean-Jones points out that in Hippocratic medicine, this simile is significant. She writes that ‘if the blood of a sacrificial victim clotted quickly it would signify that the animal had been healthy and would have been an auspicious sign for the city’. To the Hippocratics, a healthy woman’s menstrual bleeding behaved similarly, which had ‘a wider, civic significance...it affirmed that she could replenish the citizen body as well as her own’ (Dean-Jones, 1989, p. 191). As the perfect sacrifice, Jesus’ sweat in the garden of Gethsemane became drops of clotted blood (the only use of the word *thrombos* in the New Testament; Luke 22:4) demonstrating a kind of Hippocratic symbolism that runs parallel to female reproductive health. Because there were few significant medical inquiries into menstruation until the nineteenth century (Delaney et al., 1988, pp. 45-48), perhaps something of the Hippocratic connection between sacrificial blood and menstrual blood persisted in the Medieval and Early Modern phenomenon of the feminization of Jesus. Further, that the sacrificial Christ is also a virgin may be significant as well. The crucifixion may be understood as a gender inversion of the virgin sacrifice familiar in a Graeco-Roman context. From the mythological art and literature, the virgins sacrificed were always young women (Mangieri, 2021; Scodel, 1996); in the Gospel accounts, the sacrifice was of a virginal man. And instead of a host of maidens looking on during actual ceremonial sacrifices of nonhuman animals, the onlookers at the crucifixion scene were a prostitute, a mother, and a few adult men.

As Bynum emphasizes, the clear iconographic and textual representations linking the masculine Christ and feminine Mary are consistent with other reversals and inversions at the heart of Christian mysticism (Bynum, 1992, pp. 92, 109). In this case, the feminization of Christ in so many visual and literary accounts was meant to allude to the one feature that all humans – and perhaps all of creation – share in common, which is simply pain. These accounts, especially when contextualized within the Gospel, Germanic, and Hippocratic traditions explained above, speak of suffering as not only an opportunity for salvation, but the cause of salvation (Bynum, 1992, p. 117). Christ is revealed as a fleshly body that weeps, bleeds, and exudes life at its own expense; and in this way, Christ is revealed as a woman.

As for the ship at sea with *crux*-like masts reaching heavenward, it doubled as the body of Christ, sacrificing itself to save its evangelist passengers from demonic waters, but such sacrifice requires susceptibility to corruption (Rich, 2021, p. 151). The wooden ship pushing through meta/physical tempests was never silent, but creaked and groaned in torment like a woman in labor (cf. Blackmore 2002, pp. 70-71). Fluids were everywhere. The ship’s body oozed, from its putrid belly of bilges to the cracks between planks where seawater and human filth fermented and putrefied, blackening into slime and releasing a gut-wrenching miasma (Corbin, 1994, pp. 16-17). And according to the science of the time, all bodily fluids were blood (Bynum, 1992, pp. 109-114). The more the ship suffered, the more Christlike it was. And when its body failed, as they all do, it was merely prophetic. Pain and death for those onboard was the ultimate opportunity for redemption.

## Morph/ism

Ships built and sailed in the name of Mary and the body of Christ (or vice versa) exemplify the power of anthropomorphism. But from the perspective of a flattened ontology – where all things exist equally, and where humans are decentered and reduced back down to a ratio that more accurately represents the distribution of existence on Earth –

anthropomorphism operates with the troubling mechanics of raising others up to the human level, like an ideological elevator that allows the upper-story residents to slum it for a night with those on the ground floor. The anthropomorphizer must first assume that the object being anthropomorphized would benefit from bipedalism, a speaking voice, rational thought, or – in the case of pets, hurricanes, and watercraft – a person's name. And so, the anthropomorphizer bequeaths these human attributes unto the anthropomorphized, analogous to the way that colonizers so often assume(d) Indigenous peoples ever needed or wanted 'help', or for that matter, a Christian name.

We might also consider this objection to anthropomorphism in light of a concern common to the anthropologist. In a footnote Freud inserts at the outset of *Totem and Taboo*, he warns his reader that the putative 'facts' assumed by anthropologists Andrew Lange and James Frazier about 'primitive' cultures ought to be regarded suspiciously. Freud worries that any contemporary account of ancient cultures that is rooted in the anthropological study of living tribal communities does not account for the fact that all culture is a process of flux; 'primitive cultures', like all human cultures are 'in various stages of decay and disintegration', with their past states likely 'differing from the current one' (Freud, 1918, pp. 4-5, fn. 2). His critique of the anthropological stories of cultural origin and cross-cultural analogy is undergirded by an assumption especially relevant to the concerns raised here. Freud claims that the fundamental challenge that anthropology cannot overcome is akin to the observer effect in quantum mechanics. In studying a human cultural system, a student is entering that system, and thereby changing it. As John Zilcosky points out, 'we can never find the real "savage" precisely because we are out there looking for him' (Zilcosky, 2013, p. 464). In developing relationships with the so-called primitive objects of inquiry, the anthropologist discovers that they are no longer 'primitive' or even Other.

One might wonder if the familiar ethnographic problem of forcing the foreign into the familiar is at work in the processes of anthropomorphism too. Naturally, the epistemological and ontological problems of cross-cultural interaction are much less extreme than those of cross-substance interaction. But like the ethnography that more accurately resembles the ethnographer than the ethnos in question, is any real essence of the object of the anthropomorphizer's attention actually being disclosed? Or is it simply the case that the anthropomorphizer, in naming a ship after God, is only disclosing something about herself, and in the process, fundamentally altering the essence of the thing she names? Is this even a fair judgement of the mechanics of anthropomorphism, and if so, is there any alternative way to grasp at the ontologies of nonhuman objects?

In her influential work introducing the theory of vital materialism, Jane Bennett defends the potential for anthropomorphism to become isomorphic revelation (Bennett, 2010, p. 99). Although the anthropomorphizer may at first only see a world in her own image, 'what appears next is a swarm of "talented" and vibrant materialities' (Bennett, 2010, p. 99). Rather than moving the anthropomorphized up to our plane of existence, we move as close as we can to its. We seek revelation through shapeshifting into equilibrium. This performative transposition allows us to recognize features shared across categorical divides and to wonder at the agency and organization of so many nonhuman entities, whether other animals, storms, or boats. Bennett's idea of isomorphism is similar to Bogost's metaphorism; in both accounts, the human anthropomorphizer steps into the place of the anthropomorphized, gradually relating to its way of being (Bogost, 2012, p. 65; Harman, 2018, pp. 86-88). By

christening and especially Christening ships and boats, Late Medieval and Early Modern mariners grasped at the ontology of the ship, but also that of God (Figs. 5.4 and 5.5). Although exceedingly diverse entities, seafarer, ship, and savior all shared the common feature of fleshly fallibility – and arguably, the promise of resurrection too (Rich, 2021; see Rich et al., this volume). And certainly, no believer would explain the anthropomorphosis of God as humankind raising him up to the level of the human. Perhaps this point deserves to be made more explicitly: anthropomorphism cannot be understood as unidirectional given the example of Divine anthropomorphosis, or theological subsistence (see Mentz, this volume). Because anthropomorphism cannot be understood only as the elevation of an extrahuman entity up to our own plane of existence, the objections raised above are disarmed. The ontological, epistemological shimmying between entities is not vertical but lateral. Remarkably, the flattening of hierarchies through metaphor is evident even in a world riddled with them, entrenched economically through feudalism and emergent capitalism, and theophilosophically through ‘scientific’ notions of a great chain of being.

In offering an isomorphic mechanics of personification, Bennett further argues that anthropomorphism is oddly de-anthropocentric. Superstition, animism, and romanticism, though often subject to philosophical fire, manage to strike a resonating chord between person and thing so that the person finds herself ‘no longer above or outside a nonhuman “environment”’ but perceptive of an intimate echo (Bennett, 2010, p. 120). As Potawatomi scientist and poet Robin Wall Kimmerer explains, the language of the Ojibwe people makes it possible for things to be verbs: in other words, for a person (or an ant or a stone) ‘to be a hill’ or ‘to be a bay’. In this way, the human speaker might move herself into the animated, living realm of the hill or the bay:

A bay is a noun only if water is *dead*. When *bay* is a noun, it is defined by humans, trapped between its shores and contained by the word. But the verb *wiikegama* – to be a bay – releases the water from bondage and lets it live. ‘To *be* a bay’ holds the wonder that, for this moment, the living water has decided to shelter itself between these shores, conversing with cedar roots and a flock of baby mergansers. Because it could do otherwise – become a stream or an ocean or a waterfall, and there are verbs for that, too. To be a hill, to be a sandy beach, to be a Saturday, all are possible verbs in a world where everything is alive. Water, land, and even a day, the language a mirror for seeing the animacy of the world, the life that pulses through all things, through pines and nuthatches and mushrooms (Kimmerer, 2017, p. 131).

This reasoning helps us conceptualize that just as we *anthropomorphize*, a dinosaur ‘*dinosaurmorphizes*’ (Morton, 2013, p. 82, original emphasis), while ships *nauticomorphize* and gods *theomorphize*. Although we cannot grasp the alien other, we can use anthropomorphic metaphor to reach closer to it (Bogost, 2012, p. 66). And as we do, we are (re)learning that so many extrahuman kin experience sentience, sensations, and sorrows far beyond our wildest personifying fantasies: speaking plants, negotiating fungi, mourning crows, pranking octopi (see Campbell, ‘Octopodology’, this volume). For Early Modern mariners, by equating the wooden ship with the divine mother and fleshly god, who equated himself with humans, they could experience a more profound conception of their own humanity and divine origins. As isomorphically revelatory as this metaphor must have been, as time has passed, Christ

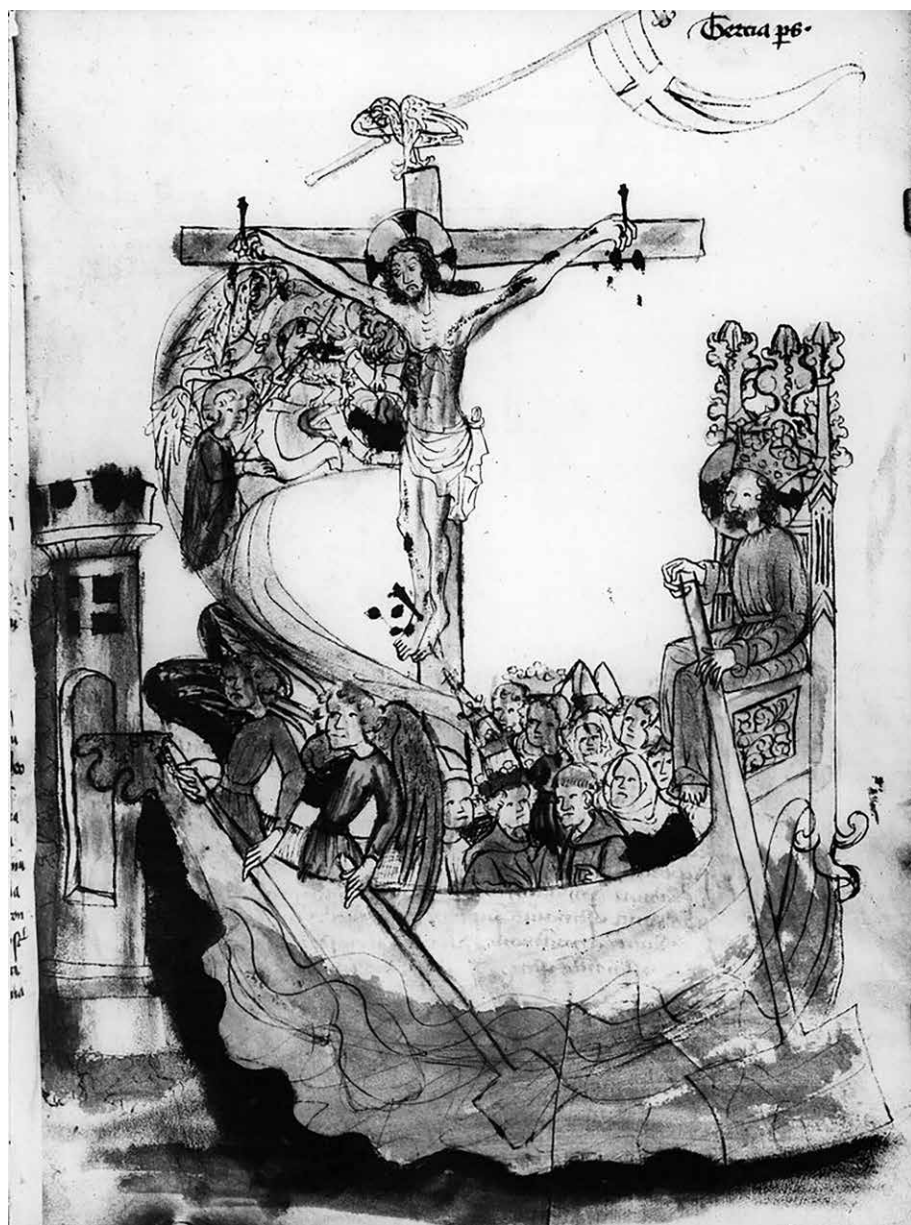


Fig. 5.4. Page from a 15th c. illustrated manuscript depicting the metaphor of Church as Ship, Ship as Christ. Wynandus de Stega, *Adamas Colluctancium Aquilarum*, fol. 69r. XV. Rome: Biblioteca Apostolica Vaticana; Cod. Pal. lat. 412 (acc. 5Fk.197). Artstor.

Fig. 5.5 (opposite page). Page from the Piccolomini breviary (MS M.799), fol. 234v. Lombardy, Italy, ca. 1475. The Morgan Library & Museum. MS M.799, fol. 234v. Purchased in 1937. Reproduced with permission of the Morgan Library & Museum.



has been increasingly masculinized in art and literature, and at the same time, ships have changed from the living material of wood to the hypermasculinity of steel; in contemporary ships, the closest component to a living material are the fossil fuels they carry and burn (see also Rich et al., this volume). Even so, by acknowledging the complexity and depth of this past metaphorical relationship, those of us living hundreds of years later in a descendent culture can move a little closer to comprehending historical interobject relations.

A concluding thought might be made here on the practicality of such careful relational comprehension. As the metaphorist and mystic both know, simply projecting our experience of reality onto others runs counter to the cause of de-anthropocentrism – and in the Anthropocene, this cause is more important than ever. In opposition to isomorphism, projection creates an exaggerated and self-indulgent mimicry of the myriad other ways that existence ('being-in-the-world') may be experienced, whether by boats or by gods. When Steinberg (1983) projected contemporary sexuality onto a Renaissance context by sexualizing Christ's painted and sculpted penis, he limited the metaphorical possibilities and by extension, his understanding of the artists' intentions and the spiritual effects of those penises on original viewing audiences. By contrast, Bynum analyzed the metaphors holistically to advance an understanding of the past that might 'enable modern people to give age-old symbols new meanings that would be in fact medieval' (1992, p. 117). The difference this means to interpreting historical cultural material is clear, but the dangers of projection are even more radically spelled out by considering how it can falsely legitimize unnecessary human interventions, and at the same time, the neglect of actual responsibilities. For example, the wreckage of ships upon whom we have projected the qualities of a 'Great Man' receive a great deal of scholarly attention, while those upon whom no admirable qualities are projected receive none. And in the case of many shipwrecks, projection can be dangerous: e.g., when historical wrecks serving as artificial reefs are prioritized for archaeological intervention over modern and contemporary vessels whose bodies pollute and defile those living around them (see Rich et al., this volume).

## Acknowledgements

This paper was written on settler-occupied Waccamaw territory, in what is now coastal South Carolina, USA. In particular, the authors thank Waccamaw Chief Harold Hatcher and Vice Chief Cheryl Sievers-Cail for their friendship and warm welcome to these lands and waters – *pilamayaye*. We are grateful for the opportunity to live in their territory, and we seek ways to honor the Waccamaw people, their ancestors, and this beautiful place, where we are a guest. Our gratitude is also extended to Dr. Ashley Cook for advising on the section related to Anglo-Saxon literature, to Dr. Claire Jowitt for drawing our attention to the National Maritime Museum painting reproduced here, and to those in attendance at the 2021 Rocky Mountain Division of the American Society for Aesthetics who provided feedback and questions for further contemplation. We also thank the anonymous reviewer for suggestions. Any errors and oversights are the authors' alone.

## Works Cited

- Augustine of Hippo (2007) *Essential Sermons*, B. Ramsey (ed.). Hyde Park: New City Press.
- Bennett, J. (2010) *Vibrant Matter: A Political Ecology of Things*. Durham: Duke University Press.
- Blackmore, J. (2002) *Manifest Perdition: Shipwreck Narrative and the Disruption of Empire*. Minneapolis: University of Minnesota Press.
- Bogost, I. (2012) *Alien Phenomenology: Or, What It's Like to Be a Thing*. Minneapolis: University of Minnesota Press.
- Brody, A.J. (1998) 'Each Man Cried Out to His God': *The Specialized Religion of Canaanite and Phoenician Seafarers*. Harvard Semitic Museum Monographs 58. Atlanta: Scholars Press.
- Bryant, L.R. (2011) *The Democracy of Objects*. Ann Arbor: Open Humanities Press.
- Bynum, C.W. (1992) *Fragmentation and Redemption: Essays on Gender and the Human Body in Medieval Religion*. New York: Zone Books.
- Calcagno, A. (2004) 'The Incarnation, Michael Henry, and the Possibility of the Husserlian-Inspired Transcendental Life', *Heythrop Journal* 45(3), pp. 290-304.
- Cañizares-Esguerra, J. (2006) *Puritan Conquistadors: Iberianizing the Atlantic, 1550-1700*. Stanford: Stanford University Press.
- Connery, C. (2006) "'There Was No More Sea": The Supersession of the Ocean from the Bible to Cyberspace', *Journal of Historical Geography* 32, pp. 494-511.
- Corbin, A. (1994) *The Lure of the Sea*, J. Phelps (trans.). Berkeley: University of California Press.
- Daeli, O.O. (2012) 'Ci Opak, Jis Opak (No Canoe, No Firewood): An Economic Dimension of the Asmat Canoe', *Melintas: An International Journal of Philosophy and Religion* 28(2), pp. 119-138.
- Dean-Jones, L. (1989) 'Menstrual Bleeding According to the Hippocratics and Aristotle', *Transactions of the American Philological Association* 119, pp. 177-191.
- Donne, J. (1896) *Poems of John Donne*, vol. 1, E.K. Chambers (ed.). London: Lawrence & Bullen.
- Gabriel, R.A. (2002) *Gods of Our Fathers: The Memory of Egypt in Judaism and Christianity*. Contributions to the Study of Religion 67. Westport: Greenwood Press.
- Hamdani, A. (1997) 'Islamic Background to the Voyages of Discovery', in S.K. Jayyusi (ed.), *The Legacy of Muslim Spain, Vol. 1*. Leiden: Brill, pp. 273-306.
- Harris, M. (1990) *Theatre and Incarnation*. London: Macmillan Press.
- Harman, G. (2018) *Object-Oriented Ontology: A New Theory of Everything*. London: Penguin.
- Jensen, R.M. (2000) *Understanding Early Christian Art*. London: Routledge.
- Luoma, T. (2002) *Incarnation and Physics*. Oxford: Oxford University Press.
- Mangieri, A. F. (2021) *Virgin Sacrifice in Classical art: Women, Agency, and the Trojan War*. London: Routledge.
- Mellefont, J. (2000) 'Heirlooms and Tea Towels: Views of Ships' Gender in the Modern Maritime Museum', *The Great Circle* 22(1), pp. 5-16.
- Mentz, S. (2015) *Shipwreck Modernity: Ecologies of Globalization, 1550-1719*. Minneapolis: University of Minnesota Press.
- Morton, T. (2013) *Realist Magic: Objects, Ontology, Causality*. Ann Arbor: Open Humanities Press.

- Nagel, T. (1974) 'What Is It Like to be a Bat?', *The Philosophical Review* 83, pp. 435-450.
- Neumann, E. (2015) *The Great Mother: An Analysis of the Archetype*. Princeton: Princeton University Press.
- Nemesius of Emesa. (1955) 'On the Nature of Man', in Telfer, W. (ed.) *Cyril of Jerusalem and Nemesius of Emesa*. London: Library of Christian Classics.
- O'Connor, A. (2019) 'Irish Sailors Unlikely to Drop "Harmless Tradition" of Calling Boats "She"', *The Irish Times*, 25 April 2019 [online]. Available at: <https://www.irishtimes.com/culture/heritage/irish-sailors-unlikely-to-drop-harmless-tradition-of-referring-to-boats-as-she-1.3871477> (Accessed: 16 June 2021).
- Portrait of a Gentleman, Circa 1596*. Accession no. BCH3152, National Maritime Museum, Greenwich, London, Caird Collection [online]. Available at: <https://collections.rmg.co.uk/collections/objects/14625.html> (Accessed: 16 June 2021).
- Raffa, G. (2001) *Divine Dialectic: Dante's Incarnational Poetry*. Toronto: University of Toronto Press.
- Ranft, P. (2012) *How the Doctrine of the Incarnation Shaped Western Culture*. New York: Lexington Books.
- Ranft, P. (2006) *The Theology of Work: Peter Damian and the Medieval Religious Renewal Movement*. New York: Palgrave McMillan.
- Raw, B. (1997) *Trinity and Incarnation in Anglo-Saxon Art and Thought*. Cambridge: Cambridge University Press.
- Rich, S.A. (2021) *Shipwreck Hauntography: Underwater Ruins and the Uncanny*. Amsterdam: Amsterdam University Press.
- Rich, S.A. (2022) 'Hauntography of an Ordinary Shipwreck: Paradox, Appellation, Provenance, Apparition', in A. Crespo Solana, F. Castro, and N. Nayling (eds) *Heritage Under the Sea: Maritime History and Archaeology of the Global Iberian World (16th to 18th Centuries)*, volume 2. Cham: Springer, 59-72.
- Rich, S.A. (2017) *Cedar Forests, Cedar Ships: Allure, Lore, and Metaphor in the Mediterranean Near East*. Oxford: Archaeopress.
- Scodel, R. (1996) 'Δόμων ἀγάλμα: Virgin Sacrifice and Aesthetic Object', *Transactions of the American Philological Association* 126, pp. 111-128.
- Smith, J.K.A. (2002) *Speech and Theology: Language and the Logic of the Incarnation*. London: Routledge.
- Steinberg, L. (1983) *The Sexuality of Christ in Renaissance Art and Modern Oblivion*. Chicago: University of Chicago Press.
- Sweet, L.I. (1986) 'Christopher Columbus and the Millennial Vision of the New World', *The Catholic Historical Review* 72(3), pp. 369-382.
- Torrance, T. (1980) *The Ground and Grammar of Theology*. Charlottesville: University Press of Virginia.
- Torrance, T. (1985) *Space, Time, and Incarnation*. Edinburgh: Handel Press.
- Voorhoeve, C. (1969) 'Some Notes on the Linguistic Relations Between the Sentani and Asmat Languages of New Guinea', *Bijdragen tot de Taal- Land- en Volkenkunde* 125(4), pp. 466-486.
- Woodruff, P. (2008) *On the Necessity of Theatre: The Art of Watching and Being Watched*. Oxford: Oxford University Press.
- Zilcosky, J. (2013) 'Savage Science: Primitives, War Neurotics, and Freud's Uncanny Method', *American Imago* 70(3), pp. 461-486.

# Complicit Objects and New Materialist Praxis

Claire S. Watson

## Abstract

New materialist approaches to archaeology rightly insist on conceptions of things as agents, just as active and involved in networks as any human. However, this flat (or flattened) approach invites criticisms of depoliticization. Does a focus on things tempt the critical eye away from the operation of power, or the dynamics inherent to the networks on which these things are exerting influence? The answer to this is very likely yes. Flat ontologies tempt us towards depoliticization – if things are conceived of as neutral. Utilizing the evidence of human relations to remnants of their past, this work develops a conception of objects as far from neutral; instead, objects are complicit. From movements to remove Confederate imagery in the United States, to Bulgarian engagement with Soviet monuments, to the shipping of prefabricated ideologically-loaded architectural elements to newly-conquered territories, it is clear that objects have been seen as collaborating in structures and expressions of power for millennia. In contexts both ancient and modern, these human relations with things indicate a sense of object complicity, the adoption of which may serve as an antidote to a depoliticized engagement with things. From this sense of object complicity, this work then derives the beginnings of a possible praxis for archaeologists engaging with complicit objects.

## Introduction: Definitions, Depoliticizations, and Object Complicity

Football season is over. No more manifestos. No more sprawling catalogues of objects. Our fascination with the infinitely varied world of things needs to translate into effective analysis to escape that familiar cloister of theory that lives in the limbo between aspiration and application. In order to do so, any approach with a flattened ontological perspective must first contend with one particularly salient criticism. Does a flattened ontology lend itself to a dangerously ahistorical, depoliticized perspective?

The answer to this question is yes. A flattened ontological perspective, one which says that all objects are equally subjects, equally involved in a given situation, tempts us to lose ourselves in the vast world of things, abandoning humans entirely as a corrective to an oft-critiqued anthropocentrism. However, I intend to show that this affirmative response is not a sign to abandon such an approach. Rather, it lends itself to a recognition of things that will be more effectively practiced than the unbridled enthusiasm and wonder towards things that has characterized previous decades.

Recognizing the potential for depoliticization should rightly lead us to ensure that the operation of power is not obscured, but rather highlighted, by a flattened perspective. This act, in turn, leads to a recognition of power as bound up within objects, the recognition that objects are not sterile or impotent, but rather still effectual, still potent, still *complicit* – long after deposition and the utter change of their original context. From that point, one can approach power and its operation alongside the very things mediating and enabling it.

In this text, I have grouped a number of rather varied approaches under the heading of ‘new materialism’. This umbrella term denotes any approach concerned with things as vibrant participatory assemblages. These approaches are concerned with disrupting an oversimplified human-thing duality in which *homo faber* intentionally acts upon things, controlling them completely, and replacing it with a flat (or flattened) ontology. The characteristics uniting these approaches – things as assemblages, things as participants, and things as things, to borrow from Witmore’s 2014 overview of new materialist approaches in archaeology – will emerge in the course of the first half of this text. It is true that new materialist approaches may differ significantly in some respects, such as the question of symmetry, the extent to which relationships between humans and things might practically differ from relationships between things. With potential differences in mind, the following text aims to begin as near to a shared middle ground as is possible, in an effort to further develop an approach to objects that is politically engaged, actionable, and analytically useful.

The use of the past participle ‘flattened’ rather than the adjective ‘flat’ in relation to ontology deserves explanation. To insist on an entirely flat ontology is to fall victim to the same issue faced by the concept of ‘distributed responsibility’ – at least one reading of the concept (e.g., Bennett, 2005), an alternative to which will be presented later. The problem, put briefly, is that if everything is entirely flat, entirely evenly distributed, if every participant is equally involved in a given situation, then responsibility is impossible to assign. Power and responsibility become excessively distributed, diluted. When this is the case, critique becomes impossible, and historically specific situations become depoliticized. Describing an approach to ontology as ‘flattened’, by contrast, highlights that while an approach that erases hierarchies between agents is useful, it is to a certain extent an analyst’s imposition in order to ascertain the roles of objects within a given situation, rather than a reflection of how a given situation was seen or experienced in the past.<sup>1</sup> This, in turn, highlights the fact that there are historical contours and structures of

---

1 A number of following examples, however, feature instances of objects being attended to, in which the perception of a given situation by actors within that very situation does appear to align with a somewhat flattened ontology.

power that impact, and rely upon, humans and things. Simply put, ‘flattening’ is intended to retain historical specificity, while still recognizing the agentic capacities of things within a given context.

If flattening is intended to make room for power in new materialist analysis, then what, exactly, does power mean? Debates abound over power: its definitions, its operations, its effects, and more. Instead of wading into those debates, this work will treat power broadly. Following Lukes, who analyzed the multiple dimensions of power (2005, pp. 16-29), power is understood in this text as substantially, but not exclusively, related to influencing behavior. This is to say that the materiality and the objective reality of objects impact the relations surrounding and composing a given object, including how other participants engage with and relate to that object. At the same time, this work borrows heavily from Foucault, who considered power to be everywhere, thanks to its embodiment in discourse, knowledge, and cultural production (Foucault, 1995). Thanks to its ability to suffuse, power necessarily conditions existence. In other words, it is thanks to the functioning of power that existence is experienced in the ways that it is. This approach to power allows us to better understand why a conquering empire might set up ideological expressions of power (churches, monuments, etc.) in a newly conquered province: that empire is setting the conditions for existence in that region. If a conquering empire establishes churches in that province, existence there will be conditioned in some way by those religious and social influences, which are themselves connected to imperial power. While this power may only influence behavior in a very roundabout way, expressions of control suffuse and predominate. Whether that power is potential or realized is immaterial; the fact is that this action (in this case, of building ideologically-loaded structures) impacts specific aspects of existence in that area. Archaeologists may only glimpse the material remains of these power relations, and therefore, we may say that, in this context at least, power is inseparable from its recording in, and through, objects. Ultimately, power only functions because things function. By looking at things, we may locate a crucial source of power, as much in the present as in the past.

Having affirmed the statement that a flattened ontology may lend itself to a dangerously depoliticized perspective, it remains to answer the question of what to do now. Do we reject the idea of such an ontology entirely? To do so would be to ignore the meaningful work done so far by thinkers such as Harman (2011), Hodder (2012), Olsen (2003; 2010) and many others, some of whom are helpfully collected by Witmore (2014). The work of these scholars, taken collectively, has pointed quite rightly to the basic premise that things are agential, that they make us as much as we make them. Instead of disputing this premise, I want to propose an alteration to our thinking: moving from things as agential to things as *complicit*.

The first step forward is, perhaps, predictable: centering the concept of ‘things as assemblages’. Things are made of multifarious other things, while simultaneously existing as something more than the sum of their parts. This recognition accounts for the fact that a car, for example, is not perceived as a bundle of metal and economic, ecological, and social relations, but as a car (Harman, 2011, pp. 14-15). Harman’s conception of symbioses encapsulates this phenomenon while extending it to account for the impact of this relationality on one of its multiple participants, or *relata* (2016, pp. 42-51; see also Harman, this volume). Though a given object is made up of relations that must be accounted for, another object’s (or subject’s) experience of that object must be accounted for as well.

Things, then, exist as expressions, as Harman puts it, of the tension between an object and its relations to other objects (2011, pp. 119-120). This move allows us to consider the inputs (the things composing a thing, in whatever sense the term ‘composing’ might be applied) as well as the output (the thing itself).<sup>2</sup> In this context, it is our understanding of the relations composing a thing, the ‘inputs’, that is of greatest importance.

Within an assemblage, perhaps the most important things are the least evidently ‘thinglike’-relations. Any given thing binds up its component relations within itself, while also representing something one step beyond the sum of these relations. Relations, additionally, may be usefully considered as internal to the object. This idealist position means that a thing’s relations compose its being, and are not mere epiphenomena. Relations persist in an object, absent a significant change. To say otherwise is to say that an object can be rid of its relations and remain the same object, something that archaeological praxis itself would stand as evidence against.

It is, in a certain sense, impossible to conceive of an object without its relations, particularly within archaeology. Imagine an artifact whose context has been lost. The material is the same, its properties are the same, but prior to the loss of its context, it was something specific. Once that relation fades from our perception, it is, practically speaking, permanently changed. The object changes from, e.g., an amphora from a shipwreck, situated in a specific time, place, and network thereby, to simply an example of a certain ceramic type, able to be historically situated and contextualized only very broadly. In the loss of perceived relationality, it becomes a generic example of something, when things, power, and relations are experienced in specifics.<sup>3</sup> They must, to a certain degree, be studied in their specifics. The amphora in Antiquity, though one of innumerable others, was nevertheless only relevant in its specificity: its carrying a specific product from one specific region to another, in service of one specific aim, and one specific group, and so forth. This mismatch between general and specific – the mismatch between the relationship of modern scholars to the object and the relationship of the object to other objects in its network across time – evinces how relations are crucial to the object: the object seen without relations is, to our eyes, quite different from what the object *actually is* (i.e., the object in all its relationality). Its past existence becomes as immaterial as it is irretrievable, even as we know this is not actually the object in all its relationality, but only our exceedingly limited knowledge of it.

Relations, therefore, are internal to the object, composing it. Key among these relations is power. It is the exercise of power that sent thousands of tons of grain between Egypt and Constantinople in the late Empire (roughly 240 million liters annually, per Durliat and Guillou, 1984, p. 597), and the material consequences – ships, harbors, etc.–exist in their historically specific ways because of this power. At the same time, these material entailments also enabled this exercise of power. The Roman Empire could not have exploited Egyptian agriculture without the structures, literal and metaphorical, in place to enable or facilitate it. Some of the more pertinent material entailments-cum-facilitators

---

2 The archaeological applications of this theory stem from DeLanda’s (2006) understanding of Deleuze and Guattari. See also Harrison (2011).

3 A helpful question: Has anything non-specific, un-specifiable, happened at any point in your life, or in recorded history, or in the history of humankind? Generalization necessarily takes place outside of one’s immediate experience.

include shipping infrastructure, knowledge of sea routes, and the ships themselves. The military and social apparatuses enabling the control of a region, as demonstrated in Justinian's Edict 13, which reorganized the province of Egypt, are similarly pertinent – everything from abstractions like the chain of command to physical embodiments of military force, to the forms in which taxes were paid, everything from grain to cash.

Momentarily veering towards one of those potentially endless lists to which I previously referred allows me to point to the most crucial intervention of this text: object complicity. This intervention is derived from another essential tenet of new materialism: things are participants. The things listed above participated in the exercise of power and the movement of grain between Egypt and Rome. Things are more than participants, however – they are complicit. They have a role in the expression of power, just as they do in other relations. And this is where new materialist thinking diverges from other archaeological approaches to power – ones that more closely resemble attempting to glimpse the subject behind the artifact – and this is perhaps where this text diverges from others.

The complicity of objects on which I will focus stems from the agency of objects that has become a tenet of flattened ontological approaches. Rather than an anthropocentric conception of agency, 'agential' in this sense is used to mean that a given thing makes a difference – not necessarily determining, but affording and affecting (Latour, 2005, pp. 70-72). This is, in many ways, simply an extension of the Heideggerian idea that things are ready-to-hand, used and affecting their own use without the user theorizing about them, and it is through this readiness-to-hand – in short, relating to an object through using it – that the world replete with interrelated objects is engaged with and understood (Heidegger, 1962, p. 207). The next step afforded by this observation is recognizing the capacity for objects to bind relations within themselves – to be composed by relations while still retaining some qualities that exceed those relations. This is to say, objects participate in the networks in which they are embroiled, and because of this, they accrue relations. This is an entailment of DeLanda's conception of objects as assemblages, as complex historically specific constructions of constituent parts, relevant in their individual components as much as in those parts having been brought together (DeLanda, 2006). Even beyond accruing, objects carry those relations with them throughout the course of their existence, influencing other actors in whatever context they are found. Objects perdure, and because they perdure, they continue to make a difference, bringing their past accrued relations along with them into the present, expressing complicity in past social relations and exercises of power while influencing those very elements in the present.

In the complicit object, we have the alternative to excessively-distributed responsibility. In the same way that we can consider objects to be agential, we can hold them accountable. Bennett's answer to the question of distributed responsibility was to consider the usefulness of hesitation when assigning blame (Bennett, 2005, p. 464). Perhaps it is time to consider the alternative: including objects in assigning blame. New materialist commitments entail the recognition that objects are involved and participate. If they can participate, they can be held accountable. From gun control in Australia following the Port Arthur massacre to the banning of Nazi imagery in Austria and similar restrictions in Germany, there is already an established modern tradition of holding things accountable by recognizing their potential as participants in a network. As another example, when a

regime is overthrown, or there is a significant political change, the materials with which the previous regime was imbricated or expressed are themselves utterly changed – typically through destruction, though sometimes through defacement and/or wholesale repurposing. The persistent complicity of objects in regimes, events, and other relations necessitates these interventions.

## Interventions and Envenomations

Sofia, Bulgaria, features a particularly interesting example of such an intervention. The *Monument to the Soviet Army* depicts, on its 37-m high pedestal, a Soviet soldier holding a rifle aloft, flanked by Bulgarians. The monument was erected in 1954 to commemorate the 10<sup>th</sup> anniversary of the Soviet liberation of Bulgaria. This liberation directly enabled the formation of the People's Republic of Bulgaria, a significant and generally unwavering Soviet ally in eastern Europe, characterized by Stalinist policies, government control of culture, and involvement in the suppression of reforms such as those of the 1968 Prague Spring and the assassination of dissidents like Georgi Markov. Though erected with one commemorative purpose in mind, the monument – thanks to its perdurance and complicity with a greater Soviet project – has accrued meaning and continues to express complicity with Soviet-ness, even in the 21st century. That this is the case is reflected in the many engagements with the statue – and responses to this activity.

Around the main composition atop the pedestal are several other compositions much closer to the ground, including a group of soldiers. This particular group of soldiers has been the site of many transformations using the visual arts to reckon with history and politics, from painting the figures as Western superheroes to painting the soldiers pink to honor the 1968 Prague Spring reforms, acts of Czech resistance to Soviet oppression (Fig. 6.1). These transformations almost universally reckon with Bulgaria's relationship to Russia and the former Soviet Union. This statue is chosen because the statue retains – and expresses – Soviet-ness, just as it did when it was built in 1954. Though built to commemorate liberation from the Axis – and it may be said that it still does – through the object's perdurance and continued agency and complicity near the heart of Sofia, it has accrued relations of Soviet-ness that are still expressed today. These are the relations with which activists armed with paint are engaging. This is why this specific monument was painted in support of Ukraine following the Russian invasion of the Crimean peninsula. This is why this specific monument was painted the colors of the Polish and Ukrainian flags to remember the Katyn massacre perpetrated by the Soviet Union (Fig. 6.2).

Predictably, many of these transformations have prompted outrage from Russia.<sup>4</sup> Condemnations of these transformations indicate that these activists are entirely correct in their understanding of the continued functioning of these objects as perpetually expressing their relations and, therefore, their complicity. Russian condemnations indicate a recognition that these statues, if left unchanged, still contain expressions of Soviet power, though the Soviet Union is no more and the political landscape has changed dramatically

---

4 An example comes to us from a press release issued by the Information and Press Department of the Russian Ministry of Foreign Affairs on February 24, 2014, following the statue being painted Ukrainian colors in support of Ukraine during the 2014 Ukrainian Revolution. The transformation is described as 'illegal action', and a 'mockery of the memory of Soviet worriers [sic]', an innocent typographical error in translation that may nonetheless prompt us to consider who the actual Soviet worriers are.



Fig. 6.1. Sculpture group of soldiers painted pink, August 21, 2013. The spray-painted words read 'Bulgaria apologizes', in both Czech (center) and Bulgarian (right). Image credit: Ignat Ignev. Image provided by Wikimedia Commons, licensed under CC BY-SA 3.0.



Fig.6 2. Sculpture group of soldiers, April 12, 2014. The figure on the left is painted the colors of the Polish flag, and the right figure is painted the national colors of Ukraine. Image credit: George Valkov. Image provided by Wikimedia Commons, licensed under CC BY-SA 3.0.

in the intervening years. Attempts to transform these statues in particular, and the strong responses from foreign powers to these attempts, demonstrate a crucial truth of objects, a conclusion that new materialist approaches may help us reach and better understand and apply: things actively bring their accrued internal relations with them.

The next step is to recognize this transformation, and all like it, as what it is: holding things accountable for their role in a network, while also recognizing that those relations endure. The Soviet monument was chosen as the site for an apology for Bulgaria's involvement in the Soviet repression of Czechoslovakia because it retains Soviet-ness, and by extension retains and expresses the relations that led to Bulgaria's involvement in the repression of 1968. Because it perdures, it continues to express those relations in which it was once involved. Because it was involved, it was complicit, and thus we can hold it responsible in some way, adding it to the list of responsible parties in any given historical moment or event.

Furthermore, objects allow relations from the past to irrupt into the present. Objects moved from one context to another still retain the relations that have contributed to their being. This capacity of retaining relations, even resisting attempts to deny the presence of such relations, allows objects to endure, and even to warp time in a certain sense. Etymology hardly serves as evidence for anything other than the vague possibility of an earlier mindset, but it is nonetheless worth noting that the Proto-Indo-European *\*ten-(k)*, meaning 'stretch out' or 'to span', has been suggested as a possible root of the Germanic word *þing* in its legal sense as an assembly or gathering (cf. Middle Irish *techtae*, 'legal, prescribed') (Oliver, 2002, pp. 139-140, citing Pokorny, 1959, pp. 1065-1067). This suggests, as per Olsen, the duality of objects as persisting and assembling (Olsen, 2010, p. 109). When viewed in tandem, the persistence of objects allows relations to persist – even after the object is moved from its context. Things are, in a sense, messengers from their time, allowing relations of all kinds – most notably, power – to irrupt into the present. This has the effect of moving, in a sense, from clock time to Eliade's mythic time. This kind of time, in Eliade's view, is seen in religious festivals and rituals, in which events are reenacted and the event is not portrayed again, but instead actually occurs again. In mythic time, time is cyclical. Though far from universally applicable, this concept may help us conceive of how objects allow their constituent relations to be enacted again and again, ad infinitum (Eliade, 1959, pp. 34-48). Things, therefore, are not only complicit, they are venomous. Like a snake able to envenomate even after death, things retain the capacity to renew relations bound up within themselves, unless those relations are fundamentally changed.

The capacity of objects to envenomate 'after death' is particularly evident in the statues and monuments found throughout the United States encompassing relations of racial injustice.<sup>5</sup> The vast majority of these represent figures from the United States Civil War who fought for the Confederate States of America.<sup>6</sup> Because of this explicit alignment with the Confederacy, representations of these individuals are connected with a legacy of racial injustice and the enslavement of Black people for which the Confederacy fought, a legacy that persists in systemic, institutional, and interpersonal racism and discrimination.

---

5 For environmental post-mortem envenomation as continued toxicity, see Rich et al., this volume.

6 While the removal of monuments extended far beyond those connected to the Civil War, this discussion will remain focused on that particular time period for the sake of brevity. Statues of Columbus – transformed via so-called "vandalism" and removed for representing his violence against Native Americans, and for representing the beginning of centuries of genocide and racial injustice perpetrated against Native Americans – may be understood in the same interpretive framework, as can any other such monument.



Fig. 6.3. Albert Pike Memorial, Washington, D.C., July 2, 2020, following the removal of the statue. A figure connected to Freemasonry remains. Image credit: User:APK. Image provided by: Wikimedia Commons, licensed under CC BY 3.0.

Consider the statue of Albert Pike, recently removed from its pedestal in Washington, D.C. (Fig. 6.3). Pike was a Confederate soldier and an ardent supporter of the Confederate States and their supposed right to uphold the institution of slavery. This devotion, as ardent as it was wrongheaded, is immortalized in his feeble poetry (e.g., Alsopp, 1920, p. 94). It is also immortalized in the statue, which bundles in itself not only Pike's legacy in its materialization of his body, but also the relations characterizing its erection in 1901, and all the relations of racial injustice stretching from the Confederacy to the statue's erection to the present day. As a result, the statue, thanks to its materiality, continues as an expression of racial injustice.

The statue bundles all of the relations of the person depicted in itself. By retaining and representing all the relations that composed Pike, the statue retains and represents the fight to retain the institution of slavery, and its connections to racial injustice throughout the 20th and into the 21st century. In doing so, that harmful ideology irrupts into modern society, thanks to the perdurance of the object that binds these relations. To be literally placed on a pedestal in Washington, D.C. is to continue to express Pike's unapologetic fight for the institution of slavery, something that has not been lost on activists. From the 1990s onward, the Pike statue was the site for transformations and positive destruction, based

on an awareness of what the object carries with it by virtue of its permanence. Much as in the case of the Soviet statue in Sofia, the responses of those defending the statue, namely former President Trump – whose long career of courting white supremacists hardly needs mentioning – are telling of the statue's ability to envenomate, to bring the relations from a previous era into the present and attempt to enact those relations anew.

This implication of the perdurance of objects should be at the forefront of our understanding, even for those whose work relates to a time more distant than the 19<sup>th</sup> century. In keeping this in mind, we may use objects – even objects less directly representational than a statue – to understand power relations. Not only may we understand relations, we may also understand how these relations are bound up in the objects we encounter. Not only may we understand this binding, we may also understand how objects are complicit in these power relations: how, as much as an amphora contributes to its own object-being, an amphora can also be complicit in its entanglements. Lastly, not only can we understand objects as complicit in the past, we may also understand them as perpetually holding this complicity within themselves. Contrary to claims that we may 'neutralize' an object through contextualization or museology, these objects were never neutral, and never will be (see Han, this volume).

### **The Retention of Complicity in Late Roman Objects**

For example, consider the archaeology of the Roman Empire, particularly its later, Eastern iteration. The Roman Empire was undoubtedly an institution characterized by military conquest and subjugation, and the Eastern Empire was no different. The Empire's *limites*, boundary forts and border regions that were under military control, served to militarily reinforce a border that was explicitly defined by difference. For example, the 6th-century CE historian Procopius' description of the career of the general Chilbudius, who was posted to the Danubian front, refers to the Sclavenes – those on the other side of the Danube – repeatedly as *barbaroi*, a clear expression of perceived otherness, if not outright hostility (e.g., *Wars* VII.14). Furthermore, to fall under the Roman *imperium* was to be exploited in the service of the Empire. The *annona*, the importation and distribution of agricultural produce to citizens of Rome, was, broadly speaking, the exploitation of conquered provinces in the service of civic centers and the military (for the military specifically, see Alston, 1995, pp. 102-116). This was seen perhaps most clearly in the case of Egypt, which was heavily taxed and exploited for its grain production. Up to 25% of agricultural production in Egypt was dedicated to the Roman land tax, only one of several such taxes (Mattingly, 2011, p. 136, citing Bagnall, 2005, and Rathbone, 2002). As Mattingly has expertly demonstrated, the Roman Empire was characterized both by the expression and operation of power that was experienced in specific, real, material ways by those in the provinces, and by ambitions at imperial control comparable to a modern understanding of empire. The objects contributing to these operations, therefore, should not be thought of as neutral now, just as they were not neutral in the past.

Several examples from the maritime archaeology of the later Roman Empire, with a few excursions outside the sub-discipline, will demonstrate how a focus on objects as complicit may help us better focus on objects and power simultaneously. In doing so, I hope to demonstrate how objects themselves communicate the relations of power to which they directly contribute(d), not as simple conduits for power, but as participants in



Fig. 6.4. An example of an LR2 (left) and an LR1 (right) amphora. Images are provided for general visual reference only and are not to scale. Image credits: (L) Donald Frey, Bodrum Museum of Underwater Archaeology; (R) Dottssa Laura Vinditelli, Crypta Balbi Museum. Images provided by the Archaeology Data Service, licensed under CC BY 4.0 (University of Southampton, 2014).

the structures and expressions thereof. From this will come a glance at the ways in which their perdurance allows the past to irrupt into the present.

The Yassı Ada 7th-century CE shipwreck is one such example of the contribution of objects to imperialism and state control at the juncture of religion and the state. The involvement of the early Christian church in the shipment is likely demonstrated through a steelyard inscribed with the name of the captain (*naukleros*) responsible for the voyage, an elder (*presbyteros*) named Georgios (Bass and van Doorninck, 1982, p. 314).<sup>7</sup> The implication of state involvement comes to us through the forms of the amphorae carried on the ship. These transport amphorae were predominantly Late Roman (LR) 1 and LR 2 forms, forms that are well-attested in the archaeological record of the fifth and sixth centuries (Fig. 6.4). These cargo elements are two sides of the same coin, as church and state were intimately connected and operated in tandem in this period, as tends to be the case with state religion. Furthermore, both are instruments of social control and entail expressions of power, projects to which objects directly contributed.

The amphorae themselves are connected to a broader imperial project. Van Alfen's 1995 restudy of the LR1 amphorae from this wreck indicates the likely use of a

<sup>7</sup> It was tentatively suggested by Bass that *Georgiou presbyterou nauklerou*, the inscription on the steelyard, referred to 'senior sea captain', rather than 'church elder [and] sea captain', but with minimal evidence or comparanda for the former translation, we must assume the better-represented latter interpretation.

metrological system in the transport of wine, which is taken to indicate association with Byzantine military resupply. This, in conjunction with the overwhelming numbers of LR1 and LR2 amphorae found in military sites along the Danubian frontier, would seem to indicate some connection between these forms and imperial conquest or the holding of conquered territory (e.g., Karagiorgou, 2001). One example comes from Topraichioi, Romania, where at a storehouse for state-sponsored military provisioning (*annona militaris*), fragments of LR1 and LR2 amphorae are among the most frequently found (Opaiț, 2004, pp.109-110). Though this particular wreck slightly postdates Heraclius' withdrawal of troops from Europe in 620 CE, this evidence still supports some kind of state-sanctioned military supply activity.<sup>8</sup>

With this in mind, we may interpret the amphorae, as van Alfen did, as being related to imperial military activity. If, as has been suggested, the military activity was related to the Persian Wars (ca. 602-628 BCE), then these objects are linked to conflict between two empires, with Persians seizing territories previously conquered and dominated by the Byzantine Empire, and the latter violently regaining these territories (van Alfen, 1995, p. 52). The exercise of imperial power was negotiated through bloodshed, and military provisioning – reliant as it was on containers like amphorae – directly supported these negotiations of power. The amphora is, in its function at least, actively involved in supporting Byzantine imperial aims.

But what about its form? The prevalence of this specific container at sites of state supply indicates that one of the relations contributing to the LR1 and LR2 vessel types – the types found most frequently on the Yassi Ada wreck – was that of imperial control and imperial power. Because of the predominance of this shape, we may postulate some connection between the material form of the amphora and imperial supply, whether on the side of amphora production (e.g., Roman control of Cyprus and the Aegean, where these forms were produced) or of distribution. Given its overwhelming appearance at sites of military supply, it is not impossible that, at least to an audience with the requisite knowledge, these containers would have eventually come to be seen as representing imperial supply in their very form. Its shape, then, relates to its practical functions as a container and potentially to its signposting as a vessel specifically connected with the Eastern Empire, as visual semiotics. These in turn relate to the impact of these supplies on the military, as they enabled the functioning of a powerful means of expressing imperial control. In this context, a focus on objects as complicit allows us to recognize that the objects not only were used by the military, but in their own specific way contributed to the Roman imperial project. Rather than seeing these amphorae as essentially fungible – focusing on them simply as containers used by the military, a means to an end – a focus on object complicity encourages us to move between the micro and macro scales, maintaining our focus on the greater Roman imperial project while also paying attention to the affordances, entailments, and relations of these specific objects within that project.

The 6th-century Marzamemi 'church wreck' is another example that allows us to move between the micro and macro scales inherent to all archaeological material. The dating of

---

8 The presence within the Yassi Ada shipwreck assemblage of other forms attested at sites in the Balkans, like a knobbed base similar to those found at Dinogetia, Romania (Bass and van Doorninck, 1982, 183), hints at a strong relation to the Danubian frontier.

the wreck to the reign of Justinian, sometime in the second quarter of the 6th century CE, implicates the cargo in a wide-reaching plan for construction stretching across the Eastern Roman Empire (Kapitän, 1969). The ship carried prefabricated building materials for a church, placing the wreck and its contents within this state building program, as described by Procopius in *On Buildings*. These stones, at the time of wrecking, were traveling from the northern Aegean and the Sea of Marmara to another Mediterranean location, possibly North Africa, though other destinations, like the southern Iberian coast, are also possible (Leidwanger et al., 2018). These objects rightly prompt questions of maritime traffic and economic factors, as well as the specific tastes in stone that led to such far-flung shipping ventures (e.g., Leidwanger, 2018). The approach I wish to suggest, however, turns from the movement of the objects to the structure within which they moved, and which these objects themselves facilitated.

These architectural elements are intimately connected to the work of restoring the Roman Empire undertaken by Justinian, accomplished through wide-ranging conquest across the Mediterranean. This conquest was supported by an extensive imperial building program composed of churches, fortifications, and other public works. As defensive structures along imperial borders, forts clearly supported imperial aims. The relationship between church and empire, however, deserves some elaboration.

As the state religion, the Christian church in the 6th century CE was an integral part of the Eastern Roman imperial project. In *On Buildings*, Procopius' panegyric to Justinian and his building program, connections abound between the church and imperial authority. As early as *Buildings* I.1, Procopius connects the church buildings themselves to imperial authority, built as they were by imperial mandate. The beginning of Procopius' text praises Justinian for having expanded the empire by the expulsion of barbarians, referring to another of Procopius' texts, *On the Wars*. This expansion of the Empire through conquest and violent expulsion is placed immediately beside a religious reorientation, as Procopius' mention of Justinian's conquest is followed by praise for his righting 'errors' in 'the belief in God'. Additionally, the Nika riots, which burnt the Hagia Sophia and half of Constantinople, are described as an attack 'not against the Emperor alone... but no less against God himself' (*On Buildings* I.1, Dewing trans.).

More convincing evidence for the connection between imperial authority, conquest, and the church comes in the form of Justinian's appearance in church mosaics in Ravenna. The Church of San Vitale features such a mosaic, completed 7 years after Justinian's conquest of the city. All other mosaics in the church were finished prior to this conquest, indicating that this change was an intentional one made to the church after Justinian's conquest. Justinian's appearance in this church represents an intentional statement of newly re-established imperial power concomitant with the power of the church. The addition of Justinian to the San Vitale mosaics may be said to reflect the place of churches as ripe ideological grounds for statements of political ideology and expressions of imperial power, and perhaps even the consolidation thereof, especially in the midst of a program of reconquest of former Roman imperial holdings.

The cargo of this ship, then, invites a study of the function of architectural material within a greater program of Eastern Roman imperialism, connected with and supported by the early Christian church. Let us consider one of many marble slabs discovered on the wreck. This type of slab, of which there are multiple examples, belonged to a pluteus, or

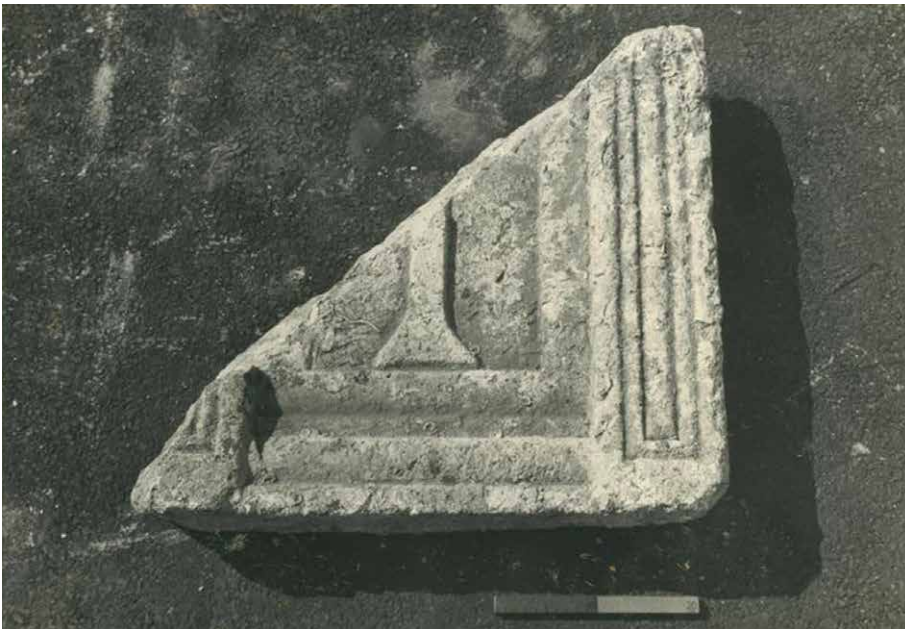
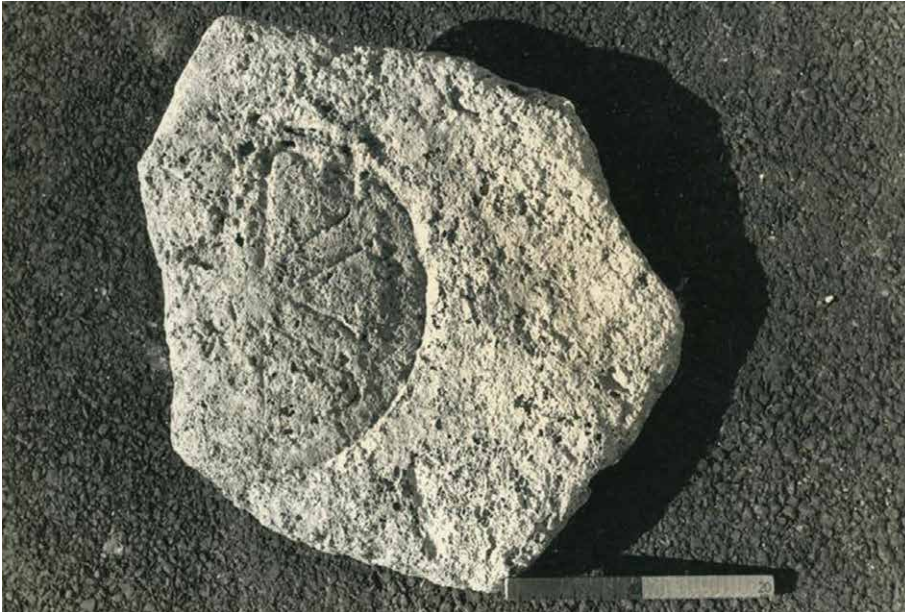


Fig. 6.5. Two fragments of the marble pluteus from the Marzamemi 'church wreck', with a Christogram inscribed inside a circle (top) and an inscribed Latin cross (bottom). Images provided by University of Bologna, licensed under CC BY-ND.

a balustrade dividing an area.<sup>9</sup> This slab is made of Proconnesian marble and decorated with a six-armed cross representing a Christogram, placed between two Latin crosses (Fig. 6.5) (Kapitän, 1969, pp. 127-128). Thanks to this symbolism, the slab itself is complicit in the Roman imperial project, contributing to the establishment of a church in a recently conquered province and thereby proclaiming not only church-ness but also Roman-ness, in a similar fashion to the San Vitale mosaics. The symbolism of the decoration is thus an entry point into the historically contingent power relations that characterize the second quarter of the 6th century CE. By publicly displaying Christendom, these prefabricated architectural elements are complicit in a wider imperial program of domination.

Even if the Christian symbolism were to be absent from the slabs, their historically specific relations to the Eastern Roman Empire would make these slabs complicit, in a material-agentive sense, in an imperial building program intended to consolidate and reinforce control across the Mediterranean. The specific materiality of Proconnesian marble, which had been in vogue in Rome and Constantinople – and which is found in Roman and late antique wrecks across the central and eastern Mediterranean – also contributed to the specific expressions of power seen here (Russell, 2013). This marble was obtained from Proconnesus, an island in the sea of Marmara near Constantinople. This source was prized and was used in Constantinople itself to mark the city as the seat of imperial power (Barsanti and Paribeni, 2016, p. 202). The use of this particular marble, then, would certainly have contributed to the imperial project outlined above. In this, a relationship begins to appear between geography, the materiality of the stone itself (including its quality as well as its suitability for architectural use), and imperial ambitions across the Mediterranean. The *verte antico* (porphyry) elements of the cargo likely also contributed in specific material ways relating to the choice of porphyry, which appears to have been obtained from Greece, some distance away from Proconnesus (Kapitän, 1969, p. 122).

In an effort to test the scope of this analysis, we may briefly move from the slabs to the ship that transported them, to find that the ship is not notably different. Ships themselves facilitated the Roman imperialist project, being essential to the Roman imperial economy, and any consideration of a given ship in this period must consider how its materiality may have been complicit in this project (McCormick, 2001, p. 87). A recognition of this complicity will go hand-in-hand with a recognition of the Roman Empire as a brutal exploitative venture and with a reconsideration of modern scholarship's relationship to this empire.

But first, the ship. This brief discussion is a general one, intended to apply to any similar vessel, as the 'church wreck' left few hull remains (Leidwanger, 2018, p. 351). The cargo and ship were themselves in close relation, and many of the bundled relations analyzed above may similarly apply to the ship. This lends itself to a recognition of the ship as intimately connected with the Roman state. At the same time, additional relations with the state appear as well, bound up with the wood itself. For example, in 371 CE, the Eastern Empire began providing shippers in the employ of the state – the very shippers who would have commanded the vessel wrecked off of Marzamemi – with timber for shipbuilding (*Codex Theodosianus* XIII.5.14.1). This timber was itself shaped by its specific relations with

---

9 In Kapitän's publication of the elements of this slab (1969, pp. 127-28), he refers to this as a 'choir screen'.

the state, as these relations likely contributed to, or even enabled, the very creation of the ship. The various features of the ship that would have enabled more efficient transport of the cargo (i.e., modifications to allow it to transport a heavy stone cargo) would similarly have been shaped by, and shaped, the Roman imperial project (Leidwanger and Tusa, 2016, p. 136). The ship bundles relations into itself, as does every object discussed so far. In this way, we may consider the ship itself not as a neutral vessel, but as another object complicit in wider imperial aims.

This complicity does not disappear with the sinking of the ship, nor does it vanish with the fading of the Eastern Roman Empire. Its historical specificity is retained, allowing that time to irrupt into later times, whether through reuse – as will be demonstrated shortly – or through scholarship, or through other appropriations (cf. ‘The Persistence of Complicity’ *infra*). The prefabricated architectural cargo of the Marzamemi shipwreck was objectively connected to imperialism and social control, as was the ship itself. These objects, in many cases, then go on to work in ways unintended by their original craftsmen, but which were nevertheless afforded by these accrued relations.

Late Antiquity offers us many such examples in the form of *spolia*, intentionally reused building materials and statuary. Building materials continue to afford complicity in ideology and the exercise of power long after their initial context changes, just like the previously discussed statues, and *spolia* provide perhaps the best example of this capacity. Waters, in his study of *spolia* in Renaissance architecture, notes that Renaissance builders turned to the physical remains of Antiquity ‘not just to reference Antiquity, but to *be* ancient both formally and materially’ (original emphasis; Waters, 2016, p. 163). The permanence of granite allows for the perdurance of something far more abstract – Antiquity. Interfacing with these materials and transforming them was seen as taking on a certain relation to Antiquity, enacting it anew and allowing it to irrupt into the Renaissance (Waters, 2016, p. 162). Of vital importance is the fact that these relations are specific to the object. It was, and is, not a matter of classicizing or archaizing, not of representing, but of actually *being* classical, even in a new architectural form.

In Mesembria (modern Nesebăr, Bulgaria), fragments of a marble altar from a heroön were used in the construction of a church in the third quarter of the 7th century CE (Preshlenov, 2018, pp. 399-400). This reuse is nothing unusual; Bayliss, though far more pragmatic in his considerations, details the commonness of temple reuse for ecclesiastical purposes (2004, pp. 31-49). This terribly ordinary event demonstrates the retained power and complicity of objects in situations of social control. A heroön is a sanctuary dedicated to the worship of a hero, typically a very popular and highly localized affair, specific to a particular place (for this specific example, see also Preshlenov, 2012, p. 516). In the heroön, representative as it is of the worship of heroes, we may see the social relations peculiar to religious practice, with few objects more directly related to these than the altar itself.<sup>10</sup> The relations – whether conceived of as social cohesion or control – bound up in these marble fragments then afforded their reuse in another context defined by similar relations, though centuries later.

---

10 Alcock (2004, 165) discusses the material involvements of hero worship and their usefulness for maintaining the social power of elite families.

The relocation of these fragments to the church would have been an intentional move. The choice of specific *spolia* in Late Antiquity appears to have been an intentional one to some degree, whether in the form of building crews exercising agency in the selection of specific materials and engagement with their materiality, or imperial building programs utilizing *spolia* to make political statements relying upon the tradition and grandeur of Rome (Frey, 2016; Brenk, 1987, p. 108).<sup>11</sup>

In any case, the use of these materials did not wipe away the relations accrued up to that point. A 382 imperial constitution indicates an earlier recognition of the same, decreeing that images of gods should remain in a particular temple, provided they were appreciated for artistic value rather than divinity (*Codex Theodosianus* XVI.10.8, cited in Alchermes, 1994, pp. 171-172). The need to underline this condition indicates a great awareness that these objects remained complicit in practices that were opposed to the new state religion. The objects retained the relations of pagan practice, and contained within themselves the ability to perpetuate that practice, unless significantly altered in some way.

The historical tensions between Christians and non-Christians, which grew steadily into the fifth century, further indicate that these practices would not simply disappear. The law itself came to recognize a need for significant interventions, as the 435 CE decree that '[pagan] fanes, temples, and shrines... shall be destroyed' indicates (*Codex Theodosianus* XVI.10.25, Pharr trans.). The defacement and desacralization of pagan temples reflects a recognition that to reckon with one set of relations (in this case paganism), its material effects would have to be dealt with first (Geffcken, 1978, pp. 121-124, 223-240, though Saradi-Mendelovici, 1990, presents a more nuanced picture of the complex relationship of Christianity to paganism as a whole). This recognition is seen even from the time of Constantine. There are numerous examples of statues of deities, including deified emperors, with crucifixes carved into them in an effort to desacralize them. Constantine himself ordered the pagan site at Golgotha to be utterly annihilated so a church could be established there (*Vita Constantini* III.27). Socrates of Constantinople records a disastrous attempt to cleanse a Mithraeum, a temple to Mithras, which entailed the clearing of the site (*Historia Ecclesiastica* III.2). Though not all pagan sites were subject to annihilation (despite later laws decreeing it so), the reuse of space was seen as a means of reckoning with and rectifying the accrued relations inherent to the objects in that space (Fowden, 1998, p. 551; Bayliss, 2004, p. 12). These examples of ancient Christian interventions in pagan space indicate a recognition in Antiquity of the point made here, that objects retain their relations and their complicity and that reckoning with these qualities is essential.

Similarly, the Mesembria *spolia* retain their complicity in the worship of heroized citizens and the founders of the *polis*. In doing so, they retain connections to the identity of the *polis* as well as to the social cohesion promoted by cults and hero worship. This forms a functional continuity between the heroön and the church, as one central form of worship and sociality changes into another. Fox and Skedros have both demonstrated the connections between early Christian practice and hero worship (Fox, 1987; Skedros, 2004). Despite these connections, reuse was intended to purify the materials of any pagan connections, potentially allowing for a balance in Antiquity between retaining the

---

11 Eastmond (2016, pp. 44ff.) provides similar evidence for the intentionality of *spolia* usage, though for the 13<sup>th</sup> century.

sociality of pagan practice and creating distance from the pagan past. This continuity very likely contributed to the reuse of these specific items in the church. Even as these pieces become involved in a new set of relations represented and practiced in the building of the 7th-century church, they retain complicity with the social cohesion of the *polis*, and with the means of maintaining and promoting that cohesion.

By thinking with the complicity of objects, analytical attention remains focused on the objects, but is also forced outward, into their functions in wider networks in which they are not only actors, but often co-conspirators. The complicity of these marble fragments prompts analysis of not only the materiality of the altar and the materiality of the church, but the materiality of the structures of social cohesion and control in Mesembria in Antiquity.

### **The Persistence of Complicity: Conclusions and Next Steps**

The point of each of these exercises is not just another way of expressing the same archaeological approach to power as we have understood it for decades, i.e., the structure of power behind the artifact, or the subject(s) behind the object(s). Rather, thinking of the complicity of objects allows us to retain our interest in materials – the ways in which ‘objects construct the subject’, as Olsen puts it – while considering how these objects were subjects themselves, integral to larger structures of power (Olsen, 2003, p. 100). In being so integral to structures of power, objects are directly responsible, in the same sense that they are agentive, for the exercise of power within those structures. Objects help construct subjects, and things help power not only function, but exist in the first place.

Furthermore, these are not momentary relations, here in one moment and then vanished in the next. The complicity of the Marzamemi ‘church wreck’ in the Roman imperial project did not disappear with the sinking of the ship, nor does it disappear with the passage of time. The complicity of a Soviet statue did not fade with the dissolution of the Soviet Union. Alfred Pike’s memorial, prior to its removal, continued to publicly give voice to injustice and to the institution of slavery. The social cohesion promoted by a heroön perdured in its altar, reinforcing its reuse in an ecclesiastical setting. The persistence of object complicity is what, finally, obliges contemporary scholars to account for these objects and their vast network of relations, and to respond to their complicity in some way.

Given the close relationship of military activity to power (e.g., Late Roman conquest), a short series of military examples may help demonstrate the necessity of things to the functioning of power, and in turn point the way towards possible interventions. Any such intervention, crucially, must center on the world of things. Napoleon Bonaparte is said to have quipped that ‘an army marches on its stomach’. That is, supply chains – ensuring that things are where they can be most effective – undergird activity. Thucydides provides an ancient recognition of this very basic principle in describing negotiations to allow the Lacedaemonians to supply their troops stranded on Sphacteria (4.15-16). Alexander the Great’s extensive conquest prompted a similar recognition. This principle is seen in the modern world as well, notably in the United States Navy’s ‘tonnage war’ conducted to destroy Japanese supply chains in World War II (Wellborn, 2008, s.v. ‘World War II (1941-1945)’). The lesson of these examples, and the countless more like them, is that disrupting the world of things is an essential first step in any intervention into structures of power.

Distributed agency entails an increased awareness of the need to address things as well as people, holding each responsible in turn. If we think of this in terms of 'blame', things must be recognized as contributing to the exercise of power, blamed, and dealt with appropriately, as active participants in their own right. A Confederate statue cannot be made neutral, when neutrality is an expression of privilege and of apathy, and when neutrality is no less than permitting the marginalization of others. The statue will always be a messenger of racial injustice and crimes against humanity, especially while textual records and living memory – themselves both social objects – remember the statue's relations, its historical specificity, and the person depicted.<sup>12</sup> Retaining such a statue is ultimately only creating a shrine to inhumanity.

When things have been addressed for their complicity in such systems – or perhaps simultaneously with such a recognition – the human element can be addressed more effectively. Once things are blamed and that blame is expressed in practical action, then the structure of power may begin to change. Humans, thanks in no small part to the relations bound up with sapience, accrue the lion's share of blame. However, things are not blameless, and when they are blamed appropriately for their complicity in structures of power, interventions are possible.

What kind of interventions may we make as archaeologists? Tearing down statues and other forms of socially beneficial iconoclasm are only one part of holding objects accountable – how can object complicity inform wider archaeological practice? Intervention may involve supporting the type of action I have described: direct transformations, or even the destruction, of objects whose entailments perpetuate injustice or the expressions of power from which people wish to be free. It also involves highlighting the aspects of the past-that-isn't-past – in the way objects can warp time à la Eliade – that may have heretofore gone uncommented upon. We may use the idea of object complicity to highlight the connections between the Albert Pike Memorial itself, his legacy of supporting slavery, and racism in the contemporary United States, for example. People far more astute than I have already made this point and acted upon it, and there are surely similar examples lurking around every corner, with people already pointing to them as examples of the very expressions of power with which this text has been concerned. It is simply a matter of looking and listening.

The ability to highlight the operation of power in the past and the affordances of the objects involved is a powerful one, whether that past is recent or distant. It was not for nothing that fascist Italy claimed the symbols of the Roman Empire, itself a violent empire bent on conquest and domination, for itself. Arthurs, in a recent study, has demonstrated that Roman archaeology and history were claimed precisely for their perdurance into the present, their ability to warp time, I might add, moving from a western, linear understanding of time to Eliade's mythic time, enacting empire anew (Arthurs, 2015, particularly pp. 54-56). Imagine, then, if Roman archaeologists had traditionally held things accountable in their own work, recognizing the Roman Empire not as an ideal, but as a brutal exploitative imperial venture; not as the sum total of the ancient world, but as a more limited phenomenon. They might have taken particular care to note, for example,

---

12 For recording and memory as the practice of creating objects of social character, see Ferraris, 2014, pp. 62-69.

that a church was not simply a church, not simply a benign tool for social cohesion, but an ideological lighthouse (metaphorically speaking). They would note that in this capacity, the church expresses power and creates, in part, the conditions of existence within newly conquered territories. Perhaps then it would have been entirely predictable that symbols of the Roman Empire would be utilized by an equally brutal, repressive Italian regime seeking its own empire nearly 1500 years later.<sup>13</sup> Had the Roman Empire been recognized from the early days of classical scholarship not as the whole of the world in Antiquity, nor even as the most important part of it, but simply as one part among others, these symbols might have been less compelling, less available for appropriation by a fascist regime.

These considerations ought to lead us to a productive disenchantment, in which things are just as agentic as they have always been, but they are not gentle, not necessarily beneficial, not impotent, but powerful, capable of doing harm, able to envenomate. This productive disenchantment may, then, free us from idealistic illusions of the past – and serve as one step towards freeing us of idealistic illusions for the future, moving us instead toward a more proactive stance. If we regard things as potentially able to harm, we may regard them appropriately and take proactive steps towards preventing such harm – whether through the transformation of certain objects through art or destruction, or through education, museology, or something else entirely.

Flattened ontological approaches remind us that the objects with which we work were, and likely still are, functioning elements of wider apparatuses and networks. If power suffuses, then power is found in these objects too. Power is and always has been exercised and experienced, and things mediated and facilitated those expressions, exactly as they do now. They were not simple conduits through which power flowed, but rather contributed to historically specific forms of power and its exercise. If we forget the involvement of these objects in the exercise of power, and all the consequent inequalities, exploitations, injustices – the lived realities of these power dynamics – then we run the risk of forgetting not only the reality we claim to study, but also the affordances of artifacts in the present.

Object complicity allows us to not only identify the huge number of participants in any given network (be it a structure of power, or a trade network, or another historically specific configuration), but it allows us to point the finger. Agency distributed between humans and objects entails increased accountability – we may hold objects to be relevant to, even complicit in, a situation. This does not mean that the humans involved are any less responsible – responsibility is not a zero-sum game. This simply means that we may point at more objects, whether they are amphorae implicated in military supply, fragments of a church, or a statue, and declare that these objects have – and express – power, and it is essential to be aware of their affordances, both in the past and in the present.

## Acknowledgement

The city of Chicago, where the author resides, is located on the traditional unceded homelands of the Council of the Three Fires: the Odawa, Ojibwe, and Potawatomi Nations; the area has also been home to many other tribes, including the Miami, Ho-Chunk, Menominee, Sac, and Fox.

---

13 Another equally (potentially) predictable contemporary example: the use of medieval Christian imagery among the white nationalist alt-right.

## Works Cited

- Alchermes, J. (1994) 'Spolia in Roman Cities of the Late Empire: Legislative Rationales and Architectural Reuse', *Dumbarton Oaks Papers* 48, pp. 167-178.
- Alcock, S.E. (2004) 'Material Witness: An Archaeological Context for the *Heroikos*', in E.B. Aitken J.K.B. and Maclean (eds), *Philostratus's Heroikos: Religion and Cultural Identity in the Third Century C.E.* Atlanta: Society of Biblical Literature, pp. 159-168.
- Allsopp, F.W. (1920) *The Life Story of Albert Pike*. Little Rock: Parke-Harper News Service.
- Alston, R. (1995) *Soldier and Society in Roman Egypt: A Social History*. London: Routledge.
- Arthurs, J. (2015) 'The Excavatory Intervention: Archaeology and the Chronopolitics of Roman Antiquity in Fascist Italy', *Journal of Modern European History* 13(1), pp. 44-58.
- Barsanti, C. and A. Paribeni (2016) 'La Diffusione del Marmo Proconnesio nelle Marche in Età Classica e Paleocristiana: Il Ruolo del Porto di Ancona', *Hortus Artium Mediaevalium* 22, pp. 200-214.
- Bagnall, R.S. (2005) 'Evidence and Models for the Economy of Roman Egypt', in J.G. Manning and I. Morris (eds), *The Ancient Economy: Evidence and Models*. Stanford: Stanford University Press, pp. 187-204.
- Bass, G. and van Doorninck, Jr, F. (1982) *Yassi Ada Volume 1: A Seventh-Century Byzantine Shipwreck*. College Station: Texas A&M University Press.
- Bayliss, R. (2004) *Provincial Cilicia and the Archaeology of Temple Conversion*. BAR-IS 1281. Oxford: Archaeopress.
- Bennett, J. (2005) 'The Agency of Assemblages and the North American Blackout', *Public Culture* 17(3), pp. 445-465.
- Brenk, B. (1987) 'Spolia from Constantine to Charlemagne: Aesthetics Versus Ideology', *Dumbarton Oaks Papers* 41, pp. 103-109.
- DeLanda, M. (2006) *A New Philosophy of Society: Assemblage Theory and Social Complexity*. London: Continuum.
- Durliat, J. and Guillou, A. (1984) 'Le Tarif d'Abydos', *Bulletin de Correspondance Hellénique* 108, pp. 581-598.
- Eastmond, A. (2016) *Art and Identity in Thirteenth-Century Byzantium: Hagia Sophia and the Empire of Trebizond*. London: Routledge.
- Eliade, M. (1959) *Cosmos and History: The Myth of the Eternal Return*, W.R. Trask (trans.). New York: Harper and Row.
- Ferraris, M. (2014) *Introduction to New Realism*. London: Bloomsbury.
- Foucault, M. (1995) *Discipline and Punish: The Birth of the Prison*. New York: Vintage Books.
- Fowden, G. (1998) 'Polytheist religion and philosophy', in A. Cameron and P. Garnsey (eds), *The Cambridge Ancient History XIII: The Late Empire, A.D. 337-425*. Cambridge: Cambridge University Press, pp. 538-560.
- Fox, R.L. (1987) *Pagans and Christians*. New York: Knopf.
- Frey, J.M. (2016) *Spolia in Fortifications and the Common Builder in Late Antiquity*. Leiden: Brill.
- Geffcken, J. (1978) *The Last Days of Greco-Roman Paganism*, S. MacCormack (trans.). Amsterdam: North-Holland Publishing Company.
- Harman, G. (2011) *The Quadruple Object*. Winchester: Zero Books.
- Harman, G. (2016) *Immaterialism: Objects and Social Theory*. Cambridge: Polity Press.

- Heidegger, M. (1962) *Being and Time*, J. Macquarrie and E. Robinson (trans.). Oxford: Blackwell.
- Hodder, I. (2012) *Entangled: An Archaeology of the Relationships between Humans and Things*. Oxford: Wiley-Blackwell.
- Kapitän, G. (1969) 'The Church Wreck off Marzamemi', *Archaeology* 22(2), pp. 122-133.
- Karagiorgou, O. (2001) 'LR2: A Container for the Military *annona* on the Danubian Border?', in S. Kingsley and M. Decker (eds), *Economy and Exchange in the East Mediterranean During Late Antiquity*. Oxford: Oxbow Books, pp. 129-166.
- Latour, B. (2005) *Reassembling the Social: An Introduction to Actor-Network Theory*. Oxford: Oxford University Press.
- Leidwanger, J. (2018) 'New Investigations of the 6<sup>th</sup>-c. A.D. "Church Wreck" at Marzamemi, Sicily', *Journal of Roman Archaeology* 31, pp. 339-356.
- Leidwanger, J. and S. Tusa (2016) 'Marzamemi II "Church Wreck" Excavation: 2015 Field Season', *Archaeologia Maritima Mediterranea* 13, pp. 129-143.
- Leidwanger, J., S.H. Pike and A. Donnelly (2018) 'Revisiting the Origin and Destination of the Late Antique Marzamemi "Church Wreck" Cargo', in D.M. Poljak and K. Marasović (eds), *ASMOSIA XI: Interdisciplinary Studies of Ancient Stone*. Split: University of Split, pp. 291-300.
- Lukes, S. (2005) *Power: A Radical View*. 2<sup>nd</sup> ed. New York: Palgrave Macmillan.
- Mattingly, D.J. (2011) *Imperialism, Power, and Identity: Experiencing the Roman Empire*. Princeton: Princeton University Press.
- McCormick, M. (2001) *Origins of the European Economy: Communications and Commerce, A.D. 300-900*. Cambridge: Cambridge University Press.
- Oliver, L. (2002) *The Beginnings of English Law*. Toronto: University of Toronto Press.
- Olsen, B. (2003) 'Material Culture After Text: Re-membering Things', *Norwegian Archaeological Review* 36, pp. 87-104.
- Olsen, B. (2010) *In Defense of Things: Archaeology and the Ontology of Objects*. Lanham: AltaMira Press.
- Opaiț, A. (2004) *Local and Imported Ceramics in the Roman Province of Scythia (4th-6th Centuries AD): Aspects of Economic Life in the Province of Scythia*. BAR-IS 1274. Oxford: Archaeopress.
- Pokorny, J. (1959) *Indogermanisches Etymologisches Wörterbuch*. Bern: Francke.
- Preshlenov, H. (2012) 'Mesambria Pontica', in R. Ivanov (ed.), *Roman Cities in Bulgaria*. Sofia: Prof. Marin Drinov Academic Publishing House, pp. 493-536.
- Preshlenov, H. (2018) 'Late Antique Mesembria: (Re)Shaping of Public Spaces', *Bulletin of the National Archaeological Institute* 44, pp. 393-408.
- Rathbone, D. (2002) 'The Ancient Economy and Graeco-Roman Egypt', in W. Scheidel and S. von Reden (eds), *The Ancient Economy*. Edinburgh: Edinburgh University Press, pp. 155-169.
- Russell, B. (2013) 'Roman and Late-Antique Shipwrecks with Stone Cargoes: A New Inventory', *Journal of Roman Archaeology* 26, pp. 331-361.
- Saradi-Mendelovici, H. (1990) 'Christian Attitudes Towards Pagan Monuments in Late Antiquity and Their Legacy in Later Byzantine Centuries', *Dumbarton Oaks Papers* 44, pp. 47-61.

- Skedros, J.C. (2004) 'The *Heroikos* and Popular Christianity in the Third Century C.E.', in E.B. Aitken and J.K.B. Maclean (eds), *Philostratus's Heroikos: Religion and Cultural Identity in the Third Century C.E.* Atlanta: Society of Biblical Literature, pp. 181-193.
- University of Southampton (2014) *Roman Amphorae: a digital resource* [dataset]. York: Archaeology Data Service, doi: 10.5284/1028192.
- van Alfen, P. (1995) 'A Restudy of the Cylindrical Amphoras from the Seventh-Century Yassı Ada Shipwreck.' M.A. Thesis. College Station: Texas A&M University.
- Waters, M.J. (2016) 'Reviving Antiquity with Granite: *Spolia* and the Development of Roman Renaissance Architecture', *Architectural History* 59, pp. 149-179.
- Welborn, C. (2008) 'Supply Line Warfare', *Army Logistician: Professional Bulletin of United States Army Logistics* 40(6).
- Witmore, C. (2014) 'Archaeology and the New Materialisms', *Journal of Contemporary Archaeology* 1(2), pp. 203-246.



# Assemblage Theory and the Mediative Practice of Ship Hull Reuse

Chelsea M. Cohen

## Abstract

Although reuse and adaption of material culture is a common object of study in archaeology, ship reuse has been understudied in the nautical subdiscipline due to ship-first perspectives. These perspectives foreground vessels as objects unto themselves, comprised of parts operational only as part of a whole technology. Assemblage theory provides a new lens with which to view instances of ship reuse, considering the vessels as assemblages of material and non-material objects, each of which have the capacity to change and be changed by their surroundings. Understanding naval architecture as an environmentally co-constructed assemblage, this chapter challenges the ship-first perspective of vessel reuse in port and harbor construction by foregrounding the changing articulations of the same material assemblages in different contexts. Using the historical wharves of Alexandria, Virginia as a case study, this paper proposes a new materialist-oriented perspective on instances of vessel reuse that understand ships first for their material quality, rather than for their sailing lives.

## Introduction

Archaeologies of reuse have long focused on establishing chronologies (Busch, 1987; Underwood, 2012), developing ideological significance (Williams, 1997; 2014), and technological adaptation to socioeconomic pressures (Sullivan III, 1989; Reilly, 2016). Despite numerous instances of ship reuse as part of ports and harbors the world over (Ford, 2013), maritime archaeological interpretations of vessel reuse have focused disproportionately on recovering the construction and sailing lives of ships. This disciplinary imperative to emphasize naval architecture has obscured the significance of vessel reuse as a practice capable of shifting port landscapes. Ships were agentive within port landscapes, both above and below the water. The qualities that made ships reusable

as parts of port infrastructure, the durability and watertightness of the wood, are not designated by human actors but instead characteristic of the timber itself.

New materialist philosophy, particularly the assemblages proposed by French philosophers Gilles Deleuze and Félix Guattari in their second volume *A Thousand Plateaus* (2004), advocates for following the flows of materials as matter-in-movement. Matter is co-constructed by its movement and movement by its matter, neither ever falling static. Assemblage theory as proposed here as a way of orienting nautical archaeology broadly and specifically the archaeology of reused ship hulls toward human-object co-construction of ships as both archaeological and theoretical assemblages. Using Alexandria, Virginia as a case study, this author employs assemblage theory to explore the potential of hull reuse as formative to the expansion of the port as the port was to the reuse of the hulls. The resulting discussion foregrounds the Deleuzoguattarian concept of strata, rarely employed in archaeology, to make legible the material flows between ship construction, ship reuse, and ship archaeology.

## Assemblage Theory

Embedded in the ontological shift toward privileging objects equitably to subjects is the concept that theories are rooted in the things and relationships they theorize, external to meaning-making by human subjectivity (Preda, 1999; Domanska, 2006; Latour, 2005; Trentmann, 2009; Olsen, 2012; Fowler, 2013). Object-oriented ontologies (OOO) equalize the human, the material, and the conceptual as agents in the entanglement of reality, rejecting the premise that reality is constructed by solely human cultural practice (Harman, 2018, p. 10). Parallel to OOO, new materialist ontologies seek to decenter and deprive human language and social construction as the primary mechanisms for understanding materiality (Deleuze et al., 2004; Latour, 2005; Barad, 2007; Alaimo et al., 2008; Bennett, 2010; DeLanda, 2016). New materialism takes matter to be co-productive of the social world and human experience, diverging slightly from the premise of OOO insofar as new materialism looks primarily to the co-construction of materiality and ideality rather than agentive entities external to the meshworks of which they are a part (Ingold, 2007). In a maritime context, Sara Rich's 2017 monograph examining the influence of cedar on the long history of ship construction in the Mediterranean employs OOO to break down the nature/culture binary between cedar as an environmental and cultural object. Archaeologists Þóra Pétursdóttir and Bjørnar Olsen (2017) use the maritime metaphor of driftwood to unsettle the notion of theory itself, suggesting that the ability to break down theories and transfigure them is what keeps them alive and relevant.

While OOO has found growing purchase in social sciences such as archaeology and anthropology as a means of rejecting traditional binaries and decentering traditional sources of power, new materialism has gained traction in part due to the concept of assemblages as a unit of study (Deleuze et al., 2004; DeLanda, 2006; DeLanda, 2016). The term assemblage is a familiar one in archaeology, which, when coupled with a focus on the speculative realism of the material world, makes new materialism an appealing ontological framework for archaeologists. Though familiar in term, the new materialist assemblage is informed less by the spatial and typological relationship between material objects and more by the Deleuzoguattarian concept of articulated relations between self-sustaining parts (Deleuze et al., 2004, p. 4). New materialist assemblage theory is

rooted in Deleuze and Guattari's version of an anti-capitalist, non-hierarchical, more-than-human philosophy defined by multiplicity and heterogeneity (Deleuze et al., 1987; Hamilakis, 2017). Harris (2018) identifies Deleuzian assemblages as tetravalent, with four distinct dimensions running on two axes: the axis of mechanics and enunciation and the axis of territorialization and deterritorialization. On the first axis, 'mechanics' identifies the objects of the assemblage, while 'enunciation' concerns the relations and expressions between the assemblage objects (Deleuze et al., 2004; Harris, 2018). Objects, in these terms, are the smallest self-subsistent units within the assemblage, which may or may not be material (DeLanda, 2016). This axis is not a binary, with objects on one end and enunciations on the other, but instead allows for conversation within and between assemblages. Components of an assemblage are both mechanical (actual) and enunciative (virtual), both an object put into relation with other objects, and an expressive act that connects and articulates.

Along the second axis, 'territorialization' refers to the objects and relationships that bring together and hold an assemblage in relation. Territorialization is the becoming of the assemblage. 'Deterritorialization' refers to the moving apart of objects and reconstitution of relationships within and between assemblages; it is the continual breaking apart of the assemblage (DeLanda, 2006, p. 12). Territorialization and deterritorialization have been conceptually embraced in archaeology (Fowler, 2013; Jervis, 2016; Hamilakis, 2017; Robinson, 2017; Antczak et al., 2019; Pauketat, 2019) with good reason. The processes of becoming and unbecoming are both our objects of study and ones in which we are also directly involved. However, this axis cannot be separated from the axis of mechanics and enunciation.

Fowler (2013), among others, advocates for an archaeological practice that is inclusive of the total Deleuzian assemblage. The archaeological process is as transformative to an object's materiality and virtuality as its making or discard, and the object is equally as capable of shaping the archaeological practice as it is of shaping the human lives and non-human entanglements of which it is a part. Within archaeological praxis, Fowler argues for understanding assemblage as the 'materials, things, places, humans, plants, animals, techniques, technologies, and ideas' (Hamilakis et al., 2017) that comprise a specific archaeological practice (Fowler, 2013; Fowler et al., 2015).

To provide a familiar example, the excavation of a royal tomb reconstitutes funerary goods as an archaeological assemblage to be recorded, studied, and analyzed. The objects are no less funerary goods than they were prior to excavation, but have become an archaeological assemblage due to the articulation of the relationship between them, the archaeologist, and the objects of archaeology which include everything from the trowel to the research design. However, the movement, recording, and territorializing of the archaeological objects deterritorializes the funerary goods by creating new enunciations that prioritize the archaeological assemblage in its own context over the funerary assemblage in the context of the archaeological assemblage. The objects in each assemblage share the same funerary goods, and the funerary goods as objects exist in both assemblages simultaneously. Territorialization and deterritorialization provide us with heuristics to understand these constant acts of being and becoming (McFadyen, 2013; Harris, 2018). In so doing, though, the archaeologist enters both assemblages as an object and enunciation, and through their enunciation becomes part of the territorialization

and deterritorialization of both assemblages. The assemblages likewise co-construct the archaeologist, giving them a *raison d'être* as an object in relation to the other objects of the assemblage. This co-creation of the archaeologist and the assemblage reflects what archaeologist Christopher Witmore (2007) termed 'symmetrical archaeology', where the human and non-human are not detached and separated and where the past and the present are always mixed.

Building on Deleuze and Guattari's assemblage theory, Mexican-American philosopher of science Manuel DeLanda (2008) has focused on the constituent axes of the tetravalent assemblage, altering the original Deleuzian concept such that another critical Deleuzian concept familiar to archaeologists, that of strata, is collapsed into the assemblage. DeLanda's new Deleuzian framework, or Deleuze 2.0 to borrow from cultural theorist Ian Buchanan (2015, p. 387), has become a prominent version of assemblage theory in the Americas in part due to the distance between 21st-century American writers and the intellectual milieu of mid-century continental philosophy (Hamilakis et al., 2017). French philosopher and anthropologist Bruno Latour's Actor-Network Theory (ANT) has also gained prominence following the Deleuzian thought that the 'real' is constituted only through the virtual (the networks, in Latour's case) (Latour, 2005). Jim Dolwick (2009) and David Berg Tuddenham (2010; 2012) offer an ANT-theorized perspective on maritime archaeology, demonstrating the utility of Latour's philosophy in the field. However, DeLanda's re-reading of assemblage theory is marked by the concept of 'relations of exteriority', which has specific resonance in the archaeological analysis of object reuse and the afterlives of objects. Relations of exteriority suggest that assemblages 'are more than the sum of their parts; their capacities exceed the different elements that make them up' (Harris, 2018, p. 90). Individual objects can move from one assemblage to another (deterritorialization and territorialization), and still leave recognizable both the assemblage the object left and the assemblage the object entered because the historical relations between object and assemblage endure (Fowler et al., 2015) If, for instance, you purchase a can of food from your local market, the can transitions from the assemblage of market groceries to the assemblage of your home pantry. This changes the composition of both market assemblage and your home assemblage, but the market, your pantry, and the can of food are all still recognizable. The can, now part of your pantry assemblage, may even maintain its designation as a grocery good, despite having left the market. The relationship between the constituents of each assemblage and object endures, making visible their previous relations even as new relationships form.

This contrasts somewhat with the OOO tenet that objects and their articulations are always less than the sum of their parts. Both assemblage theory and OOO recognize each part as a whole unto itself and that the constituent parts of each whole hold significance within and external to their articulations (Harman, 2018). However, OOO holds that if the whole is greater than the sum of its parts, parts could go missing but the whole would still be left intact, meaning that the whole maintains more thingness than the parts of which it is comprised. Since OOO holds that everything is an object and that all objects exist in the same way, the whole cannot be greater than its sum; they are equal. The difference between these perspectives is not one of true holism but of relations. Relations

of exteriority are not a necessary part of object existence in OOO. Assemblage theory holds that these relations are plural and dynamic, but always present.

## **Ships as Assemblages**

Often, though not always, the ship serves as the fundamental unit for nautical archaeology, functioning as site, feature, object, and archaeological assemblage all at once. Undoubtedly, the vessel hull, any materials associated with the vessel's purpose (trade goods, guns and munitions, etc.), and materials associated with quotidian life aboard the ship (galleyware, clothes, tools, etc.) comprise the archaeological assemblage of a shipwreck as an archaeological site. Each material object in a ship is also an assemblage object undergoing territorialization and deterritorialization. A spoon may be viewed as part of the galley (an assemblage of foods, cookware, tableware, and tools), but when found with a sailor's personal effects, might be pulled away from the galley assemblage and brought into a cabin assemblage, though the galley relationship is still visible. In this way, the archaeological assemblage and the Deleuzian assemblage are quite similar.

Within nautical archaeology, though, great emphasis is placed on ship construction and technology, in which case the vessel hull is often viewed holistically as an object, much the same as a ceramic vessel would be. Each have their constituents – frames, planks, and nails on the ship or clay, temper, and glaze on the ceramic – but their analysis is that of a material whole comprised of parts (Pomey, 2013; Benini, 2017; Bohlmann, 2017; Fraga et al., 2017; Nicolardi et al., 2017). This has led to considerable advances in understanding shipbuilding as a technological practice, particularly when aided by naval architecture treaties (Westerdahl, 1994; Coates et al., 1995; Bass, 2011; Domingues, 2011; Hoving et al., 2012). However, it has also led to a practice of ship typologizing that belies the inherent variability and vernacular traditions known to be part of vessel construction, particularly outside of military contexts (Evans et al., 2016). Viewing the ship as a relational object comprised of an assemblage of frames (themselves assemblages of floors, futtocks, treenails, metal nails, etc.), strakes (themselves an assemblage of planks, nails, caulking, etc.), stems, sternposts, knees, stanchions, keel, keelson, etc. moves away from rigid typologies and toward a relational understanding of a shipbuilding practice in which the timber and the environments that produce it are as co-constructive of the ship and shipbuilding practice as the anthropogenic knowledge used to construct it (Rich, 2017).

Maritime archaeologist Christer Westerdahl's (1992) maritime cultural landscape began this process, leading to a number of pioneering studies that expand on long *durée* maritime histories (Ford, 2011) and ships as environmental objects (Carroll, 1981). Interrogating ships as Deleuzian assemblages shifts agency from ship owners and shipwrights working in a landscape to the myriad objects, including human agents, that comprise the ship and those environments and materials from which the objects came (Ingold, 1993). Westerdahl maintained an imperative that the maritime cultural landscape is separate from the terrestrial landscape. If that is the case, it has to do with the relationship between large bodies of water and the land surrounding them, anthropogenic in that they have been unquestionably shaped by human interaction but still agentive to the degree that objects like safe harbor and navigable water have a tractable impact on human settlement (Erlandson et al., 2006; Beaven et al., 2016). The technologies developed to mediate human interaction with the water are well-documented to have been shaped

by the waters in which they sail, from the laced boats of South India's Malabar Coast which allow for flexibility and beach landings in areas of high waves and little safe anchorage (Kunhali, 2000) to Dutch leeboards, which allow vessels to quickly transition from sailing in the shallow waters of the Zuiderzee to the open ocean by increasing lateral resistance against oceanic currents (Doran Jr., 1967). In this way, nautical archaeology has long recognized the environmental co-construction of its subject material, even while centering the human in the narratives of ship construction (see Campbell, 'History', this volume). Larger questions remain about how the enunciations that articulate ships as assemblages construct and constitute power and agency, especially in the so-called Age of Sail when maritimism was closely tied to nationalism, but such is beyond the scope of this study (see Mentz, this volume).

### Assemblage and Ship Reuse

The processes of territorialization and deterritorialization take on new weight when considering the afterlives of ships and the reuse of vessels and vessel hulls in the built environment. Deliberate watercraft discard has been diachronically approached as an archaeological signature of cultural change and transformation (Richards and Staniforth, 2006). In looking at ship abandonment across Australia, Nathan Richards distinguishes the intentional discard and reuse of ships as both taphonomically and culturally distinct from the shipwreck site formation process (Richards, 2008). Though recognition of time depth applies to wrecked ships as well as discarded and reused vessels, the specific contexts of intentional discard and reuse are recognized as distinct in maritime archaeology. Drawing from this broader anthropological theorization of ships not only as vessels but as cultural objects with lives and afterlives, the archaeology of ship reuse can be understood using similar frameworks to that of discard.

Ship and hull reuse is a common practice, observed in ports and harbors around the world and throughout history (Ford, 2013). In Europe and parts of North America, this tradition has been ascribed to the rapid expansion and urbanization of ports as cities. The peculiarity of the reused ship and hulls in these contexts is that they are still discussed as ships, often due to the intervention of nautical archaeologists, this author included, who seek these sites out as opportunities to examine the architecture of vessels which are often stable, easy to access, and can be exposed for long periods of time when compared to wrecks (Delgado, 2009; Goodburn et al., 2011; Creasman, 2013; Koivikko, 2017). Where vessels have been reused, though, be it as part of a harbor (Grieco et al., 2020), a land reclamation process (Delgado, 2009), or part of terrestrial architecture such as the *USS Chesapeake's* timbers in Chesapeake Mill in Wickham, UK, they have, in all instances cited here, spent more of their use-life as a feature of the built environment than as sailing vessels. The cutting down of a ship's upperworks, the removal of rigging components, the infilling of the hull with rocks and sediment, the slow microbial breakdown of wood, the process of social forgetting that the ground on which people walk is held up by ship hulls all represent deterritorialization of the ship assemblage (see Rich et al., this volume). Simultaneously, the former vessels are territorialized as parts of the built environment, sometimes in the most literal way possible by building them into land (*terra*) that was once water. Insofar as they have served a purpose other than sailing for longer than they sailed, these hulls are parts of ships less through their direct assemblage of constituent objects, which to varying degrees have been disarticulated

from the ship assemblage, than they are ships through their relations of exteriority, their past lives visible and legible because the ship assemblage was greater than the sum of the ship objects (see Harman, this volume).

### Assemblage, Strata, and the Interstratum of Reuse

DeLanda's discussions of Deleuzoguattarian assemblage flatten the distinction between strata and assemblage (DeLanda, 2008; Buchanan, 2015). This point is regularly accepted in material studies due to the emphasis on milieu and organic forms in discussions of strata (Buchanan, 2015), though some such as Pauketat (2019) embrace the concept. The distinction is pertinent in discussions of material reuse insofar as *interstrata* deals more directly with changes and perdurance of materiality than depending solely on the rhetoric of the tetravalent assemblage. Deleuze and Guattari divide a stratum into its epistratum, which creates centers and peripheries and parastratum, which fragments and layers stratigraphic belts (Deleuze et al., 1984; Deleuze et al., 2004; Abrahams, 2019). A stratum is defined by its 'unity of composition, despite its different organization and development' (Deleuze et al., 1984, p. 7). As this unity is highly mobile, the cross-coding and mixing between strata lead to the phenomena Deleuze and Guattari call *interstrata* (Deleuze et al., 1984). The discussion extends above to *metastrata* and below to *substrata*, but *interstrata* captures DeLanda's relations of exteriority in a way that maintains enunciations rather than remembering them.

As DeLanda's assemblages, reused hulls are recognizable in the aftermath of inclusion in port infrastructure because the objects of the assemblage endure, rendering visible their past enunciations even as they are deterritorialized as ships and territorialized as port infrastructure. This proceeds from the actual to the virtual, assuming that objects of the assemblage are enduring and thus that their relations can be read from them. *Interstrata* follows a line of thought that Buchanan (2015) proposes is closer to the origins of assemblage theory, suggesting that the structure of the virtual constitutes the actual, and that objects are read only in relation to their enunciations. The alternating movement between virtual and actual is not new to or a reversal of DeLanda's thinking (DeLanda, 2000) and is necessitated here because the mixing and recoding of reused hulls as assemblages is critical to their interpretation.

As ships, these vessels interacted with and were shaped by the water (Campbell, 2020), balancing the physics of buoyancy and displacement with those of wind and current. Their specific dimensions were created as a confluence of human need and oceanic force, two active but non-thingly enunciations, and the way in which archaeologists approach defining and reconstructing these ships reflects that. Reused hulls are territorialized in their sailing lives by the enunciations between the objects of the ship: not only the planks, timbers, machinery, rigging, and sails, but the cargo, sailors, and quotidian objects aboard and the water surrounding the vessels. Simultaneously, the lap of the waves, the boring of ship worms, the constant offloading of cargo, and the rotation of crew deterritorialize the ship assemblage. The assemblage of the ship endures because the enunciations between objects remain visible in the objects themselves, reflecting DeLanda's relations of exteriority. Instances of the intentional reuse of hulls as part of port architecture are likewise territorializing and deterritorializing, bringing ship objects into the wharf assemblage through enunciations of space, function, and social milieu, while actively pulling objects away from the enunciation

of the ship assemblage. The buoyancy of the vessel that determined its length to beam ratio no longer matters for its ability to keep the ship afloat, but still corresponds to the total volume of the hull, which in turn determines how much landfill a vessel section can hold. The enunciation changes, but is still visible in the object and still an object unto itself.

The question that remains, then, is not one of interpreting the past, but of interpretation in the present. Why are these objects studied as ships when they have broad use lives? Interstrata offers a heuristic tool that, despite not factoring into many DeLanda material analyses, compliments archaeological understandings of the tetravalent assemblage (DeLanda, 2006). Ship and wharf represent alloplastic (social) strata (Bowden, 2020), with their shared objects and enunciations constituting their own assemblage. The assemblage, termed as machinic assemblage by Deleuze, functions as ‘an interstratum insofar as it regulates the relations between the strata, as well as the relations between contents and expressions on each stratum’ (Deleuze et al., 2004, p. 81). Exteriority is represented not by the changing enunciations between objects but the relationship between alloplastic strata. Alloplastic strata are ‘comprehensible, transmittable, and modifiable from the outside’ (Deleuze et al., 2004, p. 67), comprised of matter-flows to be followed between each stratum through the interstratum of the machinic assemblage (see Edgeworth, this volume). Nautical archaeological interpretation of ship and hull reuse in ports and harbors has focused largely on the singular alloplastic stratum that is the ship. The processes of construction, sailing, abandonment, and reuse represent a total flow, though, from forest to ocean to riverbed to laboratory, moderated by the same machinic assemblage that is alternately designated as ship or wharf. These designations are as much a reflection of the archaeological preoccupations of the present as they are of past material flows, as the material assemblage remains articulated through object and enunciation regardless of anthropocentric stratigraphic designation. Shifting focus to the flow of objects, including but by no means limited to humans, forces us to ask not just how the ships were constructed or when they were scuttled, but what larger entanglements directed and continue to direct the flow of these materials and the construction of their specific stratigraphies. As much is observable in the practice of hull reuse in Alexandria, Virginia.

## Alexandria History

Displacing the indigenous Nanticoke and Piscataway peoples, colonial settlement along the Alexandria waterfront grew rapidly following the city’s formal founding in 1749 as a port connecting farmers along the upper Potomac with the Chesapeake Bay and broader Atlantic world (Preisser, 1977; Shomette, 2003). The rise of plantations along the Potomac River for the cultivation of tobacco, wheat, hemp, and other commercial crops led Hugh West to establish a tobacco warehouse on the bluff overlooking what would become the town (Ryan, 2009). The Tobacco Inspection Act of 1732 designated West’s warehouse the official tobacco point of tobacco inspection for the area (Preisser, 1977). In 1748, local

Fig. 7.1 (opposite page). Plans of Alexandria from 1749 (top) and 1862 (bottom) showing the topographical change of the city’s waterfront. Credit (top): Washington, George. A plan of Alexandria, now Belhaven. Map. Alexandria: 1749. From Library of Congress, Map Collections. <https://lccn.loc.gov/98687108>. Credit (bottom): A plan of Alexandria. Map. Washington D.C.: United States Coast Survey, 1862. From Library of Congress, Map Collections. <https://lccn.loc.gov/89692513>.



merchants petitioned the Virginia General Assembly to create a 60-acre town at West's warehouse location to be auctioned off for development (Preisser, 1977; 1981; Shomette, 2003). The same year as the city's founding, local landowners began making significant changes to the area's waterfront that ultimately landed the city a designation as a port of entry for foreign ships by 1779. In the late 18th century, a sandy bluff was cut down to infill the shallow bay along the city's waterfront to open up deepwater anchorage and facilitate the onloading and offloading of ships into the city's warehouses (Fig. 7.1).

Throughout the late 18th and 19th century, the waterfront was incrementally infilled by landowners and lessees seeking to facilitate ship anchorage and warehousing for maritime trade or otherwise expand their property when nearby plots or subplots were not available (Preisser, 1981; Shomette, 2003; Shepard, 2006). The Alexandria trustees needed to approve each of these projects, so the process of infilling was done piecemeal over the course of the city's history as it proved advantageous for the city and landowners, alike (Shepard, 2006). Maps and other documentary evidence provide evidence for shoreline change over time. The process of infilling land to create waterside infrastructure continued plot-by-plot beyond the bay for the next century as Alexandria grew, rivaling nearby Annapolis and Baltimore and becoming a hub for mid-Atlantic exchange (Dudley, 2010; Leeman, 2010; McWilliams, 2011; Crenson, 2019). While the majority of the city's historic wharves were constructed using either cribbing or cobs infilled with silt, sand, and debris, ships were occasionally cut down to the waterline, submerged, and filled with stones and dirt to support sections of wharf (Shepard, 2006; Pulliam, 2019; Grieco et al., 2020).

## The Ships

Archaeology of the city's historic waterfront has identified large sections of the wharf and land reclamation structures in areas south of the original 1749 infill. This includes six ships that were integrated into the wharf foundations, cut down to the waterline and reused as construction material. The six currently-known ships were unearthed through three CRM projects: three hulls were identified at the Robinson Terminal South (RTS) site (Site 44AX235) (Claypool et al., 2014), one at the Hotel Indigo site (Site 44AX229), and three from the Keith's Warf and Battery Cove (Site 44AX119) excavations. Whereas the reused vessels were the only ships found at the first two sites, the two reused barges from Keith's Warf and Battery Cove were associated with six other hulls identified outside of the wharf infrastructure.

The vessel from the Hotel Indigo site was excavated by Thunderbird Archaeology, the City of Alexandria, The Maryland Archaeological Conservation Laboratory (MAC Lab), and the InterContinental Hotels Group in 2015 next to a section of intact wharf bulkhead. The vessel, itself, runs about 15.24 m (50 ft) from the stem to the intact stern section, though no sternpost was identified. The vessel is bifurcated along the keel, leaving only the port side intact. The location of the starboard side of the vessel is currently unknown.

All vessels from the RTS site were unearthed in 2018 by Thunderbird Archaeology, the City of Alexandria, The MAC Lab, and EYA LLC. Feature 200 from the RTS site measures approximately 12.19 m (40 ft) along the keel between parallels (Fig. 7.2). It is bifurcated along the keel with the port side intact, as well as smaller sections of the starboard side toward the stern of the ship. The location of the dearticulated starboard side is currently unknown. The keel is fully intact and joined to fractions of the stem and sternpost, indicating that the extent



Fig. 7.2. Feature 200, cleared of overburden and infill. Photo credit of author.

remains are indicative of the full bottom length of the vessel. The bottomworks are flat with an angular turn of the bilge (though not a hard chine). A single mast step was notched into the keelson about two-thirds of the way down its length. There is no evidence of ceiling planking or deck stanchions in the ship's interior. Despite the flat bottom, the ship has a deep keel and false keel, as well as noticeable deadrise at the stern to provide lateral resistance when sailing. The keel, false keel, and sacrificial planking showed evidence of *Teredo navalis* boring. The sternpost of Feature 200 was integrated directly into the wharf, with its stern supporting



Fig. 7.3. Feature 155 stem articulated into wharf structure. Photo credit of author.

cribbing timbers. A pylon for a mid-19th-century flour mill was driven in next to the sternpost. It is currently unknown if mill constructors were aware of the hull when driving the pylon. Prior to excavation, the hull was filled with rocks, sand, river sediment, and accumulated debris, some of which was part of the land infill and some of which accumulated over time.

Feature 155 from the RTS site, measures approximately 15.85 m (52 ft) in length between parallels, and included portions of a stem and sternpost (Fig. 7.3). Like the Hotel Indigo ship and Feature 200, this vessel is bifurcated along the keel with the starboard side left intact. The location of the port half of the ship is unknown. No ceiling planking was found, but the tight framing provides a consistent bottom along the length of the ship. The stern ends in a short but sharp deadrise through a series of Y-timbers and deadwood. Two mast steps were notched into the keelson just over halfway aft the stem. The second mast step is set about 15.24 cm (6 in) abaft the forward mast step. Imprints for deck stanchions are observable along the keelson, indicating at least one consistent deck spanning the length of the vessel that was removed by the time of infilling. No *Teredo navalis* damage was observed anywhere on the ship. The stern of the vessel was directly integrated into the bulkhead wall of the wharf, with the ship positioned perpendicular to the tieback sitting atop the Y-timbers. The stem was found flattened directly below the wooden supports for a wharf with a stone warehouse built on top, excavated prior to the removal of the vessel. Amidships, a box-like structure related to the wharf cribbing was found built astride the keelson. The hull fill was a mix of large rocks and sand, riverine sediment, and debris. The rocks appeared to be part of the original fill after the submergence of the hull, as they extended down to directly atop the floor timbers.

Due to extending beyond the project area, the full length of Feature 159 is unknown. However, over 21.95 m (72 ft) of keel were recovered, making it the largest vessel from the site. This ship was not bifurcated and subsequently maintains parts of its port and

starboard sides past the turn of the bilge insofar as was visible in the project area. The steep angle of deposition and weight of the fill around the exterior of the hull resulted in the sides being compressed inward and upward, obscuring the shape of the vessel. Though the aft section of the ship ran outside the project area, bow works including a stemson and a single cant frame are intact. The keelson, keel, ceiling planking, and sacrificial planking are likewise intact. The sacrificial planking shows evidence of *Teredo navalis* damage. The aft of the hull supported a section of wharf wall that ran perpendicular to the keel. The fill included rocks, sand, riverine sediment, and debris. Additionally, the fill included two ship knees of unknown orientation as well as a stanchion. It is unclear if the knees and stanchion were previously articulated with Feature 159.

All vessels from Keith's Warf and Battery Cove were excavated by Parsons Engineering Science, Inc. in 1988, and published in detail in the subsequent site report (1993). Feature 32 is a barge fragment used in the construction of a 19th-century shipway. The hull maintains its framing timbers and hull planking. The exposed section of the hull spanned 5.58 m (18.3 ft) laterally. The position of the hull within the site made total excavation unsafe, so little more is known about the construction of the hull or its orientation in the wharf.

Feature 38 was another barge fragment used in the construction of the same shipway as Feature 32. The hull timbers and planking were preserved, along with the imprints of uprights or stanchions that would have supported upper structures. The observed section of hull ran 3.66 m (12 ft) laterally, with its full length unexposed due to the constraints of the project. Keel blocks, which would have supported the keel of vessels in the 19th-century shipway, were positioned over the centerline of the timbers, but not fastened to the barge hull. The hull planks of the barge were also notched to receive a spreading timber for the shipway.

In addition to the vessels discussed above, several additional hulls including seven at Keith's Warf and Battery Cove and two vessels in Windmill Hill Park, have been recorded as part of the landfill for the city's waterfront (Parsons Engineering-Science, Inc. 1993; Rummel, Klepper & Kahl, LLP 2017). This discussion focuses on hulls intentionally integrated into the city's wharves, but the reuse of hulls in landfill offers additional examples of how vessels have been reconstituted as part of the city's maritime history.

## Discussion

The Alexandria ships were chosen as a case study for the assemblage of hull reuse because of the sheer quantity recorded due to the city's long-standing and expansive archaeological code (Appler, 2015). The discussion may apply as aptly to New York, though, where similar instances of vessel reuse as both construction material and potential landfill were recorded (Martin-Benito et al., 2014; Riess et al., 2014) or any other instance of intentional vessel reuse. Research is ongoing to analyze the construction, sailing lives, and reuse of the Alexandria vessels, but their reuse presents an opportunity to discuss the afterlives of ships, as part of DeLandan assemblages and Deleuzian strata.

## The Alexandria Interstratum

The barges at Keith's Warf were identified by their flat bottoms and angular turn of the bilge, which allowed for ample cargo storage and smooth sailing in riverine and estuarine waters (Parsons Engineering-Science, Inc. 1993). The length of the Hotel Indigo ship's keel

coupled with the curves taken from its frames enabled physical and virtual modeling of the ship that provided estimations for unknown dimensions including maximum breadth and length to beam ratio (in this case 3.75:1) (Grieco et al., 2020). These dimensions likewise reflect the compromise between the vessel's purpose and its environment. The RTS ships stand out against one another most conspicuously through their variable size, reflective of the ship stratum, and the differences in their cutting down and, in two instances, bifurcation, indicative of the wharf stratum. The objects and enunciations of the hulls exist in both strata, meaning the hulls are constantly in the process of reterritorialization as ships, sections of wharf, and objects of archaeological study.

The Alexandria ships exemplify an assemblage as an interstratum. The ongoing interpretation of vessel construction by the Conservation Research Lab (Texas A&M) and the dendrochronology of the ship timbers by the Oxford Tree Ring Laboratory (University of Maryland) represents interpretation of the ship stratum, following the flow of materials from the forest to the shipyard to the sea. Drawing from Pauketat's (2019) use of assemblage in archaeologies of urbanism and architectural understandings of the built environment as assemblage (Abrahams, 2019), this author's ongoing research into the reuse of the hulls as ecological artifacts focuses on the second stratum, that of construction material and reuse. These processes represent a total flow, though, that cannot be separated (or stratified) arbitrarily to serve the archaeological record, as the record is the sum of the total flow. 'Ship', 'hull', 'wharf' and the like are discursive groupings for the same material objects differentiated by their non-thingly objects and enunciations. The difference between strata is in their capacities to affect and be affected (Deleuze et al., 2004, p. 262), but these capacities remained informed by one another, constituting a mediative interstratum that maintains the constant flow of object, enunciation, and capacity.

## **New Materialisms for Old Materials in Port Landscapes**

Cutting down the bluff to infill Alexandria's shallow bay, and in so doing create deep water anchorage for ships and warehouses for shipping, was a decision produced unquestionably by economic opportunity, but also by the restrictions and needs of the ships that sailed into the port. It would be difficult to argue that sailing vessels have no impact on ports as built environments, or else modern ports would not be retrofitting and relocating to accommodate increasingly large container ships (Merk, 2018). It would likewise be difficult to argue that ports did not influence ship construction, as discussed previously with the development of leeboards. The needs of those designing the piecemeal wharf infrastructure in Alexandria radically changed the integrated ship hulls. The vessels were stripped of their rigging, interiors, and upperworks, and cut down to the waterline. In three instances, the ships were bifurcated, making use of only a fraction of the bottomworks. So too, though, were Alexandria's historical wharves and the city of Alexandria altered by the reused vessels.

At the most material level, the inclusion of ship wood in the wharves took the place of wood that had to have come from somewhere. The wharf cribbing, recorded in multiple instances to be rough-sawn trunks with sections of cambium still present (Parsons Engineering-Science, Inc. 1993; Shepard, 2006), offers an idea of what may have been used if the vessel hulls were not, though this interpretation is admittedly speculative. The inclusion of hull wood took the place of another form of wood, leaving that wood

available for manipulation and/or inclusion in some other form. In the case of trunks, hull reuse reduced the total number of trunks necessary for wharf construction, which relates directly to conversations of land coverage and land use. This makes no value assumption that the intention behind reuse was similar to that of modern ecological conservation. It simply acknowledges that the reuse of old but viable timber has the potential to impact the quantity of new timber cut from a landscape. The hulls also held rocks, sand, debris, and other landfill that converted the riverfront into land and supported warehouses, shops, taverns, residences, roads, and all manner of structure and infrastructure. The fill held by the ships transformed both the composition of the land and the ways in which people interacted and continue to interact with it. This is not to say that only these hulls could have facilitated the infilling process, for indeed many hulls or other timber sources could have. Rather, specific objects articulated as part of the ship stratum provided specific qualities that were articulated into the wharf stratum. The tonnage of the vessel, determined by the mediation between water and the ship owner's specifications, relates directly to how much fill the hull sections can hold, which in turn relates to what the infilled hull can support and how much additional infill needs to be supported by wharf cribbing.

Reuse also shaped human experience in the port, though. In 1799, the Alexandria City Council passed three acts outlawing the tying up of hulks and old vessels under the pretense of repair only to cut the hulls down for firewood and allow them to skin or intentionally submerge them. The City Council likewise granted permission for the sinking of vessels as part of wharf construction (Shepard, 2006). Submerged vessels were acknowledged as impactful to the cityscape over two centuries ago, prompting their regulation. In this way, the hulls not only altered the port landscape but the bureaucracy of the city and in turn the actions that humans could undertake along the city's shoreline.

Alexandria serves as the case study for this chapter, but the argument is in no way unique to the area. North American ports including San Francisco (Delgado, 2009), Charleston (Spirek, 1994), Baltimore (Crenson, 2019), New York (Riess et al., 2014), Kingston (Ontario) (Moore, 2013), and an untold number more have been shaped in some way by the hulls under their waterline. They mediate between the terrestrial in the maritime, between the things, enunciations, and capacities that define terrestrial and maritime as their own strata. In his introduction to the concept of assemblage, Pauketat (2019, p. 5), informed by Harris (2018) suggests that assemblages constitute 'all things-that-mediate'. Archaeologies of maritime reuse in port and harbor structures are defined by their capacity to mediate between the terrestrial and the maritime. Focusing purely on ship construction and sailing or even a 'ship-then' approach that segments these hulls into ships and then something else in their reuse based on linear time is to lose both archaeological and past peoples' understanding of this mediative capacity that has been part of the total assemblage since before its territorialization. If ship reuse in ports and harbors was truly so common as to not merit significant attention by past peoples (Ford, 2013), it is because the mediative capacity of these assemblages was well enough understood by those who would reuse them as to constitute vernacular knowledge.

## Conclusion

Nautical archaeology's focus on the construction and sailing lives of ships belies the larger roles vessel materiality has played as an agent between land and water.

Instances of ship reuse are widespread, and though the circumstances surrounding such reuse vary geographically and temporally, they constitute a global practice that has shaped ports the world over. From the vessels used as pontoon bridges at Thonis-Heracleion in Egypt (Robinson, 2018) and the barriers created by the Viking ships at Roskilde (Crumlin-Pedersen and Bondesen, 2002) to the scuttled Dutch ships at Christianshavn (Lemée, 2006) and modern reefs created by intentionally sinking old hulls, the practice of vessel reuse has notable extent and time depth. Considering both the territorialization and deterritorialization of ships as DeLandan assemblages and assemblages as interstratum fosters engagement with the processes of becoming that ships experience before, during, and after their sailing days. This recognition harkens back to Richard's (2008) call for seeing ships as more than just ships. Rather than taking a stance that reused ships are either ships first or infrastructure first, or even that they were first ships and then infrastructure, the articulations of assemblage theory recognize reused vessels' plurality. They are at once ships, infrastructure, archaeological objects, ecological artifacts, and much more. Being one does not preclude being the other. Rather, each articulation informs how the others are understood. Acknowledging this does not diminish the vibrancy of seafaring and naval architecture as areas of study but instead suggests that these are two of many ways that ships shaped and were shaped by the ports in which they sailed.

## Acknowledgements

The work for this project was conducted on the banks of the Potomac River, an arterial waterway for the Pamunkey, Chickahominy, Chickahominy Eastern Division, Upper Mattaponi, Rappahannock, Monacan, Nansemond, the Nentego and Confederation of Sovereign Nanticoke-Lenape Tribes, the Piscataway Indian Nation, Piscataway Conoy Tribe, and Accohannock Indian Tribe in the areas of Washington DC, Northern Virginia, and central Maryland. Many of the Indigenous peoples in this area were killed, subjugated, or forced to migrate with the arrival of the English in the 17th century. Today, an estimated 4,000 American Indians live in Washington DC and its surrounding areas, with many state- and federally-recognized tribes hosting celebrations and gatherings on their ancestral homeland to honor the indigenous people living and thriving in the region, and to teach locals about the Native histories of these lands.

Additionally, this chapter was written on Lenapehoking, the traditional homeland of the Lenni-Lenape. The Lenape lived on this land for thousands of years prior to colonization, and during the 1680s were the people who negotiated with William Penn to facilitate the founding of Pennsylvania. Their land was stolen by European colonists in the decades and centuries following, forcing the Lenape westward, out of Lenapehoking. Their descendents today include the Delaware Tribe and Delaware Nation of Oklahoma; the Nanticoke Lenni-Lenape, Ramapough Lenape, and Powhatan Renape of New Jersey; and the Munsee Delaware of Ontario. Today, an estimated 13,000 Native Americans, including Lenape descendants, live in Philadelphia, on the banks of the Delaware and Schuylkill Rivers, the ancestral and spiritual home of the Lenni-Lenape.

## Works Cited

- Abrahams, G. (2019) 'The Building as a Deleuzoguattarian Strata/Machinic Assemblage', *Architectural Theory Review* 23(3), pp. 363-379.
- Alaimo, S., and S. Hekman (2008) 'Introduction: Emerging Models of Materiality in Feminist Theory', in S. Alaimo and S. Hekman (eds.), *Material Feminisms*. Bloomington: Indiana University Press, pp. 1-19.
- Antczak, K.A., and M.C. Beaudry (2019) 'Assemblages of Practice. A Conceptual Framework for Exploring Human-Thing Relations in Archaeology', *Archaeological Dialogues* 26(2), pp. 87-110.
- Appler, D.R. (2015) 'The Formation of the Alexandria Archaeological Commission: Connecting Citizen Activism, Archaeology, and Local Government in Alexandria, Virginia', *Journal of Community Archaeology & Heritage* 2(1), pp. 22-39.
- Barad, K. (2007) *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning*. Durham: Duke University Press.
- Bass, G.F. (2011) 'The Development of Maritime Archaeology', in B. Ford, D.L. Hamilton, and A. Catsambis (eds), *The Oxford Handbook of Maritime Archaeology*. Oxford: Oxford University Press, pp. 1-16.
- Beaven, B., K. Bell, and R. James (2016) *Port Towns and Urban Cultures: International Histories of the Waterfront, c.1700 – 2000*. New York: Springer.
- Benini, A. (2017) 'The Archaic Greek Sewn Boat from Gela (Sicily, Italy): Some Notes on the Hull Construction', in J. Gawronski, A. Van Holk, and J. Schokkenbroek (eds), *Ships and Maritime Landscapes. Proceedings of the Thirteenth International Symposium on Boat and Ship Archaeology, Amsterdam 2012*. Oxford: Oxbow, pp. 409-413.
- Bennett, J. (2010) 'A Vitalist Stopover on the Way to a New Materialism', in S. Frost, J. Bennett, P. Cheah, M.A. Orlie, and E. Grosz (eds), *New Materialisms: Ontology, Agency, and Politics*. Durham: Duke University Press.
- Bohlmann, J. (2017) 'Camber in Sails of the 17th Century: A Reconstruction of Non-Preserved Features', in J. Gawronski, A. Van Holk, and J. Schokkenbroek (eds), *Ships and Maritime Landscapes. Proceedings of the Thirteenth International Symposium on Boat and Ship Archaeology, Amsterdam 2012*. Oxford: Oxbow, pp. 325-330.
- Bowden, S. (2020) 'Assembling Agency: Expression, Action, and Ethics in Deleuze and Guattari's *A Thousand Plateaus*', *The Southern Journal of Philosophy* 58(3), pp. 383-400.
- Buchanan, I. (2015) 'Assemblage Theory and Its Discontents', *Deleuze Studies* 9(3), pp. 382-392.
- Busch, J. (1987) 'Second Time Around: A Look at Bottle Reuse', *Historical Archaeology* 21(1), pp. 67-80.
- Campbell, P.B. (2020) 'The Sea as a Hyperobject: Moving Beyond Maritime Cultural Landscapes', *Journal of Eastern Mediterranean Archaeology & Heritage Studies* 8(3-4), pp. 207-225.
- Carroll, C.F. (1981) 'Wooden Ships and American Forests', *Journal of Forest History* 25(4), pp. 213-215.
- Claypool, J., and E. Johnston (2014) *Robinson Terminal South Property History*. Washington D.C.: History Matters.

- Coates, J., S. McGrail, D. Brown, E. Gifford, G. Grainge, B. Greenhill, P. Marsden, B. Rankov, C. Tipping, and E. Wright (1995) 'Experimental Boat and Ship Archaeology: Principles and Methods', *International Journal of Nautical Archaeology* 24(4), pp. 293-301.
- Creasman, P.P. (2013) 'Ship Timber and the Reuse of Wood in Ancient Egypt', *Journal of Egyptian History* 6(2), pp. 152-176.
- Crenson, M.A. (2019) *Baltimore: A Political History*. Baltimore: Johns Hopkins University Press.
- Crumlin-Pedersen, O., and E. Bondesen (2002) *The Skuldelev Ships I: Topography, Archaeology, History, Conservation and Display*. Roskilde: Viking Ship Museum.
- DeLanda, M. (2000) 'Deleuze, Diagrams, and the Genesis of Form', *Amerikastudien / American Studies* 45(1), pp. 33-41.
- DeLanda, M. (2006) 'Deleuzian Social Ontology and Assemblage Theory', in M. Fuglsang and B.M. Sorensen (eds), *Deleuze and the Social*. Edinburgh: Edinburgh University, pp. 250-266.
- DeLanda, M. (2008) 'Deleuze, Materialism and Politics', in I. Buchanan (ed.), *Deleuze and Politics*. Edinburgh: Edinburgh University Press, pp. 160-177.
- DeLanda, M. (2016) *Assemblage Theory*. Edinburgh: Edinburgh University Press.
- Deleuze, G., and F. Guattari (2004 [1980]) *A Thousand Plateaus*. London: Bloomsbury.
- Deleuze, G., F. Guattari, and C.J. Stivale (1984) 'Concrete Rules and Abstract Machines', *SubStance* 13(3/4), pp. 7-19.
- Deleuze, G., and C. Parnet (1987) *Dialogues*. London: Athlone Press.
- Delgado, J.P. (2009) *Gold Rush Port: The Maritime Archaeology of San Francisco's Waterfront*. Berkeley: University of California Press.
- Dolwick, J.S. (2009) 'The Social and Beyond: Introducing Actor-Network Theory', *Journal of Maritime Archaeology* 4(1), pp. 21-49.
- Domanska, E. (2006) 4. 'The Material Presence of the Past', *History and Theory* 45(3), pp. 337-348.
- Domingues, F.C. (2011) 'Maritime History and Maritime Archaeology', in B. Ford, D.L. Hamilton, and A. Catsambis (eds), *The Oxford Handbook of Maritime Archaeology*. Oxford: Oxford University Press, pp. 907-916.
- Doran Jr, E. (1967) 'The Origin of Leeboards', *Mariner's Mirror* 53(1), pp. 39-53.
- Dudley, W.S. (2010) *Maritime Maryland: A History*. Baltimore: Johns Hopkins University Press.
- Erlandson, J.M. and S.M. Fitzpatrick (2006) 'Oceans, Islands, and Coasts: Current Perspectives on the Role of the Sea in Human Prehistory', *The Journal of Island and Coastal Archaeology* 1(1), pp. 5-32.
- Evans, A., and S. Smith (2016) 'Vernacular Watercraft: In Concept and in Practice', in A. Evans (ed.), *The Archaeology of Vernacular Watercraft*. New York: Springer, pp. 1-7.
- Ford, B. (2011) 'The Shoreline as a Bridge, Not a Boundary: Cognitive Maritime Landscapes of Lake Ontario', in B. Ford (ed.), *The Archaeology of Maritime Landscapes*. New York: Springer, pp. 63-80.
- Ford, B. (2013) 'The Reuse of Vessels as Harbor Structures: A Cross-Cultural Comparison', *Journal of Maritime Archaeology* 8(2), pp. 197-219.
- Fowler, C. (2013) 'Dynamic Assemblages, or the Past Is What Endures: Change and the Duration of Relations', in B. Alberti, A.M. Jones, and J. Pollard (eds), *Archaeology After*

- Interpretation: Returning Materials to Archaeological Theory*. Walnut Creek: Left Coast Press, pp. 235-256.
- Fowler, C., and O.J. Harris (2015) 'Enduring Relations: Exploring a Paradox of New Materialism', *Journal of Material Culture* 20(2), pp. 127-148.
- Fraga, T.M., and J.A. Bettencourt (2017) 'The Angra D Wreck (Azores, Portugal): Study and Reconstruction of an Iberian ship', in J. Gawronski, A. Van Holk, and J. Schokkenbroek (eds), *Ships and Maritime Landscapes. Proceedings of the Thirteenth International Symposium on Boat and Ship Archaeology, Amsterdam 2012*. Oxford: Oxbow, pp. 445-449.
- Goodburn, D., F. Meddens, S. Holden, and C. Phillpotts (2011) 'Linking Land and Navy: Archaeological Investigations at the Site of the Woolwich Royal Dockyard, South-Eastern England', *International Journal of Nautical Archaeology* 40(2), pp. 306-327.
- Grieco, G., P. Fix, C. Kennedy, J. Herbst, L. Shultz, R. Borrero, and C. Dostal (2020) 'Integrating digital and conventional recording techniques for the documentation and reconstruction of an 18th-Century wooden ship from Alexandria, VA', *Digital Applications in Archaeology and Cultural Heritage* 16, e00136.
- Hamilakis, Y. (2017) 'Sensorial Assemblages: Affect, Memory and Temporality in Assemblage Thinking', *Cambridge Archaeological Journal* 27(1), pp. 169-182.
- Hamilakis, Y., and A.M. Jones (2017) 'Archaeology and Assemblage', *Cambridge Archaeological Journal* 27(1), pp. 77-84.
- Harman, G. (2018) *Object-Oriented Ontology: A New Theory of Everything*. London: Penguin.
- Harris, O.J.T. (2018) 'More Than Representation: Multiscalar Assemblages and the Deleuzian Challenge to Archaeology', *History of the Human Sciences* 31(3), pp. 83-104.
- Hoving, A.J., and D. Wildeman (2012) *Nicolaes Witsen and Shipbuilding in the Dutch Golden Age*. College Station: Texas A&M University Press.
- Ingold, T. (1993) 'The Temporality of the Landscape', *World Archaeology* 25(2), pp. 152-174.
- Ingold, T. (2007) *Lines: A Brief History*. London: Routledge.
- Jervis, B. (2016) 'Assemblage Theory and Town Foundation in Medieval England', *Cambridge Archaeological Journal* 26(3), pp. 381-395.
- Koivikko, M. (2017) 'Recycling Ships: Maritime Archaeology of the UNESCO World Heritage Site, Suomenlinna', Doctoral dissertation, University of Helsinki.
- Kunhali, V. (2000) 'Construction of Indian Vessels in 16th Century in Malabar', *Proceedings of the Indian History Congress* 61, pp. 380-384.
- Latour, B. (2005) *Reassembling the Social: An Introduction to Actor-Network-Theory*. Oxford: Oxford University Press.
- Leeman, W.P. (2010) *The Long Road to Annapolis: The Founding of the Naval Academy and the Emerging American Republic*. Chapel Hill: University of North Carolina Press.
- Lemée, C.P.P. (2006) *The Renaissance Shipwrecks from Christianshavn: An Archaeological and Architectural Study of Large Carvel Vessels in Danish Waters, 1580-1640*. Roskilde: Viking Ship Museum.
- Martin-Benito, D., N. Pederson, M. McDonald, P. Krusic, J.M. Fernandez, B. Buckley, K.J. Anchukaitis, R. D'Arrigo, L. Andreu-Hayles, and E. Cook (2014) 'Dendrochronological

- Dating of the World Trade Center Ship, Lower Manhattan, New York City', *Tree-Ring Research* 70(2), pp. 65-77.
- McFadyen, L. (2013) 'Designing with Living: A Contextual Archaeology of Dependent Architecture', in B. Alberti, A.M. Jones, and J. Pollard (eds), *Archaeology After Interpretation Returning Materials to Archaeological Theory*. Walnut Creek: Left Coast Press, pp. 135-150.
- McWilliams, J.W. (2011) *Annapolis, City on the Severn: A History*. Baltimore: Johns Hopkins University Press.
- Merk, O. (2018) *Container Ship Size and Port Relocation*. Discussion Paper 169. Paris: International Transport Forum.
- Moore, J. (2013) 'Resting Places of the Pioneer Craft: Ship Abandonment at Kingston, Canada', in N. Richards and S.K. Seeb (eds), *The Archaeology of Watercraft Abandonment*. New York: Springer, pp. 59-78.
- Nicolardi, M. and F. Castro (2017) 'Moulds and Architectural Signs in the Skeleton First Construction: A Methodology to Reconstruct the Original Hull Shape of the Cais do Sodré Shipwreck (Lisbon, Portugal)', in J. Gawronski, A. Van Holk and J. Schokkenbroek (eds), *Ships and Maritime Landscapes. Proceedings of the Thirteenth International Symposium on Boat and Ship Archaeology, Amsterdam 2012*. Oxford: Oxbow, pp. 230-238.
- Olsen, B. (2012) *Archaeology: The Discipline of Things*. Berkeley: University of California Press.
- Parsons Engineering-Science, Inc. (1993) *Maritime Archaeology at Keith's Warf and Battery Cove (44AX119): Ford's Landing Alexandria, Virginia*. Centerville: Parsons Engineering Science, Inc.
- Pauketat, T.R. (2019) 'Introducing New Materialism, Rethinking Ancient Urbanisms', in S. M. Alt and T.R. Pauketat (eds), *New Materialisms Ancient Urbanisms*. London: Routledge, pp. 1-18.
- Pétursdóttir, Þ., and B. Olsen (2017) 'Theory Adrift: The Matter of Archaeological Theorizing', *Journal of Social Archaeology* 18(1), pp. 97-117.
- Pomey, P. (2013) 'Defining a Ship: Architecture, Function, and Human Space', in B. Ford D.L. Hamilton and A. Catsambis (eds) *The Oxford Handbook of Maritime Archaeology*, pp. 25-46.
- Preda, A. (1999) 'The Turn to Things: Arguments for a Sociological Theory of Things', *Sociological Quarterly* 40(2), pp. 347-366.
- Preisser, T. (1977) 'Eighteenth-Century Alexandria, Virginia, Before the Revolution, 1749-1776', Doctoral dissertation, College of William Mary. Available at: doi:doi:10.21220/s2-9j6-s176.
- Preisser, T.M. (1981) 'Alexandria and the Evolution of the Northern Virginia Economy, 1749-1776', *Virginia Magazine of History and Biography* 89(3), pp. 282-293.
- Pulliam, T. (2019) *Early Documents Relating to When Ships at the Robinson Terminal South Site Were Buried*. Alexandria: Office of Historic Alexandria/Alexandria Archaeology.
- Reilly, M.C. (2016) "'Poor White" Recollections and Artifact Reuse in Barbados: Considerations for Archaeologies of Poverty', *International Journal of Historical Archaeology* 20(2), pp. 318-340.

- Rich, S.A. (2017) *Cedar Forests, Cedar Ships: Allure, Lore, and Metaphor in the Mediterranean Near East*. Oxford: Archaeopress.
- Richards, N. (2008) *Ships' Graveyards: Abandoned Watercraft and the Archaeological Site Formation Process*. Gainesville: University Press of Florida.
- Richards, N. and M. Staniforth (2006) 'The Abandoned Ships' Project: An Overview of the Archaeology of Deliberate Watercraft Discard in Australia', *Historical Archaeology* 40(4), pp. 84-103.
- Riess, W.C. and S.O. Smith (2014) *The Ship That Held Up Wall Street*. College Station: Texas A&M University Press.
- Robinson, D. (2018) 'The Depositional Contexts of the Ships from Thonis-Heracleion, Egypt', *International Journal of Nautical Archaeology* 47(2), pp. 325-336.
- Robinson, D.W. (2017) 'Assemblage Theory and the Capacity to Value: An Archaeological Approach from Cache Cave, California, USA', *Cambridge Archaeological Journal* 27(1), pp. 155-168.
- Rummel, Keppler & Kahl, LLP. (2017) *Management Summary: Windmill Hill Park Shoreline Rehabilitation Project*. Baltimore: Rummel, Klepper & Kahl, LLP.
- Ryan, K. (2009) *Traveler's Accounts of the Historic Alexandria Waterfront*. Alexandria: Office of Historic Alexandria/Alexandria Archaeology.
- Shepard, S.J. (2006) Reaching for the Channel: Some Documentary and Archaeological Evidence of Extending the Alexandria Waterfront. *Alexandria Chronicle* (Spring), pp. 1-13.
- Shomette, D. (2003) *Maritime Alexandria: The Rise and Fall of an American Entrepôt*. Philadelphia: Heritage Books.
- Spirek, J.D. (2012) 'The Archaeology of Civil War Naval Operations in Charleston Harbor, 1861-1865', *Legacy* 16(2), pp. 4-9.
- Sullivan III, A.P. (1989) 'The Technology of Ceramic Reuse: Formation Processes and Archaeological Evidence', *World Archaeology* 21(1), pp. 101-114.
- Trentmann, F. (2009) 'Materiality in the Future of History: Things, Practices, and Politics', *Journal of British Studies* 48(2), pp. 283-307.
- Tuddenham, D.B. (2010) 'Maritime Cultural Landscapes, Maritimity and Quasi Objects', *Journal of Maritime Archaeology* 5(1), pp. 5-16.
- Tuddenham, D.B. (2012) 'Ship Finds and Their Management as Actor Network', *Journal of Maritime Archaeology* 7(2), pp. 231-243.
- Underwood, D. (2012) 'Reuse as Archaeology in Ostia: A Test Case for Late Antique Building Chronologies in Ostia', *Late Antique Archaeology* 9(1), pp. 383-409.
- Westerdahl, C. (1992) 'The Maritime Cultural Landscape', *International Journal of Nautical Archaeology* 21(1), pp. 5-14.
- Westerdahl, C. (1994) 'Maritime Cultures and Ship Types: Brief Comments on the Significance of Maritime Archaeology', *International Journal of Nautical Archaeology* 23(4), pp. 265-270.
- Williams, H. (1997) 'Ancient Landscapes and the Dead: The Reuse of Prehistoric and Roman Monuments as Early Anglo-Saxon Burial Sites', *Medieval Archaeology* 41(1), pp. 1-32.
- Williams, H. (2014) 'Monument and Material Reuse at the National Memorial Arboretum', *Archaeological Dialogues* 21(1), pp. 75-102.
- Witmore, C.L. (2007) 'Symmetrical Archaeology: Excerpts of a Manifesto', *World Archaeology* 39(4), pp. 546-562.



# 'The Biggest Museum Gallery in the Whole World'

Virtual Excavation and the  
Musealization of the Seafloor

Lisa Yin Han

## Abstract

This article explores the practice of virtual shipwreck excavations and the subsequent production of the seafloor as a museum space. Drawing from flat ontology frameworks, I ask, how does the growth of underwater telepresence change the way we think about the role of objects in a museum and the role of the museum as an object? To answer this, I conduct a close analysis of two case studies: The Bureau of Energy Management (BOEM) Virtual Archaeology Museum, and the Nautilus Live gallery of shipwreck excavations. Despite their institutional differences, both websites share similar genre conventions and a visual language for the in-situ video mediation of shipwrecks. However, they diverge when it comes to the editing of shipwreck videos and the degree to which presence of undersea life is discussed. A comparison of these two displays of nautical archaeology suggests that the notion of seafloor-as-museum uniquely allows for ongoing and polyphonic remediations of natural and cultural history, even as it reproduces existing ideological commitments to technological determinism and anthropocentrism. Using insights from media theory to analyze archaeological practices such as livestreaming, 3D photogrammetry, and datafication, I contend that the musealization of the seafloor through wreck artifacts both valorizes an existing object-based epistemology while creating space for nonhuman agencies – a flawed, yet meaningful step in the production of an ocean ethics.

## Introduction

In 2015, Brendan Foley, a nautical archaeologist with the Woods Hole Oceanographic Institution Deep Submergence Laboratory, gave a videotaped lecture about the first century BC Roman Antikythera shipwreck to the Hood Museum of Art. Although the wreck has been excavated multiple times since its discovery in 1900, Foley focuses on the innovations of the most recent 2012 excavation: 'The entire seafloor and everything

on it is now accessible to us. And the Mediterranean seafloor in particular is a vast repository of human history. The biggest library, the biggest museum gallery in the whole world. And with these technologies, we have the key' (Foley, 2015). Foley's claim that the seafloor is a museum gallery hinges on the suggestion that advanced technology has made possible a redefinition of an entire ecosystem in relation to human history. The comment is reflective of how shipwreck excavation has become an increasingly virtual experience in the last decade. From 3D bathymetric maps, to high resolution underwater video, to advances in photogrammetry, a myriad of underwater media technologies can now make even the textures of rocks visible. With better and more robust designs for viewer participation and access to professional surveys, recording and watching a virtual excavation, while often time-delayed, is increasingly seen as a comparable experience to gazing at a museum display in person.

While this equation between digitization, underwater mediation, and musealization may have been conceived as a poetic way to introduce audiences to high-tech nautical archaeology, it prompts further reflection from a media studies perspective. On the outset, the statement contains within it several assumptions and priorities that should be critically addressed. This starts with the fact that Foley does not simply offer us a vision of a museum at the seafloor, but rather a notion of the seafloor *as a museum*. This alone, in the absence of what the museum contains, is suggestive of a few items: First, the definition of the seafloor-as-museum subsumes nature within human history, ostensibly leaving out the question of the ocean's dynamism and the more-than-human ecosystems of the ocean bottom. Second, not only is the physical location of the museum displaced from terrestrial buildings to a benthic environment, but the temporality of the museum as a static record of the past is also put into question. Another outcome of this is that the old critique of museums removing objects from their proper context applies differently when the artifact in question remains in its original resting place. And finally, by equating the ability to capture and make accessible large quantities of data with progress, the seafloor museum implies the pending obsolescence or at least decentering of traditional maritime museums. Some archaeologists, such as Monika Stobiecka, have gone as far as to suggest that 'with digital archaeology this physical but also material and haptic character of archaeological work is now becoming obsolete' (Stobiecka, 2019, p. 4).

The seafloor is a space in which multiple temporalities are mixed up – the temporalities of capitalist accumulation, salvage, sedimentary history, environmental turbulence, and catastrophe converge in human endeavors to mediate, control, and extract from wild ocean environments. What I aim to explore here however is how virtual mediation of shipwrecks on the ocean bottom selectively and non-neutrally understands the role of the museum, as apparent in the initial implications I identified above. Moreover, the conceit of this particular volume and its emphasis on flat ontology, new materialism, and object agencies prompts further questions about the media platform specificity of virtual musealizations (cf. Rich and Campbell, this volume). Following this, I engage with a 'shipwreck hauntography', considering questions of presence and absence as well as the liveliness of archaeological objects (Rich, 2021). Artifacts are the material basis through which an institutionalized form of historical knowledge is validated. The shift in emphasis from the materiality of those objects to their mere telepresence and existence in interactive, datafied forms inevitably puts them into conversation with a broader new media landscape.

Film and media scholarship has long held that media texts must be evaluated beyond their messages and in terms of specific platform affordances and limitations as well as their social, political, and cultural context of operations. I aim to follow suit here, drawing on critical media studies frameworks to consider how technologies like high definition underwater videation, telepresence, the use of autonomous underwater vehicles, and photogrammetry models revise the cultural functions of the museum itself. To what extent do technological developments build from past iterations of the science museum and other cultural displays of artifacts? How might we think about remediations of shipwrecks in multiple heterotopic spaces (seafloor, internet, and traditional museum) (cf. Fyfe, 2006, p. 35)? And finally, what can this musealization of the seafloor tell us about the affordances of technology in restructuring our imaginaries of natural and cultural histories – of humanity and nonhuman nature?

To address these questions, I will begin by considering existing scholarship on archaeological practice and musealization, with particular attention to how an object-oriented ontology could be read alongside the existing object-oriented epistemologies of shipwreck excavation. Afterwards, I will conduct a textual and discursive analysis of two specific case studies: The Bureau of Energy Management (BOEM) Virtual Archaeology Museum, and the Nautilus Live gallery of shipwreck excavations (2021a). These two institutions are leaders when it comes to mediated experiences of maritime history, yet their origins and ownership are dissimilar. The BOEM museum is a byproduct of American oil and gas exploration; the objects within the museum were discovered by oil and gas exploration companies and submitted to the museum for further mediations by historians and scientists. Meanwhile, Nautilus Live is primarily an educational resource and research body funded by famed oceanographer Dr. Robert Ballard (the underwater archaeologist who discovered the RMS *Titanic* wreck) and the Ocean Exploration Trust. Nautilus Live is well-known for its pioneering use of live-streaming underwater vehicles and its emphasis on the public communication of ocean science. Despite their institutional differences, both websites share similar genre conventions and a visual language for the in-situ video mediation of shipwrecks. However, they diverge in important ways when it comes to the editing of underwater shipwreck videos and in their approaches to the presence of undersea life around their objects.

By examining excavations of the Monterrey and the SS *Gulfpenn* shipwrecks in the Gulf of Mexico from these two organizations, I demonstrate that virtual musealizations of the ocean bottom produce permeable displays that paradoxically see archaeological artifacts as lively environmental actors, while continuing to recruit them into infrastructures of knowledge that presume stable, universal, and objective notions of heritage. While this can further obscure the politics of archaeological practice itself as a non-neutral filtering and framing of information, it also opens up an opportunity for situated, mutable, and heterogeneous perspectives on human-environmental pasts and futures.

## The Objectification of History and Heritage

In 2019, as I was conducting research and interviews with oceanographers around the United States, I made a point to visit several shipwreck museums on my route. With my mind already on the seas, my curiosity for oceanic media led me to play tourist at Battleship Cove (Fall River, Massachusetts) and the Charlestown Navy Yard, home to the *USS Constitution* (Boston, Massachusetts), the Santa Barbara Maritime Museum (Santa Barbara,

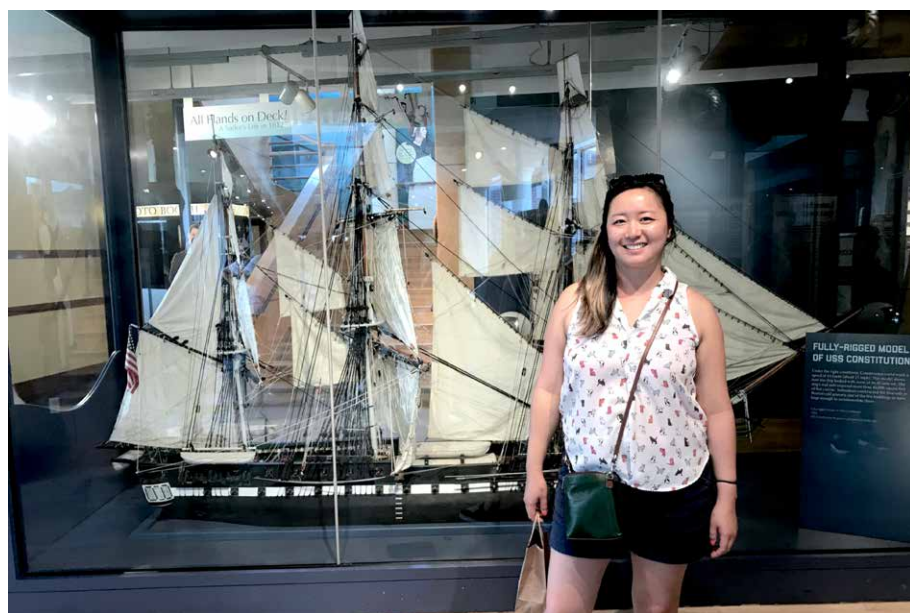


Fig. 8.1. Author with a model of the *USS constitution*, July 27, 2019. Photo by author.

California), the *USS Bowfin* Submarine Museum and Park, the *USS Arizona* memorial, and the *USS Battleship Missouri* memorial (Honolulu, Hawaii) among other locations (Fig. 8.1). From nineteenth-century naval frigates to World War II submarines, it was at this time that I began taking mental notes about how museums produce historical narratives around shipwrecks. There is a shared set of signifiers that constitute the genre: photographs, sound clips, and artifactual display were a near universal feature. In addition, from clothing to food choices, most of the exhibits guide their visitors through a sequence of spaces that would ‘put us in the shoes’ of former deckhands, servants, and naval officers.

The *USS Constitution*, nicknamed ‘Old Ironsides’, was my most hands-on experience. In addition to a museum gallery with historical information about the ship’s restoration and a gift shop with pens from the original ship’s wood, uniformed Naval officers welcome tourists aboard the restored and fully functional frigate itself. When it comes to the paradox of the ‘Ship of Theseus’, this museum takes a middle ground, preserving form first, while giving a small nod to the preservation of matter (see Harman, this volume). In contrast, the Pearl Harbor exhibits focus on recorded interviews, text, and quiet, contemplative remembrance. I remembered in particular my visit to the *USS Arizona*, a spatially isolated memorial built on top of the wreck. Here, the vessel remains in its final resting place untouched, down to the ‘black tears’ of oil that continue to spill from its hull. I marveled at the choice to maintain an ongoing oil spill – like a wound that won’t stop bleeding. Poignant as it was, I could not help but consider how such a curatorial decision validates human cultural memory over an environmental present. These museum visits showed me on the embodied level what it meant to make the past present through images, voices, and other residual traces. Shipwreck museums are more than history lessons. They each entail a bit of necromancy to keep the past alive.

While the choice whether or not to restore or recover the ships themselves differs across museums, an intrinsic part of the genre was undoubtedly the presentation of ‘original’ ship materials. Archaeological and museum practice is rooted in what historian Steve Conn has described as an ‘object-based epistemology’, wherein physical artifacts act as evidentiary objects that buttress disciplinary expertise and power (Conn, 2010, p. 7). For Conn, this is particularly true for the late nineteenth-century advent of natural science museums, which operated (and still operate) within an imperative to educate the public about the authority and rationality of scientific practice. But the material objectification of the past was not only useful in advocating for science; Steven Hoelscher and Nadia El-Haj have made similar claims about the importance of object display and metonymical representation to the social and political production of heritage (Hoelscher, 2011, p. 203; El-Haj, 2003). The excavation, selection, and presentation of objects as evidence is the unifying practice across archaeological contexts (El-Haj, 2003, p. 152). This emphasis on material ‘facts on the ground’ can then be mobilized to normalize or instantiate specific histories framed around present-day political contexts, nationalist ideologies, and state-building initiatives. For instance, El-Haj discusses this specifically in relation to Zionist state-building, and I have previously explored this dynamic as well through the case study of how China’s Maritime Silk Road Museum uses nautical archaeological artifacts to claim ‘heritage’ and thus ownership over the contested South China Seas (Han, 2020). For US Naval shipwrecks, material objects participate in narratives that bolster a sense of heroism, sacrifice, nationhood, and a fetishism of military technology. These are also closely aligned with the historical gendering of oceanography and nautical archaeology as a masculine pursuit. Jesse Ransley explains, ‘The dominant narrative that prescribes the business of boats and the sea as male can be isolated and traced... this dominant narrative is evident in the development of our discipline [maritime archaeology], in our techniques, in our dominant theoretical frameworks and our prevailing interpretative narratives’ (Ransley, 2005, p. 622).

Object-oriented epistemologies are thus frequently recruited to reify political views as fact. This is done not just through the selection of information, but also through omissions. Artifactual history often erases or trivializes lived social histories and struggles like hunger and war (Urry, 1995 p. 52). Musealization is moreover couched within cultures of exhibition that are specifically settler colonial in origin. This can be seen in indigenous critiques of museums, which have frequently narrativized indigenous cultures as static or relegated them to the past instead of acknowledging their ongoing and present existence.<sup>1</sup> Finally, it is apparent that the discourse of heritage escapes mere display. For instance, heritage is a term that is invoked in civil rights movements, in the legal language around resource extraction, and in instances in which no material artifacts exist. Writing about the bodies of drowned slaves from the *Zong* massacre and the regulation of human remains in international waters, Michelle Barron makes a case for attending to ‘absent bodies’, or ‘those that are ultimately unexcavatable

---

1 Speaking on this point, Jeremy Pilcher and Saskia Vermeylen (2008) have critiqued the mechanisms of appropriation, ownership, objectification, and stereotyping of indigenous identity in museum curatorship, arguing that ‘exhibitions focusing on Indigenous peoples fail to show them as dynamic, living culture’. They stress instead a need to provide agency to ‘social relations that link objects, persons, environments and memories’, allowing for a plurality of meanings around museum objects (p. 3).

through maritime archaeology or through contemporary legal means, and instead must be figuratively reclaimed' (2018, p. 160). Heritage can never be fully materialized – there is much that we inherit that is invisible, transitory, unidentifiable, or absent within the structures of property, law, and archaeology.

Object-oriented ontologies counter and complicate artifactual knowledge (or object-oriented epistemologies) by working beyond the anthropocentric framework that places objects into human-centric narratives and temporalities. In early works articulating object-oriented ontology and its related framework of speculative realism, scholars such as Levi Bryant argue for the unknowability of objects, which places emphasis on object existence and relation outside of subject perception (2011, pp. 148-153). As a 'flat ontology', OOO puts humans and objects into nonhierarchical relation to one another. However, while ontology cannot be reduced to epistemology, I contend that an object-oriented perspective should not ignore the recruitment of more-than-human objects into anthropocentric epistemologies, affective experiences, and social relations of power. As Ian Bogost puts it, 'all things equally exist, yet they do not exist equally' (2012, p. 11). To ignore perception, politics, and affect is to ignore what I see as a potential affordance of new materialist or object-oriented thinking: it allows us to revise the instrumentalist and extractive ideologies that currently structure dominant institutional perceptions on nature, history, and technology, and to foster new intimacies and creative imaginaries around nonhuman others – ideas that carry political and social consequences (see Watson, this volume). Whereas traditional museum epistemologies tend to view archaeological objects as static, evidentiary sources of truth, object-oriented ontologies can seek to understand artifacts as meaningful agents and lively actors both within and without networks of power and social relation.

Moreover, the seafloor-as-museum changes the terms by which we can understand museums themselves as meaningfully built environments. From Frank Lloyd Wright's Guggenheim Museum to Renzo Piano's Whitney Museum of American Art, museums today are themselves architectural feats that are built to facilitate a curated set of gestures and experiences for museumgoers (Conn, 2010, p. 11). What is at stake with the virtual presentation of the seafloor-as-museum is its politics of both preservation and spatial organization. This begs the question: How might philosophical orientations towards flat ontologies change the way we think about the role of objects in a museum and the role of the museum as an object? How does the transition away from artifactual preservation to digital mediation-as-preservation change, reinforce, or extend the epistemological and ideological commitments of archaeology?

While originally a reference to the remembrance offered by museum buildings, Andreas Huyssen draws on the work of Herman Lübbe to broaden the application of the term 'musealization' to the 'expansive historicism of our contemporary culture' (Huyssen, 2003 p. 22). Huyssen argues that musealization efforts today are reactive to deep social anxieties around the present culture of amnesia, speed, and obsolescence, particularly as they militate against the very notions of history that institutions like museums, libraries, and archives provide (cf. Huyssen 1995, 2003). This tension between the contemporary privileging of technological determinism and newness and growing fears of losing historical memory complicates the political landscape of cultural preservation and the relationships between 'political, geographic, historical, and epistemological truths' (El-Haj, p. 150). If physical presence is no longer a necessary aspect of musealization and yet

anxieties about the preservation of memory are exacerbated in the wake of technological culture, then digital musealization necessarily mediates between the charge to preserve and the charge to innovate. This in turn impacts the relative valorization of archaeological objects within both anthropocentric and ecocentric frameworks. In the next section, I will discuss film and media perspectives on musealization and analyze contemporary examples of virtual maritime museums in relation to these questions.

### **Film, Digital Media, and the Preservation of Data**

Film and other forms of digital or virtual media have long been conceived of and theorized in relation to acts of preservation. The photograph is ‘change mummified’, as André Bazin once famously asserted (Bazin 1960, p. 8). Building on this notion, film and media theorist Philip Rosen has made the argument that cinema and other media hybridize the old and new to participate in modern historiography – a point related to the historicization of the film medium itself. He elaborates that there is a ‘need to think about how the category of history penetrates the representational and discursive modes that have characterized the history of filmic textuality’ (Rosen 2001, p. xxii). This includes, among other things, understandings of photographic film as an ‘indexical trace’ of its signified, television’s capacity to create a sense of liveness and telepresence, the relationship between databases and conceptions of technical and cultural memory, as well as discussions of digital media’s tendency to embrace novelty and obscure remediations of earlier media forms.

For my purposes here, it will be important to draw from the insights of media archaeologists to further understand the role of digital media in archaeology itself. In particular, media historian Jussi Parikka has focused on the moments of articulation between cultural memory and technical memory, conceiving the medium as an archive consisting not of ‘stable memory but a dynamic circuit for reproduction of culture on the level of technical signals’ (2012, p. 92). What results here is a layering of historiographic temporalities. Like all media texts, digital museums are processes consisting of backstage selection, ordering, and display. Live video of dives and digital excavations are part of the preservation process; they extend each wreck through time by connecting them to a fixed temporal location in the near present, thereby translating cultural memory into technical memory. Cultural memory requires an audience and is collectively constructed. As such, human memories are contextual, dynamic, partial, and fallible, and are mediated by continuous acts of filtering and forgetting. Technical memory, while also fallible and partial, alters the dynamism of cultural memory by placing it into a database whose function is latent, rather than continuously enacted. Here, the work of displaying and archiving evidence happens simultaneously. As Wolfgang Ernst explains, ‘the traditional separation between transmission media and storage media becomes obsolete’ with the digital archive (2013, p. 100). The effect is that the moment in time of the shipwreck’s mediation becomes as important to the aims of the archive as the time of the ship’s sinking. To put it another way, the objectification of the wreck is partially displaced onto the objectification of the video image itself – a continuation and reorientation of the museum’s object epistemology.

To analyze this layered historicity, let us first consider the case study of the BOEM virtual archaeology museum. The main interface of the BOEM museum is comprised of a scrolling list of clickable icons for each shipwreck. In addition, each individual shipwreck musealization consists of four main components: 1. Underwater videos of the wreck, 2.

Photogrammetric 3D models of the ships that can be manipulated by viewers, 3. Itemized lists and annotation of individual artifacts found at the wreck sites underneath each photogrammetry model, and 4. A mosaic map of each ship comprised of stitched together images. BOEM Gulf of Mexico Director Mike Celata made the following statement when the virtual museum went live in May of 2019: 'With the ROVs we can clearly examine the artifacts in these shipwrecks up close, in thousands of feet of water. Through the use of 3D models, we can see each shipwreck site as a whole and monitor changes to it over time' (Plummer, 2019). The website thus already understands the shipwreck museum as an evolving archive in which data is accumulated over time. While the cultural memory of each shipwreck may remain seemingly static within historical narratives, the technical memory of the wreck is constantly being modified, and its objects are understood to be living and changing in conjunction with the ocean bottom itself. From videos, to models, to databases, each form of mediation in the museum differently articulates the shipwreck to historical time, yet each also evaluates the wreck by invoking technological realism and familiar object-oriented epistemologies.

The underwater video of the wrecks, shot by Remote Operated Vehicles (ROVs) act as the viewer's introduction to individual sites like the nineteenth century Monterrey shipwrecks in the Gulf of Mexico. These short, roughly two-minute videos are comprised of underwater footage from an ROV that is edited through a series of dissolves between slow camera pans and close-up images on artifacts. At the beginning of the Monterrey C Shipwreck video, an operator welcomes to audience to the dive: 'You're in for a treat today, we're looking at not one but two shipwrecks. We're lucky to have a number of archaeologists on the phone today and they're going to be interpreting as they see' (BOEM, 2020a). The video is framed as a tour of the wreck over the center line and around the perimeter, intended to minimize disruption of the site. 'We don't want to kick up sediment with D2 thrusters around the perimeter of the wreck'. What ensues is an edited selection of soundbites from multiple experts, who alternate between identifying instruments and parts of the ship, and explaining biological interests around the wreck such as the growth of habitats on different wreck materials like ceramic, glass, leather, and metal. In addition to commentary from ocean scientists and archaeologists, extradiegetic music is added in post-production to create a sense of ethereality and otherworldly ambience.

Museums are curated, highly produced spaces, and the seafloor-as-museum is no different. On the one hand, the preservation of authenticity, exemplified here by the concern over kicking up sediment, is of the utmost importance. Like a museum gallery, the seafloor becomes reframed as delicate and pristine, requiring care and protection. Interestingly, this resembles preservationist attitudes that tend to reinforce nature/culture divides by evacuating subsequent human perturbations from the 'rewilded' seafloor. Yet, the natural is also made cultural, as the seafloor can only be understood as a museum through the work of remediation, organization, and narrativization. This is done primarily through the documentation and appraisal of heritage objects.

Museum collections rely on what philosopher Bruno Latour has described as 'immutable mobiles' or objects that have been rendered readable, mobile, and combinable through acts of mediation and standardization: 'Collections are essential but only while the archives are well-kept, the labels are in place, and the specimens do not decay...the collection will be drawn, written, recoded, and this process will take place as long as more

combinable geometrized forms have not been obtained from the specimens' (1986, p. 17). Latour emphasizes the role of consistency, rather than objectivity, in allowing for this mobility (1986, p. 10). Photographs likewise create immutable mobiles by transforming found objects into reproducible forms that can be placed in any configuration in relation to each other. But more than images of anchors and old muskets, shipwrecks themselves are also transformed into immutable mobiles through video and photography. Film editing and the directorial role of the underwater camera operator, meanwhile, serve as surrogates for the work of museum curation. This resonates with what museum scholars have already identified as a shift in the authority of museums, wherein curators increasingly act as interpreters and commentators rather than legislators (Macdonald, 2002, cited in Fyfe, 2006, p. 40).

As I mentioned earlier, the challenge of any shipwreck museum is to make present things that are absent. This is achieved more directly in a traditional museum, where the viewer is able to engage with and see physical artifacts. To achieve a similar sense of presence, virtual museums rely on the authority of expert delivery, digital hyperrealism, and detailed description. As Jay Bolter and Richard Grusin explain, digital representation navigates a certain 'tension between looking at and looking through' (1999, p. 43). This can be described as an interplay between immediacy (the experience of looking directly into reality) and hypermediacy (the viewer stays conscious of the act of looking at media); hypermediacy is naturalized and becomes immediate as a result (1999, p. 20). We can see how this duality plays out with the livestreaming of shipwreck excavations.

Given the existing editing, it is interesting to note that narration exists as live commentary. On the one hand, shipwreck video excavations boast a sense of immediacy through the premise of liveness, and thus foster a feeling of transparency for the viewer (the feeling of 'looking through'). On the other hand, the livestreams are highly annotated and the mediation process is made visible, which would seem to work against the notion of immediacy. This suggests that the notion of presence is not merely equated with transparency or realism, but also fidelity – the idea that knowledge comes through faithfully through media. In archaeological practice, fidelity is often a technologically deterministic concept: the newer and more complex the technology, the more faithful the representation seems. Thus, making the materiality of cutting-edge technology perceivable is a core aspect of what makes the virtual museum feel immediate. These choices foster a sense of copresence, directly placing the virtual audience into the subjectivity of an ocean scientist. This explains why the 'liveness' of each wreck video is primarily signified by the choppy and filtered sound of the phone and the 'behind-the-scenes' explanations of camera movements. The materiality of hypermediated elements is used to create a feeling of authenticity and temporal copresence with the image.

Beyond heritage objects, most shipwreck videatons contain information about the decomposition and biological habitats around the wrecks themselves, and in this sense, they exceed the content of brick-and-mortar shipwreck museums. Scientists specifically mention a desire to study 'the impact of man-made structures being added the Gulf of Mexico, in the form of pipelines and platforms and windmills eventually and things like that, and how that might influence lifeforms around the Gulf' (BOEM, 2020a). This change in the physical treatment of wrecks and the choice to leave them undisturbed acknowledges object agencies beyond notions of human heritage as well as the environmental effects

of anthropogenic activity. The museum itself becomes a scientific object that can be repeatedly studied and consulted for new information – information pertinent to our ocean futures and to the Anthropocene at large. Nevertheless, the mere acknowledgment of a deep natural history does not necessarily constitute a flat ontology. Rather, an OOO perspective would see natural environments as more than backdrops, and acknowledge conditions with ‘no intrinsic connection to the logics of capitalist, nationalist, or socialist identities’ (Chakrabarty, 2009, p. 217). Shipwrecks lend themselves easily to discourses of shared pasts, multispecies futures, human-environment dependencies, accidents, and extinctions. Nevertheless, the BOEM museum ultimately stops short of embracing these perspectives by placing marine life in secondary relation to human activity and technological achievements.

While parts of underwater videos include discussions of marine life, the primary focus of the virtual museum continues to center around historical artifacts. Blurbs accompanying each wreck illustrate a preference for themes of tragedy, damage, and a fascination with the old and ancient. The frontpage additionally declares, ‘Each shipwreck tells a story of our shared history and provides a mystery to uncover’ (BOEM, 2020b). This narrative of mystery or detective work is a familiar mode of inquiry for archaeological museums, which attempt to foster curiosity, discovery, and enchantment among their audiences. A forensic imaginary of the seas has a strong precedent in Western cultural imaginaries through Hollywood blockbusters like *Titanic*, and more recently through series like HBO Max’s *The Investigation*. This is further extrapolated into masculine hero narratives: ‘Divers are presented as courageous explorers who expose themselves to all manners of horror for the sake of the accumulation of knowledge, because the only way to control the horror is to know it’ (Rich, 2021, p. 196). Cultural anxieties about the ocean’s vastness and unknowability are easily displaced onto anxieties about mysterious (or criminal) pasts. Yet, such a platitude about unravelling mysteries also suggests that the history of this interest is a universally human one that can be abstracted from the present. This not only averts the natural histories of shipwrecks as host to vibrant ecologies, but also ignores the lived histories of nation-building, civil war, independence movements, and colonization that put into question suggestions of a universally shared sense of human heritage in the first place.

Nautical archaeologists render shipwrecks as immutable objects of cultural heritage most effectively through the use of modeling, including 3D photogrammetry (Fig. 8.2). This works through the extraction of three-dimensional measurements from two-dimensional digital photographs or video. On the National Oceanic and Atmospheric Administration ship *Okeanos Explorer*, video from an ROV is taken in a gridded pattern that ensures data overlap from multiple directions. The NOAA website explains, ‘The ROV pilots also get angles so that the sides of the wreck can be included in the 3D model, which is a digital surrogate, or cyber twin, of the site. Once these video data are collected, researchers can reverse engineer it into a 3D model by running the video through photogrammetry software’ where the images are evaluated in relation to one another and then stitched together (Irion and Sorset, 2018). Photogrammetry freezes images in time with a level of detail that allows viewers to zoom in and manipulate the ship models at their will. The technique is also used for activities such as the modeling of natural structures like underwater volcanoes, deep sea mapping, and oil and gas surveying. Like the live ROV videos, photogrammetry is a hypermediated technology that signifies fidelity and immediacy to the viewer.

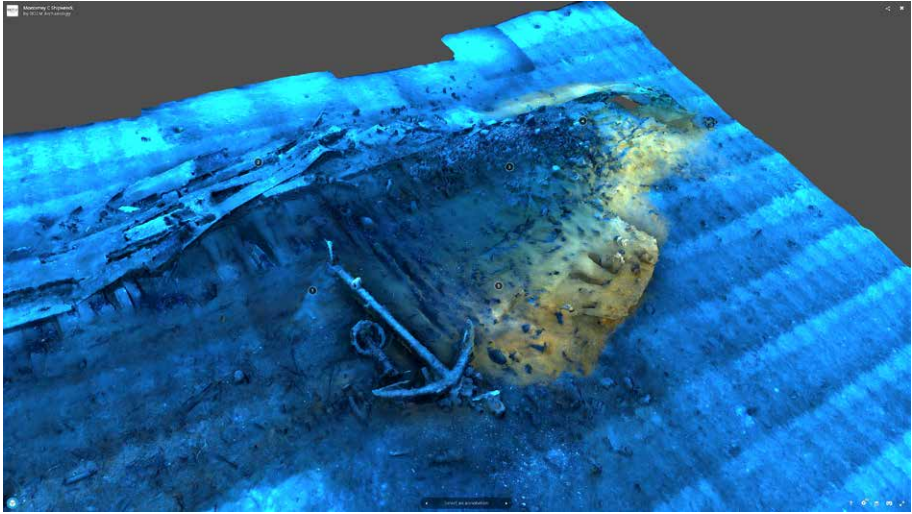


Fig. 8.2. 3D Photogrammetry model of Monterrey C Shipwreck, BOEM Virtual Archaeology Museum, <https://www.boem.gov/environment/virtual-archaeology-museum#Monterrey-C-Shipwreck> (Accessed: 26 May 2021).

Each 3D model is additionally annotated with numbers corresponding to photographs and blurbs about individual artifacts and components of each shipwreck. Anchors, weapons, cooking vessels, and navigation instruments are frequent features in maritime museums, acting as metonymical substitutes for larger wrecks that might remain on the ocean floor. Here, those objects continue to be centered and tabulated, much like a traditional museum display. This, together with the narrative presentation of processes like identification and establishing chronology, works to further fetishize and essentialize each object in terms of the bygone past. This is antithetical to OOO, which understands objects as nonreducible to anthropocentric narratives and agencies. Instead, mediations of wreck artifacts through photography and text channel existing social regimes of informatic control and mastery. Thus, while the wreck objects themselves lay on the ocean floor unperturbed, their data doubles can be owned, manipulated, and further examined.

Additionally, the objects that are selected for individuated annotation tend to be technological objects like weapons, cooking gear, or instruments. For instance, the Antikythera wreck mentioned in the beginning of this chapter is named for one of its artifacts – an ancient computer called the Antikythera Mechanism. Meanwhile, the excavation of Monterrey A takes a strong interest in the crates of muskets and canons: ‘Was this a pirate, a privateer, a military ship, or a heavily defended merchant?’ Given that the wrecks were found by an organization devoted to oil and gas exploration, it is perhaps fitting that this virtual museum continues to validate its objects largely in terms of their capitalist and militaristic history. Meanwhile, by focusing the majority of the textual and photographic mediations around discrete objects (a controlling and objectifying gaze), static and anthropocentric notions of the museum archive end up taking primacy over scientific mediations of the wreck, which become merely bonus curiosities for the viewer.

There is a certain irony to the BOEM museum's rendition of cultural heritage, in that these 'discoveries' were made by Shell Oil and Chevron – companies that actively disrupt the so-called 'natural heritage' of the Gulf region through extractive activities. When I first began to encounter virtual excavations in my research on seafloor mediation, I was focused on the institutional, technical, ideological convergences between future-oriented notions of technological development at the seafloor (the blue frontier) and the past-oriented notions of heritage that structure legal and economic regimes around the same space (the blue archive). The argument I made was that the blue frontier and the blue archive share a conception of history as a resource to be exploited for economic or political gain (Han, 2020). As Rich puts it, 'exploration and exploitation are two sides of the same coin' (Rich, 2021, p. 195). With telepresence, museums and archives are no longer simply storage devices, but rather become resource frontiers in themselves. In this vein, the BOEM virtual museum is a fascinating example of how acts of resource pillaging and environmental degradation can be entirely compatible with endeavors to protect cultural objects from being damaged or pillaged. In fact, the pillaging of one 'heritage' object leads directly in this case to the protection of another. In this way, archaeologists continue to define heritage in anthropocentric terms, even when they acknowledge natural agencies.

In spite of its ideologically inflected choices around mediation and preservation, BOEM mostly renders science as objective and disinterested through its adherence to narrative frameworks of mystery and forensics, as well as its emphasis on technological progress and advanced gadgetry. This is tied to the museum's institutional commitments to Western scientific authority and its simultaneous charge to communicate science. What this approach ignores is the opportunity for museums to also enliven their objects and link environmental agencies to a diversity of human agencies. As I will argue next however, an object-oriented ontology is not mutually exclusive with the humanization of science and technology.

## **Shipwrecks as Displays of Natural History**

BOEM's virtual shipwreck museum contains the capacity for multitemporal, ongoing, and participatory forms of historicization. The livestream, the excavation of artifacts, and digital modeling are each remediations that can differently articulate the wreck to pasts, presents, and futures, creating a palimpsest of cultural heritage. These platform affordances are taken up to a greater degree by organizations like Nautilus Live, which mobilizes expert-guided telepresence to bring the deep ocean into public imagination. Unlike BOEM, Nautilus Live focuses on the deep ocean as a whole, rather than solely on cultural heritage. This is reflected in its online display: there is no dedicated 'virtual museum' for shipwrecks, but rather, ample videos of shipwreck excavations are incorporated into a gallery which can be filtered by the tags 'ancient wrecks' and 'modern wrecks' (Nautilus Live, 2021a). The ancient wrecks on the website are primarily located in the Mediterranean, while modern wrecks are located in areas ranging from the western coast of the US to the Gulf of Mexico. This gallery structure places the category of 'Maritime History' into the same hierarchical plane as 'Biology', 'Geology', and 'Technology'.

While the web arrangements differ, Nautilus Live videos share a lot in common with those found in the BOEM virtual archaeology museum. Videos depicting the initial

approach of ROVs towards individual shipwrecks dominate the gallery. This imagery primarily comes from the ROVs *Hercules* and *Argus*, which are hooked to high-definition cameras that stream images via fiber-optic cable directly to the *E/V Nautilus* control room. This is then sent via satellite to a receiving station, then the inner space center, and finally distributed over the web (Nautilus Live, 2021b). Like the BOEM videos, a team of commentators from different specialist fields offer information about the wrecks through telepresence. In fact, there are institutional overlaps, as some of the oil tankers found and highlighted on the Nautilus website were identified by BOEM. Other gallery items are linked to popular media projects like the ‘Exploring Unknown America’ expedition, co-constituted by National Geographic and the 60 minutes CBS television special, *The Unknown America* (McClellan, 2015). Next, I will analyze one Nautilus Live text related to the ‘Exploring Unknown America’ expedition in particular, a six-minute video entitled, ‘Exploring WWII Wrecks: SS Gulfpenn (1921-1942)’ (EVNautilus, 2014).

In this video, the research vessel *E/V Nautilus* visits and films an oil tanker sunk by a German U-boat off the Gulf Coast. The video begins with music, and a stream of voices immediately begins commenting on the images. These videos are notably less edited than those in the BOEM virtual museum, and as a result, the backstage direction of the filming is far more pronounced. Technical comments that might otherwise be excised are centered: ‘I don’t want to go in yet, so let’s just slide along the rail...does Rich have a mic?’ Throughout the video, one speaker can be heard talking to the ROV operator, giving instructions to track in, track out, focus, and linger on certain images: ‘Hold it for a minute and then we’re going to discover what we’re looking at. Okay now slowly zoom back, and we’ll discover the bow..okay stop right there’. At certain points, voices overlap accidentally and obscure one another. Meanwhile, the personalities of individual commentators are also brought into the narrative: ‘I remember the first time I did this on the *Titanic* my lights shined back at me...This is about four times deeper than I could dive, at my best’ (EVNautilus, 2014). Scientists can be heard bantering and making jokes as they point out features on the wreck. This unfiltered conversation works to humanize scientific work. Wonderment, personal experience, and camaraderie are as much a part of the content as the shipwreck itself. Viewers, in turn, are given cinema vérité-esque perspective on underwater videography and archaeological practice.

Aside from the editing choices (or lack thereof), the biggest difference between BOEM and Nautilus Live videos is the latter’s extended focus on the natural and biological aspects of the wreck. An explanation of the oil tanker’s history, and the torpedo hit that caused the wreck does not come until the very end of the video (five minutes and 30 seconds in). Instead, references to the oil tanker’s previous life above water are interspersed with information about the ecology of the wreck. One scientist remarks, ‘While there was a loss of human life here we can see that we have recolonization with marine life. Look at all that life!’ Another explains, ‘Corals are taking advantage of the superstructure to get up into the flow of the water and they’re feeding. So these guys fight over this real estate. This is prime real estate if you’re a coral for being able to filter feed food out of the water going by’ (EVNautilus, 2014). Notably, metaphors such as ‘prime real estate’ create an association between human and animal colonization. While the Nautilus Live speaker uses this association as a bit of descriptive garnish for biological information about corals, such a comparison echoes a long history of Western fascination with corals as colonists, landowners, and empire builders (see Elias, 2019, p. 17; Smith, 1999, p. 333).

What is presented in this video is a distinctly anthropocentric perspective that equates coral agencies to human agencies. However, not all anthropocentric perspectives are equal. In most marine industries, the formation of marine life on human artifacts is usually referred to as ‘biofouling’, which is a term which projects anxieties about the need to maintain and police boundaries between nature and culture onto technological objects. Foulness is perceived as ‘matter out of place’ – in a traditional museum spaces, artifacts are cleansed and scrubbed of organic matter for this very reason (Douglas, 1966). Yet in this video, marine life is celebrated rather than described in terms of corrosion or pollution. The shipwreck is altered by ‘extrahuman ecological engineers’, entering the realm of ‘naufragic architecture’ (see Rich et al., this volume). In addition, metaphorization and meta-narrative also play an important role in fostering a sense of kinship between human and nonhuman subjects. Phrases like ‘prime real estate’ act as an unofficial ‘social tagging’ of the musealization, incorporating present socialities into mediations of the past.<sup>2</sup> As a result, the wreck itself comes to embody a shared natural and cultural history.

## Musealization as Polyphonic Remediation

Environmental media scholar Alenda Chang has argued that nature and reality are not static ideas – they are always being remediated (2015). In other words, what counts as ‘natural’ is always shifting. For instance, acts of environmental remediation are not always a question of how to go back in time and ‘restore’ a pristine nature, but rather a question of how to move forward and foster biodiversity. Given this, virtual mediations of shipwrecks left in the ocean show us the potentialities of a seafloor-as-museum to remain permeable and dynamic, incorporating place-based, ongoing, and polyphonic remediations of nature. This multi-vocality has always been latent within museums, which, regardless of media platform, are contingent performances of heritage (Urry, 1996, p. 54). Historicity becomes not only a matter of ‘present pasts’ (Huysen, 2003) and a forensic fixation on what is dead, but also an acknowledgment of ongoing, living heritage (cf. Han, 2020). Leaving the physical shipwreck on the ocean floor allows it to continue on as a living human-nature assemblage, even as its image is extracted and manipulated for narratives of cultural heritage. And by displaying not just objects but also the process of objectification, virtual museums can further connect shipwrecks to the mutability of both nature and culture.

My exploration of virtual shipwreck musealizations has foregrounded two modes of historicization that operate in tandem, yet would appear to be diametrically opposed: On the one hand, virtual excavations maintain an object epistemology that assumes heritage is shared and static. This has the tendency to cover up the politics of archaeology and museum practice by leaning into notions of objectivity, transparency, and western scientific epistemologies. Objectifications of heritage also participate in the naturalization of a technological sublime through appraisals of antique tools, technology, and weaponry. On the other hand, heritage narratives are intermixed with perspectives from scientists that celebrate the ongoing coevolution of human and

---

2 The term ‘social tagging’ is derived from Pilcher and Vermeylen (2008), who discussed the use of keyword tags in museums that allow visitors to contribute metanarratives to object readings.

nonhuman structures at the site of the wrecks. This secondary mediation often comes with an acknowledgment of environmental entanglement and mutability. The effect of this dualistic mediation is that viewers are brought closer to the ecologies of the nonhuman seafloor by way of human history and subjectivity. What are the limits of this, and to what extent can such a correlationist perspective on the seafloor's historicity be rehabilitated into a multispecies or nonhuman framework for living? Answering this question is not so simple as dismissing musealization for its incorporation of nature into human history. Instead, it requires that we think about the affordances of environmental mediation as a whole, and the tangible role that film and media have played in helping human beings care about oceanic others.

Object-oriented ontology and the seafloor-as-museum change the terms of what it means to preserve, elevating nonhumans into the realm of culture and social relation. This openness to change and fluidity foregrounds the agency that human beings have in natural history, and vice versa. As Chang argues, an ideal environmental text produces a sense of involvement: 'It brings the nonhuman world into equal prominence with the human, exposes humanity's moral responsibility to and participation in the natural world, and portrays the environment as a fluid process, not static representation' (2019, p. 32). Chang was talking about interactivity in environmental games. And indeed, the reconfiguration of the seafloor into a virtual museum gallery does resemble aspects of game culture: shipwreck video tours substitute players for oceanographers who execute a mission and a defined series of tasks, while museumgoers become spectators who inhabit the perspectives of their favorite 'players'. Meanwhile, 3D modeling and self-guided interfaces allow visitors to be the player themselves, in control of a lost past through the acts of clicking, zooming, and observing shipwreck objects. These acts bring us into a world of environmental interaction;<sup>3</sup> we experience, albeit often vicariously, a sense of awe around material agencies. And while a curious gaze does not absolve the Western museum's historical role as an anthropocentric institution of control, it can be a start in nurturing an ocean ethic that acknowledges deep temporalities of human and nonhuman relation.

## Acknowledgment

As the author, I acknowledge the twenty-two Native Nations that have inhabited the land where I currently reside. Arizona State University is located in the Salt River Valley on the ancestral territories of Indigenous peoples, including the Akimel O'odham (Pima) and Pee Posh (Maricopa) Indian communities, whose continuous care and keeping of these lands allow us to be here today. I acknowledge the sovereignty of these nations and seek to foster an environment of success and possibility for Native American students and patrons, in addition to advocating for the incorporation of Indigenous knowledge systems and research methodologies within contemporary academic study. I am grateful to have the opportunity to work on this land.

---

3 Nicole Starosielski also discusses environmental interaction, 'the representation of the world' as a 'dynamic force one can interact with' (2011, p. 150) as an important affordance of environmental animations. A behind-the-scenes look at shipwreck video mediations accomplishes a similar goal.

## Works Cited

- Barron, M. (2018) 'Drowned in Law: An Examination of M. NourbeSe Philip's *Zong!* And the Regulation of Human Remains in International Waters', in Will Abberley (ed.), *Underwater Worlds: Submerged Visions in Science and Culture*. Newcastle: Cambridge Scholars Publishing.
- Bazin, A. and G. Hugh (1960) 'The Ontology of the Photographic Image', *Film Quarterly* 13(4), pp. 4-9.
- Bogost, I. (2012) *Alien Phenomenology, or What It's Like to be a Thing*. Minneapolis: University of Minnesota Press.
- Bolter, J.D. and R.A. Grusin (1999) *Remediation: Understanding New Media*. Cambridge: MIT Press.
- Bureau of Ocean Energy Management (2020a) *Monterrey C Shipwreck*. 29 December 2020. Available at: <https://www.youtube.com/watch?v=Wu7vgwnOt0M&t=1s> (Accessed: 12 March 2021).
- Bureau of Ocean Energy Management (2020b) *Virtual Archaeology Museum*. Available at: <https://www.boem.gov/environment/virtual-archaeology-museum> (Accessed: 12 March 2021).
- Chakrabarty, D. (2009) 'The Climate of History: Four Theses', *Critical Inquiry* 35(2), pp. 197-222.
- Chang, A. (2015) 'Environmental Remediation', *Electronic Book Review*. Available at: <https://electronicbookreview.com/essay/environmental-remediation/> (Accessed: 12 March 2021).
- Chang, A. (2019) *Playing Nature: Ecology in Video Games* (vol. 58). Minneapolis: University of Minnesota Press.
- Conn, S. (2010) *Do Museums Still Need Objects?* Philadelphia: University of Pennsylvania Press.
- Douglas, M. (1966) *Purity and Danger: An Analysis of Concepts of Pollution and Taboo*. New York: Routledge.
- El-Haj, N.A. (2003) 'Reflections on Archaeology and Israeli Settler-Nationhood', *Radical History Review* 86, pp. 149-163.
- Elias, A. 2019. *Coral Empire: Underwater Oceans, Colonial Tropics, Visual Modernity*. Durham: Duke University Press.
- Ernst, W. (2013) *Digital Memory and the Archive*. Minneapolis: University of Minnesota Press.
- EV Nautilus. (2014) *Exploring WWII Wrecks: SS Gulfpenn (1921-1942)*, *Nautilus Live*. 15 July 2014. Available at: <https://nautiluslive.org/video/2014/07/15/exploring-wwii-wrecks-ss-gulfpenn> (Accessed: 12 March 2021).
- Foley, B. (2015) Dartmouth. *The Antikythera Shipwreck: Excavating the World's Richest Ancient Shipwreck*. Available at: <https://www.youtube.com/watch?v=owVfI4p0zgs> (Accessed: 12 March 2021).
- Fyfe, G. (2006) 'Sociology and the Social Aspects of Museums', in S. Macdonald (ed.), *A Companion to Museum Studies* (vol. 39). Oxford: Wiley-Blackwell.
- Han, L. (2020) 'The Blue Frontier: Temporalities of Salvage and Extraction at the Seabed', *Configurations* 27(4), pp. 463-481.

- Hoelscher, S. (2011) 'Heritage', in S. Macdonald (ed.), *A Companion to Museum Studies* (vol. 39). Oxford: Wiley-Blackwell.
- Huyssen, A. (1995) *Twilight Memories: Making Time in a Culture of Amnesia*. New York: Routledge.
- Huyssen, A. (2003) *Present Pasts: Urban Palimpsest and the Politics of Memory*. Stanford University Press.
- Irion, J. and S. Sorset (2018) *Photogrammetry for Archaeological Survey*. 21 April 2018, Bureau of Ocean Energy Management. Available at: <https://oceanexplorer.noaa.gov/oceanos/explorations/ex1803/logs/apr21/welcome.html>. (Accessed: 12 March 2021).
- Latour, B. (1986) 'Visualization and Cognition'. *Knowledge and Society* 6(6), pp. 1-40.
- McClellan, M. (2015) *The Unknown America*, CBS News, May 10, 2015. Available at: <https://www.cbsnews.com/news/exploring-america-with-robert-ballard-60-minutes/> (Accessed: 12 March 2021).
- Nautilus Live (2021a) *Gallery*. Ocean Exploration Trust. Available at: [https://nautiluslive.org/photos-videos?field\\_topics\\_target\\_id=16](https://nautiluslive.org/photos-videos?field_topics_target_id=16) (Accessed: 12 March 2021).
- Nautilus Live (2021b) *Telepresence*. Available at: <https://nautiluslive.org/tech/telepresence>. (Accessed: 12 March 2021).
- Parikka, J. (2012) 'Archives in Media Theory: Material Media Archaeology and Digital Humanities', in D.M. Berry (ed.), *Understanding Digital Humanities*. New York: Springer, 85-104.
- Pilcher, J. and S. Vermeylen (2008) 'From Loss of Objects to Recovery of Meanings: Online Museums and Indigenous Cultural Heritage', *M/C Journal* 11 (6). doi:10.5204/mcj.94.
- Plummer, M. (2019) *BOEM Opens Virtual Archaeology Museum* [Press release]. 10 May 2019. Available at: <https://www.boem.gov/newsroom/press-releases/boem-opens-virtual-archaeology-museum>. (Accessed: 12 March 2021).
- Ransley, J. (2005) 'Boats are for Boys: Queering Maritime Archaeology', *World Archaeology* 37(4), pp. 621-629.
- Rich, S.A. (2021) *Shipwreck Hauntography: Underwater Ruins and the Uncanny*. Amsterdam: Amsterdam University Press.
- Rosen, P. (2001) *Change Mummified: Cinema, Historicity, Theory*. Minneapolis: University of Minnesota Press.
- Smith, J. (1999) 'Darwin's Barnacles, Dickens's Little Dorrit, and the Social Uses of Victorian Seaside Studies', *Lit: Literature Interpretation Theory* 10(4), pp. 327-347.
- Starosielski, N. (2011) "'Movements That Are Drawn": A History of Environmental Animation from *The Lorax* to *Fern Gully* to *Avatar*', *International Communication Gazette* 73, pp. 145-163.
- Stobiecka, M. (2019) 'Digital Escapism: How Objects Become Deprived of Matter', *Journal of Contemporary Archaeology* 5(2), pp. 1-19.
- Urry, J. (1995) 'How Societies Remember the Past', *Sociological Review* 43(1 suppl.), pp. 45-65.



# Naufragic Architecture in the Anthropocene

Sara A. Rich, Leila Hamdan and Justyna Hampel

## Abstract

Designed to move across the surface of water, ships sink when they are no longer able to perform their anthropogenic function; in other words, when they fail as watertight works of nautical architecture. Throughout a ship's 'working life', it undergoes near-constant augmentation from refueling and refitting to extensive repair and even recycling. Given the topside cycles of construction and conversion, how accurate is it to conclude that nautical engineering really ends with the sinking of the ship? This paper considers recent research in 'shipwreck microbial ecology' to posit that, from nautical architecture to naufragic architecture, upon sinking, extrahuman engineers take over the processes of construction and conversion that had been dominated by humans. The ship's original function is thwarted as marine colonizers repurpose the structure according to their own designs. Marine microorganisms begin the work of conversion, which then establishes the wreck site as a habitat for diverse macrobiota too. That said, however independent these underwater processes may be, human influence still remains a factor, as the rate of marine re-engineering is impeded by the toxicity of the cargo and original construction materials, along with that of the surrounding water and sediments. The identification of naufragic architecture leads to a pronounced confusion of the domains of 'natural' and 'cultural' heritage, along with the idea of heritage as 'resource', which in turn develops the proposition that all shipwreck sites should be considered sources – of contamination, of biodiversity, of nutrients, of knowledge – rather than merely resources.

## Introduction: *Heterotopia*

All ships and boats were designed with one common purpose in mind: to move across the surface of water. But to summarize philosopher Paul Virilio's famous imploration, let's not forget the invention of the shipwreck with the invention of the ship (Virilio, 2008, p. 40). All things break, so if we are to use new technologies and construct new objects, we should be prepared for their inevitable demise – and the consequences thereof. Ships sink when they are no longer able to perform their anthropogenic function; in other words, when they fail

as watertight works of nautical architecture. The discontinuity between the ship's 'working life' at the surface and its 'afterlife' at the seafloor presents an opportunity to consider the wreckage in ontological terms, rather than solely architectural ones. Architectural design generally requires the implementation of both form and function, but object-oriented ontology offers an alternative in what Graham Harman calls 'zero form, zero function': that is, acknowledging that form surpasses the realm of the visual, and that function surpasses the telos of the blueprint (Harman, 2021; Bedford, 2021). A wrecked ship would appear – or disappear – to do just that as it subverts both accessible form and original function. Furthermore, as will be demonstrated below, the shipwreck is an excellent example of architecture that refuses to be either undermined (reduced to its parts or properties) or overmined (expanded to its relations with other objects) in that 1) its parts, properties, and historical details are often irretrievable, and 2) it never 'submits' to its site but rather irreversibly alters its site (Harman, 2021; Bedford, 2021; Harman, 2018, pp. 41-51). But if a shipwreck can be considered architectural, who are its architects?

Throughout a ship's 'working life', it undergoes near-constant augmentation from refueling, redesigning and refitting to extensive repair and even recycling. Given the topside cycles of construction and conversion, how accurate is it to conclude that nautical engineering really ends with the sinking of the ship? This paper considers recent research in 'shipwreck microbial ecology' to posit that, from nautical architecture to naufragic architecture ('naufragic' being derived from the Latin word, *naufragium*, or shipwreck; see also section 'Naufragocene' below), upon sinking, extrahuman ecological engineers (organisms that modify, maintain or create habitats; Jones et al., 1994) prevail over the processes of construction and conversion that had been dominated by humans. Already having been diverted by the wrecking event from its original function, the ship continues to stray from anthropogenesis, as marine colonizers repurpose the structure and its contents according to their own designs (see Campbell, 'Octopodology', this volume; on other afterlives, see Cohen, this volume). Therefore, this paper considers shipwrecks in terms that are architectural and ontological, but also ecological.

Even while still sailing, marine microorganisms begin forming layers of biofilm between the surface of the ship and that of the water (Hamdan et al., 2018; Mugge et al., 2019). When this process attracts barnacles, algae, and other small organisms to the submerged parts of vessel, it is referred to as 'biofouling', a word that suggests the undesirable nature of this process to the vessel's human engineers. As if the microorganisms were anticipating the inevitable, upon the ship's wrecking, they continue the work of architectural conversion, which eventually establishes the wreck site as a habitat for diverse macrobiota too, including fish, marine reptiles, crustaceans, and cephalopods, among others (Svane et al., 2001; see Campbell, 'Octopodology', this volume; Han, this volume). These processes of underwater engineering may seem to negate or refute anthropogenesis altogether; however, human decision-making still remains a factor because the rate of marine re-engineering depends in no small part on the actions leading up to the ship's final transit across the surface, the degree of toxicity of the ship's original construction materials and cargo, and, increasingly, anthropogenic environmental influencers.

Historically and prehistorically, boat and ship hulls were most often constructed of wood, composed of anywhere from one tree (e.g., dugout canoes) to thousands of trees depending on the size and complexity of the vessel. Early Modern European galleons and

carracks have been referred to as ‘floating forests’ due to the number of trees and variety of species used in their construction. To mitigate the deleterious effects of seawater on wood and prolong the ship’s ‘working life’, shipbuilders have sheathed them in copper, lead, tar, or blubber, or by attaching ‘sacrificial’ planking to the hull’s exterior (Staniforth, 1985). After millennia of wooden shipbuilding traditions around the world, a drastic change occurred in the mid-nineteenth century with the advent of fossil fuels, which also marks the point when hulls began being constructed of iron, and then steel (an iron-carbon alloy). Ferrous-hulled ships, some with aluminum superstructures, remain the most common type in use, from cruise liners and aircraft carriers to cargo vessels and oil tankers. Smaller watercraft, like speedboats, yachts, and fishing boats have been constructed with glass-reinforced plastic (GRP, or fiberglass) since the 1940s (Marsh, 2006). Besides GRP, other marine composites include ferrocement, a steel armature layered with cement that was made popular in the early twentieth century; wood-epoxy composites that drench thin layers of wood in adhesives to mold the frame; and fiber-reinforced polymer composites that include aramid (e.g., Kevlar) or carbon fibers for shock absorption and stability (Johnson, 2018). Each of these materials used in hull construction, as well as the paints used on them, the fuel used to propel them, and the presence of corrosive electronic equipment, variously contributes or impedes contribution to the biotic re-engineering of a new ship ecology as the wrecked vessel settles into the underwater environment (van der Schyff et al., 2020, p. 156; Lundquist et al., 2013; Lundquist et al., 2014).

There are drastic changes in the ecology of the ship as it becomes wreck. Onboard, there are all kinds of inhabitants: those with exoskeletons like roaches and fleas; those with fur like humans and rats; those with feathers like gulls and hitchhiking migratory birds; those with only one cell like bacteria; those like viruses who invade cells, and whose uncategorizable state of being leads us to name others whose qualities situate them uneasily within the category of inanimate (cargo, fuel, navigational instruments, ballast stones, sailors’ clothes, food, anchors, ropes, sails, rudders, lifejackets, and dinghies to name a few). While things onboard like viruses, or mold-oozing planks, blur the distinction between alive and inert, there are also organisms who blur the distinction between the ship and the sea: those contained within seawater ballast, the barnacles attaching themselves to the hull, the wood-boring mollusk *Teredo navalis* who first attaches to the hull before eating through it, and the translucent sheath of biofilm formed almost instantly upon immersion that is ever changing with time and transit.

Along similar lines, the simultaneously isolated and penetrable nature of a ship at sea is one of the reasons that philosopher Michel Foucault (1984) identified the sailing ship as the ultimate heterotopia – an ‘other’ place, a subversive micro world in opposition to the fictional perfection of utopia. Besides being dually remote and vulnerable, the heterotopian ship is also imprisoning and liberating; there is a rank-and-file order and yet the hierarchies of land are flattened; entrance, departure, and other movements onboard are often ritualized if not compulsory; and collections of sea shanties, like those of sailors’ superstitions, transcend time. Indeed, the ship at sea is the heterotopia *par excellence* (cf. Van de Noort, 2011, pp. 33-35, 178-200).

When a ship wrecks, its heterotopian nature is compounded, aided by all the transcendent varieties of its inhabitants along the surface (Rich, 2021). Shipwrecks are cemeteries, museums, microcosms displaced into a dark, wet, resting place. Airbound

lifeforms quickly die and are consumed by waterbound ones. Wooden hulls continue to be eaten below by some of the same mollusks who devoured them above. Plastic hulls brittle. Metal hulls corrode. Ballast water empties into the wreck site, depositing unfathomable alien lives there, some of whom live on to begin colonizing the wreck, some of whom are invasive species adverse to local ecology. Hazardous materials like crude oil, bunker fuel, naphtha, liquified natural gas (LNG), hydrocarbon polymers, and petrochemicals spill out of holds, contaminating the water column, the air above, and the sediments beneath, along with all the lives, benthic and pelagic, living there (Michel et al., 2005; see Edgeworth, this volume). Most fundamentally, the heterotopian shipwreck subverts its anthropogenic function of carriage and embarks on an 'other' course.

Historically, shipwreck ecology began with the cessation of life, the drowned corpses whose organic bodies invited a biotic proliferation at the wreck site, such that shipwrecks became heralded as artificial reefs. Many ancient and historical wrecks have been discovered by fishermen and sponge divers lured to the site by such proliferations, including those of commercially valuable macrobiota (Price, 2013, p. 60 and refs). Lead anchor stocks, heavy metal sheathing, and ammunitions may have had a detrimental effect on the local marine environment (Rosen and Galili, 2007), but for the most part, these wooden-hulled vessels carried and were composed of objects that were edible, colonizable, or both (Fig. 9.1). By contrast, modern and contemporary shipwrecks pose a variety of challenges for the microbial communities trying to initiate long-term colonization projects on the remains, and, eventually, to reorganize those remains into new architectural forms.

For example, in 2012, a 79.5-tonne steel-hulled tuna longliner ran aground on the reef island of St. Brandon's Atoll, near Mauritius, in the Indian Ocean (van der Schyff et al., 2020). Despite the potential for sunken ships to form artificial reefs, this one has not only balked at the possibility, but also continues to destroy the actual reef it crashed into. Perhaps for some ships there remains a sense of duty or destiny even after wrecking, so that a ship fashioned to destroy one type of fish might continue its path of destruction on the seafloor. At any rate, within two years following the wreck, corals in the immediate vicinity were blackened, dead or dying, due to the infiltration of iron leaching from the ship's hull. The excessive iron had caused a cyanobacteria and turf algae bloom, which subsequently decomposed thanks to other microscopic engineers, but who, in the meantime, snuffed out the light and oxygen upon which coral lives depend. In a comparison of the longliner's wreck zone to a nearby control site, the number of fish at the wreck zone was greater than at the control site; however, the diversity of the population was considerably less than at the control site, a signal that the wreck zone remained ecotoxic. Those populating the wreck zone included Critically Endangered hawksbill sea turtles, attracted to the wreck's associated algal bloom, and sea cucumbers, attracted to the wreck's detrital biomass of broken corals and algae. In the absence of other prey, emperor fish were also plentiful at the wreck site, as they are one of few who prey on sea cucumbers, but only as a last resort. Because the bioaccumulation of pollutants in these species is of serious concern to the health of all who consume them, including humans (80% of the atoll's fish export is emperor fish), van der Schyff et al. (2020) recommends removing the wreck from the site altogether as soon as possible to mitigate what could be more than a decade of destruction to the reef habitat if left *in situ* (cf. Precht et al., 2001; Carter et al., 2019).



Fig. 9.1. An assemblage of artifacts including ceramics, utensils, bottles, a telescoping spyglass, and other materials collected along the port side of the extant 19th-20th century hull of shipwreck site 15470 in the Gulf of Mexico (photo: Leila Hamdan).

In addition to the fatal effects of iron on coral reef ecosystems, wrecked petroleum-burning and petroleum-bearing vessels of modern age wreak other kinds of havoc on underwater life. Consider the *Costa Concordia*, a ship of the Carnival Cruise Line, owned by the American-British multi-billion-dollar company Carnival Corporation & plc. This vessel was also wrecked in 2012, this time off the coast of Tuscany and killing 5 crew members and 27 passengers (Fig. 9.2). Unlike the tuna longliner, after two years of decay, the *Costa Concordia* was removed from the site. The ship was righted, towed to the port of Genoa, and salvaged for scrap in the largest naval parbuckling project in history. However, even in those two years, significant damage had already been done to local marine life. Foundational seagrass (*Posidonia oceanica*) habitats were degraded by mechanical scouring of the seafloor and the simple effect of the shadows cast by the vessel, which cut off the meadow's ability to photosynthesize (Mancini et al., 2019). Another recent study recorded elevated levels of microplastics in the area of the wreck site even after the vessel itself had been removed (Avio et al., 2017). The greatest impact of the waterborne microplastics, often petroleum-based, were noted in benthic fish. The plastics are working their way through the Mediterranean food chain, permeating bodies of water and of flesh. Now undeniably infiltrating nonhuman life too, fossil fuels and the plastics made from them define modernity perhaps more than any other material. As philosopher Timothy Morton observes, while channeling feminist theologian Mary Daly, plastics contaminate gradually until 'the soft boundaries of plant and animal cells become the rigid, smooth boundaries of plastic, having been turned into oil' (Morton, 2017, p. 47; Daly, 1990). The dependency on disposability so emblematic of doomed middle-class luxury is exemplified by this average cruise liner and the particulate matter left in its wake: vinyl seat coverings protected foam cushions; polyester bed linens wrapped foam mattresses in each of the 1500 cabins; plastic drink cups were stocked for the 4000 passengers onboard; and



Fig. 9.2. View of the Costa Concordia after running aground Isola del Giglio, off the coast of Tuscany, on 13 January 2012. Image taken 28 April 2012. Image © Dvoevnore/AP/Shutterstock ID 168717047.

countless plastic-coated electrical wires spanned the 290m-long ship, now parbuckled to manufacture more objects for human consumption. Construction for disposability makes for hideous ghosts – or worse yet, injurious poltergeists (Rich, 2021).

### Methods: *Resurrections*

For archaeologists who specialize in shipwrecks, the *modus operandi* is what has been referred to as the ‘resurrection model’ of nautical archaeology (Rich, 2021). Archaeologists tend to approach wrecked ships as though they are dead ships, passive and inert, lying in wait on the seafloor for human intervention. In this model, the scientist acts as the savior, raising the dead from the depths of a watery grave, and granting the resurrected body everlasting life by infusing it with polyethylene-glycol (PEG) and placing it on display in a museum, behind red velvet ropes or plexiglass. The savior-scholar approach to nautical archaeology can be exemplified by some famous examples of entire shipwrecks raised from the seafloor, preserved for perpetuity, and displayed for public consumption: the 19th century *H.L. Hunley* in South Carolina (USA), the 17th century *La Belle* in Texas (USA), the 17th century *Vasa* in Stockholm (Sweden; see Harman, this volume), and the 16th century *Mary Rose* in Portsmouth (UK), to name only a few. There is a certain irony at work here in that some resurrected wrecks have had eternal life thrust upon them only to experience a higher rate of decay in the museum at the hands of sulfuric acid and iron corrosion than had they stayed underwater (Hocker, 2006; Hocker, 2018). According to UNESCO’s 2001 underwater cultural heritage statute, archaeologists are now to prioritize *in situ* preservation over raising wrecked ships in

their entirety. While this statute may seem to operate in agreement with criticisms of the resurrection model, its basis remains firmly grounded in the savior-scholar approach to archaeology. It is primarily because financial resources are scarce, conservation methods are imperfect, and museum space is at a premium that historic shipwrecks ought to be left underwater, where they are supposed to patiently, purgatorially, await their (re)turn (Maarleveld, 2011; Maarleveld et al., 2013). It is also supposed that the future will generate the financial and technological circumstances for more and better resurrective opportunities for shipwrecks, so that even the steel gargantuans of recent history might also eventually be raised and praised. In the meantime, care is taken to preserve those wrecks underwater, *in situ*. Particularly for wreckage in the purview of nations who have ratified the 2001 Convention, *in situ* preservation is in accordance with UNESCO regulations for the protection of underwater cultural heritage.

There are multiple problems with the resurrection approach, several of which have been discussed at length elsewhere (Rich, 2021; Rich et al., 2022). To summarize, this model operates on the basis of the Christological privilege of entitlement to eternity for favored individual humans and, by extension, for the favored individual things that humans make. The reliance on this model leads to a kind of paternalism that may be so deeply culturally embedded that it has become inadvertent or even subconscious. Historic shipwrecks are now widely understood as in need of human intervention: i.e., that they need to be rescued and restored to the realm of the human, even if they can no longer carry out their original function of moving across the water. Once resurrected, humans can provide wrecks with alternative functions – tourist attraction, past glorification, or public education – so long as they continue to serve the needs of humans by demonstrating human mastery over water, even or especially while removed from it entirely.

Interestingly, however, the resurrection model is not practiced as democratically as its principles might suggest. Wrecks prioritized for intervention are generally those that fall into one or more of three categories: superlative, well-preserved, or supportive of a Great Man narrative. Superlative shipwrecks are the oldest example, the latest example, or the only example. Well-preserved wrecks are those whose site formation happened to favor preservation by being in an anoxic environment or whose wrecking event happened to leave the hull intact. Often the first two categories coincide so that a favored wreck is the most well-preserved example of a ship category or shipbuilding method. Dyan Sudjic (2005) coined the phrase ‘Edifice complex’ to explain the close relationship between architecture and political power, and the same can be said for nautical architecture. Therefore, ships that exemplify the Edifice complex often also support the Great Man narrative, including each of those listed above (*H.L. Hunley*, *La Belle*, *Vasa*, and *Mary Rose*; for more, see Han, this volume). Supporters of the Great Man narrative include vessels who went down in the name of empire, and especially those affiliated with a famous captain or battle. Early Modern ships of ‘discovery’ and watercraft from the World Wars are particularly susceptible to this category. Not surprisingly though, many of these wrecks also find some superlative in their construction type, date, or find spot, and many are also well-preserved, especially those who sailed later in time and with ferrous hulls and engines.

At the time of writing, however, WWII wrecks are ineligible for UNESCO protections because they are currently less than 100 years old, the minimum age to be considered underwater cultural heritage, by definition (UNESCO, 2001). Perhaps in partial recognition

of this arbitrary threshold, steps are being taken to at least informally recognize WWII wrecks, especially those in the Pacific (Pacific Underwater Cultural Heritage Partnership, 2017; Monfils, Gilbert and Nawadra, 2006; see also Carter et al., 2021). Yet the countless other boat- and shipwrecks of the last 100 years are not even informally considered cultural heritage: not the tragic wrecks of migrant boats in the Caribbean and Mediterranean Seas, not the grounded tuna longliner or Costa cruise ship, not the ruined oil and gas tankers like *Sanchi* or *Exxon Valdez*. If these wrecks were claimed as ‘cultural heritage’, then human collectives in positions of privilege might have to take responsibility for them. Instead, our scientific powers of necromancy can still be aimed toward the (eventual) museum showpieces (see Han, this volume). In other words, the wrecks in most urgent need of ‘cultural’ intervention are those left to ‘natural’ forces (cf. Rich, 2021).

### **Materials: Resources**

In effort to deliver on its utopian promise of world peace by protecting world heritage (Meskell, 2016), UNESCO distinguishes between two varieties of inheritance: cultural and natural. Natural heritage includes features (like coral reefs), formations (like canyons or volcanoes), and sites (like national parks or zoos) that are declared of Outstanding Universal Value on the basis of a scientific, conservation, or aesthetic perspective. Cultural heritage includes monuments (like artworks or museums), buildings (individuals or groups), and sites (including archaeological sites) of Outstanding Universal Value from a historical, aesthetic, or scientific perspective. Of interest here is that while both categories of natural and cultural include the subcategory ‘sites’, cultural sites are ambiguous, as they are defined – in unambiguously gendered language, no less – as ‘works of man or the combined works of nature and man’ (UNESCO, 1972). This ambiguity betrays what we all know (and what Indigenous peoples tend to know best) but are too often reluctant to admit: that humans are animals too, and that trying to draw such a rigid distinction between what people make and what ‘nature’ makes is a literal exercise in vanity.

Lofty universal values and utopian ideals aside, heritage is an industry, a function of capitalism and its tentacular global reach. The industry includes heritage management professionals and licensing organizations, along with hospitality specialists who promote ‘heritage’ as a tourist attraction and provide informational leaflets to those seeking an authentic experience of or connection with something universally valued. Therefore, it is unsurprising that places and objects deemed of Outstanding Universal Value are often referred to as ‘resources’ when there is so much to be gained by those who control them. That said, even those that have not been awarded a World Heritage designation are still commonly called ‘resources’. Along the same lines, even though the US has not ratified the 2001 Convention, the US government and UNESCO employ the same terms to artificially delineate between types of heritage. For example, the Florida Keys National Marine Sanctuary, which encompasses coral reefs, mangrove forests, and a variety of shipwrecks, differentiates between marine and maritime resources. As the Sanctuary’s website explains, ‘A maritime heritage resource is one that has any type of historical, cultural, archaeological, or paleontological significance and is greater than 50 years old’ (NOAA). This resource type is associated with living or earlier people or cultures, or human activities or events. The problem here is twofold: firstly, that humans and their activities do not operate in a vacuum devoid of the rest of earthly existence, and secondly, that

when a place or object is regarded as a 'resource' it is reduced to a commodity to function primarily for humans alone.

For example, in the Baltic, historical wooden-hulled shipwrecks have been under scrutiny due to the degradation of the wood by a wide array of aquatic fungi and bacteria, as part of the carbon cycle (Bjordan, 2012; Bjordan and Fors, 2019). Compared to the decay of wood on land, these processes are slow underwater, but the end result is the same – eventually the ship will fall further apart and dissipate into the currents. Soft-rot fungi and erosion bacteria are credited as the most common types of submerged wood degraders in the Baltic. It is important to note that until recently, most efforts to study microbial decay of wooden shipwrecks have relied on morphological approaches that do not address the totality of microscopic diversity that can colonize submerged watercraft. That said, the efforts of microbial wood degraders have been interpreted as an invitation to larger xylophagous organisms, like shipworms (*Teredo* sp.), which are bivalves, and gribble (*Limnoria lignorum*), a crustacean. Recent research finds that sunken vessels in the Baltic host 2-3 times the floral and faunal diversity of surrounding areas (Balazy et al., 2019). In this way, the seagrasses and sponges, bivalves and crustaceans, macroalgae and microorganisms, all act together in symbiosis, all benefiting from the opportunities offered by the wreckage on the seabed. As Bjordan notes, 'Most probably, many interesting interactions and synergistic effects take place within and between the groups' of marine borers and microbial wood degraders (2012, p. 138). And yet, she concludes that the primary reason for learning more about these synergistic happenings is for the purpose of 'identifying and rescuing unique shipwrecks in time, before they fall apart or the surface layers [with historical information] are eroded away. Furthermore, it would be most important for the development of new in-situ protection methods' (Bjordan, 2012, p. 139). It might be noted that while backfilling or reburial with sediment used to be the norm, the most common *in-situ* preservation methods today involve covering the site with sand-filled plastic bags, synthetic-fiber geotextiles, artificial seagrass, or nylon debris netting (Gregory and Manders, 2011), all of which also decay, but hazardously as the plastics brittle and break off into marine ecosystems. The singular focus on determining microbial decay rates, not so that the most at-risk wrecks can be prioritized for research but so that entire wooden shipwrecks might be rescued from the underwater world – whether by raising them out of it or sealing them off from it indefinitely – is an example of the common resurrection model of nautical archaeology.

A more recent study examining the microbial effects on shipwrecks was located in the Atlantic off the coast of North Carolina (USA), at the site of a ferrous-hulled wreck (Price et al., 2020). Sampling microbial communities on the Pappy Lane wreck, likely identified as a 1944 warship that sank in the 1960s while serving as a post-war barge, revealed a wide variety of community types, with significant variation noted even between degrees of metallic corrosion (Price et al., 2020, p. 6). The authors report the findings are a significant step toward a better understanding of the biogeochemical cycling that contributes to shipwreck corrosion. And yet, this 'fundamental knowledge' is noted as a useful 'aid in resource management and conservation of shallow-water shipwrecks and other irreplaceable artifacts that have fallen victim to Earth's watery depths' (Price et al., 2020, p. 10). Once again, the resurrection model is apparent, as Pappy Lane is harnessed into a Great Man narrative of nationalistic struggles of good versus evil, which render it

significant and worthy of preservation, of monitoring and guarding it as a non-renewable resource from rapidly accumulating oceanic evils.

The connection between the ideas of *resource* and *resurrection*, so evident in the industries and sciences of ‘heritage’, is not a new one. Rather, it goes back to the Early Modern Era, the period of time that arguably marks the beginning of the Anthropocene, the period that gave way to the rise of colonialism and capitalism, and the efforts of science to not just understand the world around us but to dominate it (Moore, 2015). Both words, ‘resurrection’ and ‘resource’, find their roots in the Latin *resurgere*, ‘to raise up’. One means to raise up from the dead, the other to raise up to a utilitarian purpose – which in the context of capitalism, means to commodify. Both words indicate control – over the inevitability of death and decay, and over something that was previously regarded as a *source* (of water, of life, of wonder) rather than a mere resource to indicate wealth and its utility (Rich, 2017, pp. 201-203). But even for humans, despite our species having become a significant geophysical force, ultimate control is an illusion.

### **Discussion: *Naufragocene***

Additional to the assumption that humans and their favored anthropogenic objects are deserving of eternal life, the resurrection model of nautical archaeology also assumes that, in their ruined condition, shipwrecks are passive, and powerless to shape their new environs. The famous nautical archaeologist Keith Muckelroy once stated that shipwrecks are the static seabed remains of a once dynamic machine (Muckelroy, 1978, p. 157). However, even in the handful of examples mentioned above, we can already see that this is not the case. As Stacy Alaimo has argued, ‘it is possible for the agency, the activities, the becomings of the nonhuman to recreate a seemingly static site into a place of energy and transformation’ (Alaimo, 2016, p. 38). The acknowledgement of multispecies and ‘thingly’ architectural endeavors begins to flood and crack the foundations of the resurrection model because instead of passively awaiting human salvation, shipwrecks are revealed as already dynamic, from their macrostructures to their microbial pioneers. Wrecks actively affect their new ecosystems, whether by killing or poisoning with leaked toxins, invasive taxa, and microplastics; feeding organic materials to local grazers; forming reef architecture; changing the biodiversity of the seabed; or acting as stepping stone habitats for expanding populations of invasive species (Soares et al., 2020).

Instead of the resurrection model which valorizes only one aspect of a wreck, namely its ‘working life’ or what else it can do for humans, a different approach, called ‘shipwreck microbial ecology’, recognizes in wrecks the importance and validity of their afterlives, despite having little directly to do with humans. This approach is also an excellent example of how biogeochemistry and the social sciences can work together in response to Anthropocene developments (cf. Bianchi et al., 2021). The wrecks of the *U-166* and the *Robert E. Lee* are both superlative and supportive of a Great Man narrative because they represent the only WWII battle in the Gulf of Mexico. Yet studies have focused on other aspects of these ships in their current state of existence, an existence which is ultimately shared between organisms and inanimate actors. Not surprisingly, examinations into their extrahuman components reveal a unique and heterotopian afterlife for these ships. *U-166* entered the Gulf of Mexico in July 1942 to lay mines off the mouth of the Mississippi River (Warren et al., 2004). On July 30, 1942 the passenger

freighter S.S. *Robert E. Lee*, bound for New Orleans under escort from U.S. Navy patrol craft *PC-566*, was torpedoed by *U-166*. As the freighter sank, *PC-566* successfully counter-attacked the submarine, which lay hidden for 59 years before it was discovered at ~1450m deep, less than a mile from the remains of *Robert E. Lee*. *U-166* is a war grave whose afterlife is particularly entangled with the Anthropocene and naufragic ecosystem engineers. After nearly 70 years of marine reengineering, the wreck site entered a new phase in 2010 with the *Deepwater Horizon* oil spill (Hamdan et al., 2018), named after the drilling platform which is itself now a wreck not far from *U-166*. Along with *U-166*, two wooden-hulled 19th-century shipwrecks known as Mica and Mardi Gras are also situated on the seabed in ‘the acute fallout plume’ of the disaster (Stout et al., 2016). It is likely that *Robert E. Lee* was also oiled, but this has not yet been confirmed. The microbiome (totality of all microorganisms present, their genetic elements, and interactions with the surrounding environment) of sediment in contact with the three shipwrecks bears hallmarks of increased biodiversity because of the presence of the shipwreck, and elevated membership of oil-degrading bacteria (Mugge et al. 2019). *U-166* was subject to a 5-cm layer of marine oil snow sedimentation and flocculent accumulation, or MOSSFA (Passow et al., 2012). The delivery of MOSSFA to the seabed and the decks of the shipwreck appears to have accelerated microbially mediated metal loss, possibly due to secondary metabolites produced by oil-degrading bacteria in biofilms. Time series images from pre- and post-spill show corrosion on the decks of *U-166* to be proceeding at rates orders of magnitude higher than before the spill and for other contemporaneous shipwrecks. Although the oil spill has accelerated corrosion, the afterlife of *U-166* is characterized as a microbially garrisoned sentinel for ecosystem establishment. This scenario recalls Donna Haraway’s cautiously hopeful charge that ‘from the start the greatest planetary terraformers (and reformers) of all have been and still are bacteria and their kin, also in inter/intra-action of myriad kinds (including people and their practices, technological and otherwise)’ (Haraway, 2016, p. 99). Perhaps in light of shipwreck ecology studies in the Gulf of Mexico, we might consider microbes as the greatest aquaformers too, rather than strictly terraformers.

Recent further investigations of the microscopic inhabitants of deep-sea (below 200 m) shipwrecks have turned attention to how shipwrecks shape seabed life beyond the extent of their hulls. During the course of studying *U-166*, six additional historic wrecks – Mica (wooden-hulled), Mardi Gras (wooden-hulled), *Halo* (steel-hulled), *Anona* (steel-hulled), Ewing Bank (wooden-hulled), and Viosca Knoll (wooden-hulled) – were located in depths spanning 140-1450 m. From these six, a further serendipitous discovery was made: that shipwrecks enhance microbial biodiversity of the surrounding seabed (Hamdan et al., 2018). While it was discovered that hydrocarbon contamination decreases biodiversity at spill-impacted sites in comparison to reference sites outside the spill fallout plume area, biodiversity proximate the shipwreck’s hulls was greater than biodiversity 100-200 m away. This indicates that some shipwrecks’ impart an island effect on seafloor microbiomes (Hamdan et al., 2018, p. 12). Only at the most heavily impacted sites were microbial diversity indices and composition comparable on-site versus at a stand-off distance. As noted above, the study found that disruption to metal-colonizing biofilms by oil and chemical dispersants used to combat oil contamination in sub-surface waters could negatively affect ‘the recruitment of invertebrate and vertebrate organisms to

these artificial reefs' (Salerno et al., 2018, p. 12; Mugge et al., 2019). It also determined that biofilms tend to protect steel from saltwater corrosion; therefore, when microbial communities residing on shipwrecks for decades to centuries are compromised, the entire structure may become compromised too.

This discovery introduced a new way of thinking about shipwrecks, less focused on a static condition (suppurative, supportive, preserved) and more on active process. A more in-depth investigation revealed the shipwreck *Anona*, a 42-m luxury steam yacht that sank in 1944, increases the biodiversity of bacteria in sediments up to 200 m away from the superstructure (Hamdan et al., 2021). Shipwrecks are known to support macrobiological life on structural elements, and they may also shape the surrounding environment through release of contaminants. *Anona* was the first deep-sea shipwreck to receive comprehensive study for how it shapes life in the surrounding sediments. This shipwreck, smaller than most research vessels that support its study, alters an ~30-acre area of seabed. Even though this effect is invisible to the human eye, the wreck has shaped seabed life for nearly eighty years – nearly twice the 'working life' of *Anona* at the surface.

Another expedition in 2019 led to the discovery of two historic wooden shipwrecks (similar size and age) in the Gulf of Mexico, which have been examined to determine how they influence seafloor biogeochemistry and microbiology (Hampel et al., 2022). One of these wrecks, dated to the early 19th century, located at 1800 m deep, shows a clear signal of influence on sediment microbiome composition and diversity, while the signature of the other shipwreck, found at a depth of 525 m near the Mississippi River outfall was subtle. The microbiomes near these shipwrecks include taxa capable of organoheterotrophy and cellulolytic metabolism, signaling the shipwrecks still subsidize carbon to the deep sea, over 100 years after their arrival. A picture emerges that there is more than meets the eye concerning nautical archaeology sites, and while shipwrecks may popularly be construed as a resource of sorts, they are instead sources of biodiversity and so much more.

From all the studies presented here, it is clear that there are multiple agents involved in the ecology of a shipwreck: the wreck itself (nutrients, structure, pollutants), the water (depth, temperature, salinity), the seafloor (sediments, contaminants, inhabitants), and the development of biofilms that initiate the processes of reef formation. The microbial communities in particular act as underwater nautical engineers, changing the structure of the wreck over time, negotiating the influx of contaminants, and recruiting new members of the ecosystem. There is much more to learn from these pioneers of wreckage, such as the rate of community establishment on various construction materials, microbial dispersal, evolutionary mechanisms and metabolic pathways, the temporal scales of shipwreck to reef transformation, how invasive species affect biodiversity, how extreme weather events like hurricanes impact shipwreck ecology, and how ocean warming and acidification continue to alter these processes.

Sidestepping the resurrection model to develop better understandings of shipwreck microbial ecology will help to ensure, not that shipwrecks are protected for perpetuity, but that life is. If we could approach the study of all shipwrecks not as 'resources' but as *sources* – of community, of biodiversity, of nutrients, of toxicity, of hazardous waste, of contemplation, of knowledge – then we nautical archaeologists would be in a better position to take action where it is most needed (Lundquist et al., 2013; Lundquist et al., 2014), to consider surrendering toxic shipwreck lead to dark matter research (Perez-Alvaro

and Gonzalez-Zalba, 2015), and to intervene with the corroding tuna longliner rather than the habitable ship of the line. After all, one might wonder whether those sunken vessels and other artifacts that have been mimicking the surrounding ‘natural’ habitats for hundreds or even thousands of years (e.g., Gravina et al., 2021) even still legitimately belong to humans. Alternatively, once original telos is thwarted, the needs of the current ‘users’ might take precedence over those of the past ‘creators’ (Jørgensen, 2017).

Ultimately, all these submerged artifacts and architectural works are sources, and understanding them as such would mean that the dangerous ontological distinction between marine and maritime, natural and cultural, might begin to flatten. Surely the flattening of this distinction would be preferable to the flatlining of life as we know it, chest-deep in the ecocidal Anthropocene. Referring to Haraway once more, ‘our job is to make the Anthropocene as short/thin as possible and to cultivate with each other in every way imaginable epochs to come that can replenish refuge’ (Haraway, 2016, p. 100). In our human imagination that can barely fathom the depths, oceanic refuges are innumerable because oceans are infinite. But this poetic notion of oceanic infinity is a dangerous hyperbole that has formed part of the philosophical grounds for centuries of extraction and exploitation. If the sea is eternal, it has a limitless ability to supply whales, disperse mercury, dissolve plastics, and absorb carbon dioxide. But the ocean is finite, and so are its refuges. This is why a timely reckoning with naufragic architecture is so important – in this phrase, we are reminded that the ship (*nau*), this great feat of engineering, was fragile all along and, having realized its potential for fragility, is now broken and submerged, either aiding or impeding marine colonists who seek refuge there. And as it turns out, some of those oceanic refuges, like seagrass meadows, reciprocate by acting as security vaults for the shipwrecks and prehistoric settlements lying beneath them (Krause-Jensen et al., 2018).

There have been many alternative names proposed for the Anthropocene, this epoch of the species that makes inhospitable its own home (Haraway, 2016; Bonneuil and Fressoz, 2017), but none is quite such a convincing substitute as Steve Mentz’s *Naufragocene*. The particular ecocides and genocides that began with Early Modern globalization are captured by the concept of an era characterized by global wreckage. By 1610, the deadly Columbian Exchange resulted in a measurable dip in global CO<sub>2</sub> levels that became permanently embedded in Earth’s crust, before rising catastrophically with the burning of fossil fuels (Lewis and Maslin, 2015). With the term *Naufragocene*, we are warned that the ‘oceanic globe into which the *Naufragocene* plunges its human sailors is not a friendly place’ (Mentz, 2015, p. xxii); but neither is it a friendly place for the nonhuman sailors and stowaways that so many human activities plunge into extinction or its cusp. Instead of offering one final master narrative of epic humanity, *Naufragocene* rejects simplicity and elegance to advance disorder in the interests of subsistence (see Mentz, this volume). It recognizes the dangerous illusion of dominance over the planet – by contrast, dynamism is to be found here in the soils, the air, and the waters, and they will prevail long after we and our technologies fail. And it remains, in the meantime, alert to the complexities that characterize the human experience of the nonhuman – including, as it were, the nonhuman engineers that morph nautical heritage into naufragic heterotopia.

## Acknowledgements

Part of this paper was written on settler-occupied Waccamaw territory, in what is now northeastern coastal South Carolina, USA. The rest of this paper was written on occupied Chahta Yakni (Choctaw) territory, in what is now southeastern coastal Mississippi. The authors are grateful to the Indigenous peoples upon whose territories we reside, and we humbly seek to honor these lands and waters. The authors also thank the anonymous reviewers for their insights.

## Works Cited

- Alaimo, S. (2016) *Exposed: Environmental Politics and Pleasures in Posthuman Times*. Minneapolis: University of Minnesota Press.
- Avio, C.G., L.R. Cardelli, S. Gorbi, D. Pellegrini, and F. Regoli (2017) 'Microplastics Pollution After the Removal of the Costa Concordia Wreck: First Evidences from a Biomonitoring Case Study', *Environmental Pollution* 227, pp. 207-214.
- Balazy, P., U. Copeland, and A. Sokolowski (2019) 'Shipwrecks and Underwater Objects of the Southern Baltic – Hard Substrata Islands in the Brackish, Soft Bottom Marine Environment', *Estuarine, Coastal and Shelf Science* 225, 106240.
- Bedford, J. (ed.) (2021) *Is There an Object-Oriented Architecture? Engaging Graham Harman*. London: Bloomsbury.
- Bianchi, T.S., M. Anand, C.T. Bauch, D.E. Canfield, L. De Meester, K. Fennel, P.M. Groffman, M.L. Pace, M. Saito, and M.J. Simpson (2021) 'Ideas and Perspectives: Biogeochemistry – Some Key Foci for the Future', *Biogeosciences* 18, pp. 3005-3013.
- Björdal, C.G. (2012) 'Microbial Degradation of Waterlogged Archaeological Wood', *Journal of Cultural Heritage* 13(3), pp. S118-S122.
- Björdal, C.G. and Y. Fors (2019) 'Correlation Between Sulfur Accumulation and Microbial Wood Degradation on Shipwreck Timbers', *International Biodeterioration & Biodegradation* 140, pp. 37-42.
- Bonneuil, C. and J.-B. Fressoz (2017) *The Shock of the Anthropocene*, trans. D. Fernbach. London: Verso.
- Carter, A.L., C.B. Edwards, M.D. Fox, C.G. Amir, Y. Eynaud, M.D. Johnson, L.S. Lewis, S.A. Sandin, and J.E. Smith (2019) 'Changes in Benthic Community Composition Associated with the Outbreak of the Corallimorph, *Rhodactis howesii*, at Palmyra Atoll', *Coral Reefs* 38, pp. 1267-1279.
- Carter, M., F. Goodsir, P. Cundall, M. Devlin, S. Fuller, B. Jeffery, G. Hil and A. Taloui (2021) 'Ticking Ecological Time Bombs: Risk Characterisation and Management of Oil Polluting World War II Shipwrecks in the Pacific Ocean', *Marine Pollution Bulletin* 164, 112087.
- Daly, M. (1990 [1978]) *Gyn/Ecology: the metaethics of radical feminism*. Boston: Beacon Press.
- Foucault, M. (1984) 'Des Espace Autres'. *Architecture, Mouvement, Continuité* 5, pp. 46-49.
- Gravina, M.F., E. Casoli, L. Donnarumma, J. Giampaolletti, F. Antonelli, C. Sacco Perasso, and S. Ricci (2021) 'First Report on the Benthic Invertebrate Community Associated with a Bronze Naval Ram from the First Punic War: A Proxy of Marine Biodiversity', *Frontiers in Marine Science*, doi:10.3389/fmars.2021.772499.

- Gregory, D. and M. Manders (2011) 'In-Situ Preservation of a Wreck Site', in C.G. Björdal and D. Gregory (eds), *WreckProtect: Decay and Protection of Archaeological Wooden Ships*. Oxford: Archaeopress, pp. 107-129.
- Hamdan, L.J., J.L. Salerno, A. Reed, S.B. Joye, and M. Damour (2018) 'The Impact of the Deepwater Horizon Blowout on Historic Shipwreck-Associated Sediment Microbiomes in the Northern Gulf of Mexico', *Scientific Reports* 8(1), pp. 9057-9114.
- Hamdan, L.J., J.J. Hampel, R.D. Moseley, R.L. Mugge, A. Ray, J.L. Salerno, and M. Damour (2021) 'Deep-Sea Shipwrecks Represent Island-Like Ecosystems for Marine Microbiomes', *ISME Journal* 15, pp. 2883-2891.
- Hampel, J.J., R.D. Moseley, R.L. Mugge, A. Ray, M. Damour, D. Jones, and L.J. Hamdan (2022) 'Deep-Sea Wooden Shipwrecks Influence Sediment Microbiomes and Diversity in the Northern Gulf of Mexico', *Limnology and Oceanography* 67(2), pp. 482-497.
- Haraway, D.J. (2016) *Staying with the Trouble: Making Kin in the Chthulucene*. Durham: Duke University Press.
- Harman, G. (2018) *Object-Oriented Ontology: A New Theory of Everything*. London: Penguin.
- Harman, G. (2021) 'Architecture Meets Philosophy: A Conversation with Graham Harman'. Lecture, University of Malta, 6 May 2021.
- Hocker, E. (2006) 'From the Micro- to the Macro-: Managing the Conservation of the Warship, *Vasa*', *Macromolecular Symposia* 238, pp. 16-21.
- Hocker, E. (2018) *Preserving Vasa*. London: Archetype Publications.
- Johnson, T. (2020) 'A List of Composite Materials in Boats', ThoughtCo, 27 August 2020 [online]. Available at: <https://www.thoughtco.com/composite-materials-in-boats-820410> (Accessed: 16 June 2021).
- Jones, C.G., J.H. Lawton, and M. Shachak (1994) 'Organisms as Ecosystem Engineers', in F.B. Samson and F.L. Knopf (eds), *Ecosystem Management*. New York: Springer, pp. 130-147.
- Jørgensen, D. (2017) 'Artifacts and Habitats', in U. Heise, J. Christensen and M. Niemann (eds), *The Routledge Companion to the Environmental Humanities*. London: Routledge, pp. 138-143.
- Krause-Jensen, D., E. Oscar Serrano, T. Apostolako, D.J. Gregory and C.M. Duarte (2018) 'Seagrass Sedimentary Deposits as Security Vaults and Time Capsules of the Human Past', *Ambio* 48, pp. 325-335.
- Landquist, H., I.-M. Hassellöv, L. Rosén, J.F. Lindgren, I. Dahllöf (2013) 'Evaluating the Needs of Risk Assessment Methods of Potentially Polluting Shipwrecks', *Journal of Environmental Management* 119, pp. 85-92.
- Landquist, H., L. Rosén, A. Linde, T. Norberg, I.-M. Hassellöv, J.-F. Lindgren, and I. Dahllöf (2014) 'A Fault Tree Model to Assess Probability of Contaminant Discharge from Shipwrecks', *Marine Pollution Bulletin* 88, pp. 239-248.
- Lewis, S. and M. Maslin (2015) 'Defining the Anthropocene', *Nature* 519, pp. 171-180.
- Maarleveld, T.J. (2011) 'Open Letter to Dr. Sean Kingsley, Wreck Watch International, Regarding his Questionnaire on In Situ Preservation', *Journal of Maritime Archaeology* 6(2), pp. 107-111.

- Maarleveld, T.J., U. Guérin, and B. Egger (eds) (2013) *Manual for Activities Directed at Underwater Cultural Heritage: Guidelines to the Annex of the UNESCO 2001 Convention*. Paris: UNESCO.
- Mancini, G., E. Casoli, D. Ventura, G. Jona-Lasinio, A. Criscoli, A. Belluscio, and G. D. Ardizzone (2019) 'Impact of the Costa Concordia Shipwreck on a *Posidonia oceanica* Meadow: A Multi-Scale Assessment from a Population to a Landscape Level', *Marine Pollution Bulletin* 148, pp. 168-181.
- Marsh, G. (2006) 'Fifty Years of Reinforced Plastic Boats', *Materials Today*, 8 October 2006 [online]. Available at: <https://www.materialstoday.com/composite-applications/features/50-years-of-reinforced-plastic-boats/> (Accessed: 16 June 2021).
- Mentz, S. (2015) *Shipwreck Modernity: Ecologies of Globalization, 1550-1719*. Minneapolis: University of Minnesota Press.
- Meskel, L. (2018) *A Future in Ruins: UNESCO, World Heritage, and the Dream of Peace*. Oxford: Oxford University Press.
- Michel, J., D. Schmidt Etkin, T. Gilbert, R. Urban, J. Waldron, and C.T. Blocksidge (2005) 'Potentially Polluting Wrecks in Marine Waters', in *International Oil Spill Conference 2005 Proceedings, May 15-19, 2005, Miami Beach, Florida, USA*, American Petroleum Institute publication no. I 4718 B. Washington D.C.: American Petroleum Institute, pp. 901-904.
- Monfils, R., T. Gilbert, and S. Nawadra (2006) 'Sunken WWII Shipwrecks of the Pacific and East Asia: The Need for Regional Collaboration to Address the Potential Marine Pollution Threat', *Ocean & Coastal Management* 49, pp. 779-788.
- Moore, J.W. (2015) *Capitalism in the Web of Life*. London: Verso.
- Morton, T. (2017) *Humankind: Solidarity with Nonhuman People*. London: Verso.
- Muckelroy, K. (1978) *Maritime Archaeology*. Cambridge: Cambridge University Press.
- Mugge, R.L., M.L. Brock, J.L. Salerno, M. Damour, R.A. Church, J.S. Lee, and L.J. Hamdan (2019) 'Deep-Sea Biofilms, Historic Shipwreck Preservation and the Deepwater Horizon Spill', *Frontiers in Marine Science*, doi:10.3389/fmars.2019.00048.
- NOAA (no date) 'Florida Keys National Marine Sanctuary' [online]. Available at: <https://floridakeys.noaa.gov/wrecks/resource.html> (Accessed: 16 June 2021).
- Pacific Underwater Cultural Heritage Partnership (2017) *Safeguarding Underwater Cultural Heritage in the Pacific: Report on Good Practice in the Protection and Management of World War II-Related Underwater Cultural Heritage*. Paris: UNESCO.
- Passow, U., K. Ziervogel, V. Asper, and A. Diercks (2012) 'Marine Snow Formation in the Aftermath of the Deepwater Horizon Oil Spill in the Gulf of Mexico', *Environmental Research Letters* 7, 035301.
- Perez-Alvaro, E. and M.F. Gonzalez-Zalba (2015) 'The Role of Underwater Cultural Heritage on Dark Matter Searches: Ancient Lead, a Dual Perspective', *Ocean & Coastal Management* 103, pp. 56-62.
- Precht, W.F., R.B. Aronson, and D.W. Swanson (2001) 'Improving Scientific Decision-Making in the Restoration of Ship-Grounding Sites on Coral Reefs', *Bulletin of Marine Science* 69(2), pp. 1001-1012.
- Price, F.H. (2013) 'Notes from Mount Desert Island: Interviewing Maine Fisherman to Find Archaeological Sites', *Journal of Maritime Archaeology* 8, pp. 59-76.

- Price, K.A., C.E. Garrison, N. Richards, and E.K. Field (2020) 'A Shallow Water Ferrous-Hulled Shipwreck Reveals a Distinct Microbial Community', *Frontiers in Microbiology*, doi:10.3389/fmicb.2020.01897.
- Rich, S.A. (2017) *Cedar Forests, Cedar Ships: Allure, Lore, and Metaphor in the Mediterranean Near East*. Oxford: Archaeopress.
- Rich, S.A. (2021) *Shipwreck Hauntography: Underwater Ruins and the Uncanny*. Amsterdam: Amsterdam University Press.
- Rich, S.A., C. Sievers-Cail, and K. Patterson (2022) 'What Is there to Do if You Find an Old Indian Canoe? Anti-Colonialism in Maritime Archaeology', *Heritage* 5(4), pp. 3664-3679.
- Rosen, B. and E. Galili (2007) 'Lead Use on Roman Ships and Its Environmental Effects', *International Journal of Nautical Archaeology* 36(2), pp. 300-307.
- Salerno, J.L., B. Little, J. Lee, and L.J. Hamdan (2018) 'Exposure to Crude Oil and Chemical Dispersant May Impact Marine Microbial Biofilm Composition and Steel Corrosion', *Frontiers in Marine Science*, doi:10.3389/fmars.2018.00196.
- Soares, M.O., S. Salani, S. Vieira Paiva, and M. Davis Andrade Braga (2020) 'Shipwrecks Help Invasive Coral to Expand Range in the Atlantic Ocean', *Marine Pollution Bulletin* 158, 111394.
- Staniforth, M. (1985) 'The Introduction and Use of Copper Sheathing: A History', *Bulletin of the Australian Institute of Maritime Archaeology* 1985, pp. 21-48.
- Stout, S.A., S. Rouhani, B. Liu, J. Oehrig, R.W. Ricker, G. Baker, and C. Lewis (2017) 'Assessing the Footprint and Volume of Oil Deposited in Deep-Sea Sediments Following the Deepwater Horizon Oil Spill', *Marine Pollution Bulletin* 114, pp. 327-342.
- Sudjic, D. (2005) *The Edifice Complex: How the Rich and Powerful – and Their Architects – Shape the World*. New York: Penguin.
- Svane, I. and J. Kjerulf Petersen (2001) 'On the Problems of Epibioses, Fouling and Artificial Reefs, a Review', *Marine Ecology* 22(3), pp. 169-188.
- Van de Noort, R. (2011) *North Sea Archaeologies: A Maritime Biography, 10,000 BC to AD 1500*. Oxford: Oxford University Press.
- Van der Schyff, V., M. du Preez, K. Blom, H. Kylin, N. Sun Choong Kwet Yive, J. Merven, J. Raffin, and H. Bouwman (2020) 'Impacts of a Shallow Shipwreck on a Coral Reef: A Case Study from St. Brandon's Atoll, Mauritius, Indian Ocean', *Marine Environmental Research* 156, 104916.
- Virilio, P. (2008 [1997]) *Open Sky*, Julie Rose (trans.). London: Verso.
- UNESCO (1972) *Convention Concerning the Protection of the World Cultural and Natural Heritage* [online]. Available at: <https://whc.unesco.org/en/conventiontext/> (Accessed: 16 June 2021).
- UNESCO (2001). *Convention on the Protection of Underwater Cultural Heritage*. 2 November 2001. Paris: United Nations [online]. Available at: <https://unesdoc.unesco.org/ark:/48223/pf0000126065.nameddest=6> (Accessed: 21 February 2021).
- Warren, D., R. Church, R. Cullimore, and L. Johnston (2004) 'ROV Investigations of the DKM U-166 Shipwreck Site to Document the Archaeology and Biological Aspects of the Wreck Site: Final Performance Report', NOAA award no. NA03OAR4600103 [online]. Available at: <https://www.bsee.gov/sites/bsee.gov/files/memos/u166-final.pdf> (Accessed: 23 March 2021).



# Octopodology and Dark *Amphorae*

## Alien Archaeologies, Reflexivity, and the Non-Human Afterlives of Objects in the Sea

Peter B. Campbell

### Abstract

Archaeology is the study of the gap between the lived past and ruined present, according to Michael Shanks. Recent archaeological theories, such as Symmetrical Archaeology, New Materialism, and Drift, reveal not a gap, but the persistence of objects beyond their human use. The non-human afterlives of objects extend beyond the human-focused ‘site formation processes’ that modify artifacts, which is a de-anthropocentric multispecies archaeology. These nonhuman afterlives are not at the margins of human activity, but integral to archaeological practice and interpretation. This chapter examines the persistence of human-made objects in the sea and how marine species integrate them into their lives. In particular, it examines the octopus which is a common inhabitant of underwater archaeological sites. Octopuses have been categorized as a site formation process termed ‘scrambler’ from the human-perspective of site disintegration. However, the octopus is an entirely different form of conscious being from vertebrates, offering a perspective on thinking that brings our own limitations and biases into focus. Octopuses do not scramble shipwreck randomly; they construct settlements and collect objects of interest. In this way, artifacts such as amphorae persist beyond human meaning to non-human afterlives, where they are reconstituted into octopus material culture. The archaeology of octopus settlements using amphorae provides important insights into human preconceived notions of the archaeological record and the practice of archaeology, engaging with new theoretical approaches such as human-animal relations, Symmetrical Archaeology, and Object-Oriented Ontology.

### Introduction

When Christopher Columbus presented his argument for the existence of lands across the Atlantic Ocean, the ‘eminent men of Genoa’ apocryphally replied that to the west were only ‘the mist of darkness’ (Abulafia, 2019, p. 610). This self-limiting conception of the world resulted in Genoa missing the European ‘discovery’ of the western continents to the benefit of Spain. Anthropology and archaeology have their own ‘mists of darkness’,

self-imposed limits or blindness due to culture, gender, or social status. There are aspects that observers cannot perceive due to their proximity to the subject. Anthropology sought to address this through the ‘reflexive turn’, where researchers seek to identify and understand their own inherent biases (Hymes, 1999).

It is hardly surprising that in archaeology, as a field that interprets material culture to gain an understanding about the past, there are some interpretations that say more about the archaeologist – their identity and values – than about past cultures. Perhaps the bluntest example is a bronze artifact that was interpreted as a crown by 19th-century archaeologists who wished to see a royal burial, when in fact it is simply the remains of a bucket (Landsberg, 2018, p. 1). Feminist theory exposed the male gaze dominating interpretations of the archaeological record. Palaeolithic female figurines were interpreted by men to be fertility votives, but feminist theorists dispensed with this supposition based on the fact the figurines depict elder women past child-bearing age, do not depict the vulva or pregnancy, and perspective that suggests the figurines are self-portraits (McCoid and McDermott, 1996; McDermott, 1996). Archaeology is currently undergoing a decolonial turn, one stripping back the dominant white colonial narratives to reveal indigenous perspectives (Bruchac, 2014) and academics from the Global South providing non-Western systems of knowledge (Sinamai, 2020). The Euro-centric ideas that proliferate archaeology have created imagined mists that obscure truths that are evident to those of non-European backgrounds. The mists of darkness affect one’s perception of the world; can one practice reflexivity through non-human perspectives?<sup>1</sup>

Vilém Flusser and Louis Bec examine the *Dasein* of the cephalopod *Vampyroteuthis infernalis*, or vampire squid, putting forward that ‘Perhaps a game can be built out of distorting mirrors that would enable us to recognize the basic structure, distorted and from afar, of our own *Dasein*’. By playing a ‘reflective’ game of this sort, we should hope to gain a new, reflexive perspective of ourselves. This view, though distanced, is not ‘transcendent’, meaning a perspective of the vampire squid, in the case of Flusser and Bec or the octopus in the present chapter, but reflects our co-being (*Mit-Sein*) on this planet (Flusser and Bec, 2012, pp. 9-10), which Donna Haraway calls ‘making kin’ with the squid or octopus (Haraway, 2016).<sup>2</sup> A non-human perspective may allow us to take aim at our collective blind spot – our humanness – and determine things about ourselves and cultures that we cannot normally see due our proximity to our *Dasein*. Archaeology is not an objective field; it is firmly anthropocentric by design. However, just as Feminist and Decolonial approaches break down the assumptions that underlie traditional approaches, a non-human view of humans and material culture may reveal new perspectives about our cultures. Human-animal relations has been a growing section of the Humanities and non-human archaeology is a developing discourse (Kirksey and Helmreich, 2010; Pilaar Birch, 2018). This chapter probes the edges of archaeology from the perspective of the non-human and the lessons that can be learned from lifting the mists of darkness that we self-impose by being human. To this end, the chapter seeks a non-human perspective: cephalopods. Why? ‘Because’, as Peter Godfrey-Smith writes, ‘evolution built minds twice

---

1 However, non-human reflexivity is far less urgent than the critical and overdue decolonization required in archaeology.

2 *Dasein* and *Mit-Sein* are terms coined by the philosopher Martin Heidegger.

over. [The cephalopod] is probably the closest we will come to meeting an intelligent alien' (2016, p. 9). If we wish to understand a non-human perspective of ourselves, or if we wish to explore alien archaeology, then the best we can do on Earth is the octopus.

Octopuses are commonplace on submerged archaeological sites in the oceans. This proliferation of octopuses provides two opportunities: to investigate a non-human archaeology and to hold a mirror up to human archaeology. In exploring Octopodology, the goal is a 'jolting of the archaeological imagination' (Pétursdóttir, 2017, p. 192) and to radically re-think our notions of archaeological deposits as static and the domain of humans. It is also worth exploring octopus consciousness because maritime archaeologists impose our thought upon oceanic environments that are much older than our own. Sea consciousness predates consciousness on land by millions of years and the fact that consciousness evolved on two occasions begs for comparison. The persistence of objects or entities across time is an important aspect for archaeology and the sea provides ample examples, whether it is an octopus altering its behavior to make use of a two-thousand-year-old amphora or humans altering their behavior to shutdown beaches due to persistent Cambrian (541-485.4 million years ago) and Ordovician (450-420 million years ago) entities like the box jellyfish and sharks. The persistence of entities in the sea challenges the anthropocentrism of archaeology.

## Mind the Gap

Michael Shanks argues that archaeology 'focuses upon the gap between the lived past and its ruin now' (1995, p. 17). Mark Hudson takes this argument and uses contemporary philosophy and discourse on the Anthropocene to demonstrate that contemporary archaeology precludes a gap, since we are integrated into it (2014, p. 85). These 'dark artifacts' are time transgressive and experience adjunct lives to those they had in the past (Hudson, 2014, p. 84). Hudson adopts the term dark objects from Object-Oriented Ontology (OOO) theorists (Bryant, 2014; Harman, 2016; Morton, 2016); Graham Harman argues that objects have a dark side which is hidden and not fully comprehensible (Harman, 2016, p. 7). Hudson uses Styrofoam as an example of dark artifacts, which was created for cheap and disposable containers, yet take thousands of years to disintegrate, forming significant deposits of persistent material culture on land and in the sea. 'In the ocean, the plastic can break down into small particles that damage marine life yet can also create new ecological habitats for microorganisms' (Hudson, 2014, p. 85). These dark artifacts have unintended non-human afterlives, leading archaeology to a new conceptual exploration of artifacts and 'how they endure and outlive us, and how they interact outside our control and domain' (Pétursdóttir, 2017, p. 194).

Recent scholarship on non-human agency and multispecies archaeology has challenged this gap, arguing that it is an anthropocentric perception of the material record (Witmore, 2007; Olsen et al., 2012; Pétursdóttir, 2017). The 'afterlives' of human-made objects are actually the longest part of their lives (Liboiron, 2016, p. 103; Pétursdóttir, 2017, p. 192), which causes Pétursdóttir to avoid the term 'afterlives' entirely since it is anthropocentric (Pétursdóttir, 2017). Nevertheless, I am using 'afterlives' within the narrow focus of *amphorae* because they are commonly described in terms of their 'use-life' in archaeological parlance and I wish to examine the *non-human* afterlife. *Amphorae* are found on the seafloor in the millions through shipwreck and discard, as these ceramic containers were used to transport wine, olive oil, and fish sauce – similar to barrels – from

the Bronze Age through Late Antiquity. While their human use-life ended at ‘deposition’, they persist as structures on the seafloor which forms the longest part of their object-life. In maritime archaeology shipwrecks are often viewed from the anthropocentric ‘time capsule’, but the structure of the wreckage, or piles of *amphorae*, provides a habitation for marine life including fish, coral, sponges, cephalopods, and more.

It is evident that shipwrecks, and *amphorae*, possess agency, serving as structures for ecosystem development, protective spaces for species to dwell, and elements for accessing resources in currents and the water column. Non-human agency is a controversial topic within traditional archaeology, but contemporary philosophy has recently advocated for it through Speculative Realism (SR) and OOO. Agency is the capacity to effect change (Dolwick, 2008, p. 18) and should not be conflated with intentionality. For example, Andreas Malm argues against object agency by incorrectly conflating it with intentionality, stating, ‘The sun does not act when it rises in the morning (although it certainly makes a difference to a state of affairs), for on the lay view, an element is needed which is absent in the daybreak: an agent seeking to accomplish some goal. The parent who wakes up his child when the sun rises has agency, while the morning light does not’ (Malm, 2018, p. 84). The sun does not have intent, but its agency is evident in the fact that it powers life on Earth through photosynthesis, causes skin cancer, and prompted the creation and use of sunscreen. The sun has consequence in the world, which is agency but not intent. The philosophies



Fig. 10.1. An amphora from the Levanzo I shipwreck colonized by a coral, which was found during the Egadi Islands Survey Project (Author; Soprintendenza del Mare/RPM Nautical Foundation).

emphasizing the agency of non-humans – the ‘flat ontologies’ – de-anthropocentrize existence and have led to new perspectives on the role of objects beyond human perception. The term ‘object’, which has specific meaning in archaeology, in philosophy has broader meaning and archaeologists might feel more comfortable with the term ‘entity’.

Within OOO, objects are always more than what we perceive. To describe this, objects are philosophically described as ‘withdrawn’ and we perceive their ‘sensual’ characteristics (Morton, 2013, p. 89). When the ocean casts a wave up onto a beach and small grains of sand are eroded away in one place and deposited in another, neither the totality of the ocean nor the beach are interacting or perceivable. Instead, there is always more to an object that is withdrawn; neither the ocean nor beach are ‘exhausted’ by their interaction. In this way, objects possess agency and interact with other objects, independent of human thought. When a potter creates an amphora, they anthropomorphized the clay for human purposes, shaping it with twin handles for a human’s two hands and firing it to harden the clay so that it is robust enough to hold liquids and facilitate transport. A key component of OOO is recognition of the sensual interactions differing between objects (Morton, 2013, p. 89), so while humans anthropomorphize the amphora, the octopus octopomorphizes it as a den, the coral coralmorphizes it as a solid surface for colonization, and the amphora amphoramorphizes humans, octopuses, and coral because the engagement of amphora with those entities differs for each. Further, each object has finitude, meaning that though one might be quite durable, all objects exist for a certain amount of time (Morton, 2013). Humans have difficulty with finitudes longer than their own lifetimes, such as conceptually distinguishing between 10,000 versus 50,000 years.

In this way, OOO is a *realist* philosophy, because it advocates that objects are real and not constructs of the human mind. The latter is the approach of *idealist* philosophies, which argue for Cartesian dualism that separates mind and nature. Idealist approaches are evident in archaeology, for example, in cognitive landscapes theories such as the maritime cultural landscapes paradigm. Maritime cultural landscapes argue for cognitive landscapes which are created in the human mind (Westerdahl, 1992); however, the interaction between the ocean and beach continues whether humans form a maritime cultural landscape in their mind or not, demonstrating that these are real objects. In advocating for realist over idealist approaches, I recently argued that OOO in archaeology provides a more contextual view of human culture, offering an outside view or distance to give more perspective (Campbell, 2020, pp. 210-211). This article continues advocating for realist philosophy in archaeology, as the persistence of objects in the sea is best understood through flat ontologies.

## **A Sea-Change Rich and Strange: Persistence and Afterlives Beneath the Sea**

Full fathom five thy father lies;  
Of his bones are coral made;  
Those are pearls that were his eyes:  
Nothing of him that doth fade,  
But doth suffer a sea-change  
Into something rich and strange.



Fig. 10.2. A statue of a youth from the Antikythera shipwreck showing the effects of endoliths which consumed the exposed half (right) while the portion that was buried was unaffected (left), which led the diver who discovered the wreck in 1901 to exclaim that there were diseased bodies on the seafloor (Author; National Archaeological Museum Athens).

It is persistence and metamorphosis that William Shakespeare captures in *The Tempest* (1611).<sup>3</sup> Édouard Glissant expresses persistence when writing of the enslaved thrown from slave ships, 'These underwater signposts mark the course between the Gold Coast and the Leeward Islands... [in] these deeps, with their punctuation of scarcely corroded balls and chains' (Glissant, 1997, p. 6). The sponge diver who discovered the ancient statues of a Roman shipwreck at Antikythera returned to the surface in hysteria, shouting that the seafloor was covered with bodies corrupted by disease (Throckmorton, 1964, p. 34). When the captain, a person of sturdier constitution, dove below he found marble faces half eaten by endolithic organisms and bronze limbs covered in calcareous growths. The corrupting sea colonizes objects from the land and transforms them into its own weird and uncanny, almost mocking, versions of the original, as seen in colonized *amphorae* (Fig. 10.1) and statues (Fig. 10.2). Francis Bacon claims, 'Antiquities are history defaced' (2011[1605], p. 333)<sup>4</sup>, but beneath the sea they are further transformed into grotesques.

It is an alien archaeology beneath the sea, requiring one to think differently. In the television series *Stranger Things*, the characters descend into a subterranean underworld that is a mirror of the surface called Upside Down. Everything appears uncannily similar, except buildings are abandoned and inhabited by perverse and corrupted creatures. Archaeology studies a form of the Upside Down, where we descend below ground or underwater to study buildings, ships, and sites that were once complete on the surface, but have been corrupted by site formation processes – biological, chemical, and physical forces – to make them at once familiar and strange (Ward et al., 1999). The ocean is indeed an Upside Down where cities and ships plunged below and become weird versions of their former selves. It should be noted that, as Graham Harman writes in his chapter, 'Weirdness is actually a technical term in OOO... It is defined as what happens not only when the deep reality of an object is hidden beneath its phenomenal surface, but more generally whenever an object has a loose relationship with its own qualities' (Harman, this volume). Donna Haraway adopts the Greek *chthonios* meaning 'of, in, or under the earth and the sea', from which H.P. Lovecraft derived the octopus-like Cthulhu who inhabits a sunken city, for her term for climate change or the Anthropocene: the Chthulucene. It is an epoch defined by 'ongoing multispecies stories and practises of becoming-with' (Haraway, 2016, pp. 53, 55).<sup>5</sup> It is multispecies practices that form underwater sites, creating the metamorphosis that is the archaeological Upside Down. To think as an archaeologist, one has to think differently to understand the shape of the past which is at once worrisomely familiar and unexpectedly different. One method of thinking differently is to explore alien archaeologies.

There are, on Earth, persistent non-human entities in deep-time if we are willing to look beyond the individual and toward the species. Each summer, Australian beaches are shut down by the clash of persistent Cambrian box jellyfish and Ordovician sharks with

3 The play recounts the wreck of the *Sea Venture*, later discovered by archaeologists after it became part of a Bermuda reef (Wingood, 1982).

4 The full quote is 'Antiquities are history defaced, or some remnants of history which have casually escaped the shipwreck [sic] of time'.

5 Haraway derived the name of the epoch from a spider, *Pimoida chthulhu*, and not Lovecraft.



Fig. 10.3. An eel hides in an amphora colonized by red and brown invertebrates on the Battle of the Egadi Islands site, a shell midden outside the mount indicates octopodes have used it as a den in the past. Given the time of year, the eel may have consumed an octopus resident (RPMNF/Soprintendenza del Mare).

Pliocene and Holocene (5.6 million years ago to present) beings: us.<sup>6</sup> These Cambrian and Ordovician entities strike fear in humans, who deploy material culture in the form of nets, helicopters and drones, and issue warnings through radio and television broadcasts. A material record prompted by the persistent Cambrian is not unique; in fact, wars have been fought over oil and gas which are the remains of decomposed Palaeozoic marine organisms (541-251 million years ago)<sup>7</sup> and seabird guano from the Late Pleistocene and Holocene (129,000 years ago to present). It is hardly an exaggeration to say the Modern Period is powered by consuming the Palaeozoic. Archaeology has long relied on an observer situated in a present to provide comparison with the past; however, it would be more accurate to view the present as transient and intersecting with persistent entities from the deep past (e.g., Cambrian box jellyfish) and extending into a deep future (e.g., radioactivity created 70 years ago will not dissipate for 200 million years). From this perspective, archaeology is less about the gap between the lived (human) past and ruined present, and more about objects of varying finitudes bumping into each other in a frame of reference that we call the present.

- 
- 6 Box jellyfish and sharks are naturally Holocene species as well, since they are alive today. However, the species evolved into their present forms and behaviors for Cambrian and Ordovician Earths and they have changed little in the intervening periods – though they have changed. It is in this respect that I refer to them as Cambrian and Ordovician, as they were largely shaped by nature for an Earth that is past, yet they remain successful species today. Similarly, humans developed for a Pliocene Earth, thrived in the more stable climate of the Holocene, and face an uncertain future with the Anthropocene.
- 7 Coal is formed primarily from terrestrial trees and plant material, while oil and gas are formed primarily from marine organisms such as plankton.

Maritime archaeology often generalizes depositional, wrecking, or subsidence events and subsequent site formation processes through the perspective that artifacts lie in stasis until rediscovered by humans.<sup>8</sup> Rather than entering stasis, artifacts continue to possess agency. They are, in this regard, quite evidently objects in the manner of OOO. Work by coastal ecologists such as Derek Smith have demonstrated that shipwrecks are similar to ‘whale falls’, forming entirely new ecosystems that feed and develop on the skeletons of both whale and ship alike (Smith, 2014). These mid-ocean ecosystems can lead to unique and important groups of colonization, though the ecosystems change over time with phases of colonization by different species. The appearance of an object on the seafloor is important, as it is vertical structures that lead to complex ecosystems since they change or provide access to the flow of water (and hence waterborne organisms for both colonization and as a food source) and provide protection from predators. The *amphorae* which this study focuses on are therefore objects with agency, which do not lie in wait for humans to rediscover them but have lengthy non-human afterlives (Fig. 10.3). These are dark *amphorae* that endure and possess capacities beyond human intention.

## The Octopus and the Archaeologist

The octopus has been part of archaeologists’ awareness since the foundation of the field of maritime archaeology. They are curious organisms with a penchant for stealing fieldwork tools, bringing them into their dens. As a result, they have been approached from the perspective of site formation processes that break down intact human features on archaeological sites. One of the foundational theories of maritime archaeology, site formation processes were first proposed by Keith Muckelroy in his book *Maritime Archaeology* (1978). Octopuses were classified as ‘scramblers’ by Parker, who describes them as ‘[collecting] small objects to furnish their homes’ (1981, p. 312). However, the octopus is not a process; it is an intelligent being that offers more perspective than it has previously been given credit for.

Regarded as the founder of nautical archaeology, George Bass’ research is a good place to start an inspection of octopus behavior. Bass describes the shipwreck site at Sheytan Deresi and notes a confused mix of material inside one of the ceramic containers called a pithos. ‘[The pithos] lay about 100 ft (30 m) away from the other complete pithos (SD 10), in shallower water (90 ft or 27 m deep) in a sandy area above the rocky slope (Fig. 10.3). Inside this pithos (SD 13) were a number of large rocks, an amphora neck (SD 18), an amphora base (SD 17) and a lead fishing weight (SD 22); we assumed they were carried into the open mouth by an octopus. One sherd in the pithos joined perfectly a sherd uncovered below the distant grid, forming part of SD 8’ (Bass, 1976, p. 295), indicating that an octopus can move an object significant distances and not simply to the nearest interior space. Muckelroy uses this description in his categorization of site formation processes to state, ‘the house-building instincts of the octopus can result in accumulations of potsherds in suitable crannies, including amphorae; this may have been the principal cause of enigmatic distributions recorded on the Sheytan Deresi site in southern Turkey’ (Muckelroy, 1978, p. 181).

---

8 The inherent fallacies in this paradigm are examined in this volume by Sara Rich in *Shipwreck Hauntography* (2021) and in Rich et al., this volume.

This fits with my observations over hundreds of dives in Albania, Croatia, Greece, Italy, and Montenegro, where my mentors taught me to check octopus dens for artifacts as an indicator for a nearby shipwreck. The octopus is, in a certain manner, the first archaeologist to find a site, moving artifacts and collecting them in and around its den, which human archaeologists can then use to make an informed survey to locate the main site. Octopuses also live on shipwrecks, making dens inside *amphorae* or among the timbers of more modern vessels. While recording a 19th-century shipwreck in Bermuda, I felt a tug and looked down to see an octopus grasping my fluorescent green ruler with one tentacle in an attempt to pull it into its den. Texture and the behaviour of light interacting with an object appear to be important to the octopus. Muckelroy therefore underestimated the octopus by declaring only ‘house-building instincts’, as they also collect objects that interest them. Over the course of the season, octopuses made off with pencils and scale bars, and nearly a camera. At the sunken Bronze Age city at Pavlopetri, Greece, an octopus ambitiously grabbed hold of our 2-m shiny steel stadia rod while we were taking measurements. From Sheytan Deresi to current surveys, archaeologists have learned the behaviours of octopuses: their intense curiosity, bordering on mischievousness, and their desire for material objects. What drives these organisms to gather objects? Is it instinctive den-building, as Muckelroy suggests, or does it relate to their intelligence?

## Octopus Consciousness

Octopus consciousness has long been the subject of study, as ‘Cephalopods are evolution’s only experiment in big brains outside of the vertebrates’ (Godfrey-Smith, 2016, p. 160). Their consciousness is distinct from vertebrates, developed under entirely different circumstances. The octopus does not have the majority of neurons in its brain, but instead two-thirds are found in its arms (Godfrey-Smith, 2016, p. 51). They developed 252-66 million years ago during the Mesozoic Marine Revolution, when they discarded their ancestor’s shells in exchange for mobility and intelligence. However, the loss of their shells required them to find or create a protective dwelling (Fig. 10.4). Octopuses are predators and aggressively hunt for prey and fight with other octopuses. They communicate with each other through bright colour changes and displays. However, octopus consciousness is brief as the common octopus (*Octopus vulgaris*) only lives for two years. They live until they reproduce, after which they die, perhaps to prevent competition for the same resources (Godfrey-Smith, 2016, p. 14).

Octopus intelligence, despite its distributed neurons, bears some resemblance to humans. For example, curiosity and touch are common in cephalopods (Godfrey-Smith, 2016, p. 22). Like humans, octopuses possess bilateralism, giving them orientation on the seafloor surface similar to humans on land. Sense of time and space developed early in life on Earth, and there is a shared single-celled ancestor of both humans and cephalopods which could conceive of time and space (Godfrey-Smith, 2016, p. 16). Octopuses have a developed sense of self and ‘other’, and in fact can distinguish between different humans and treat individuals differently (Godfrey-Smith, 2016, p. 19). They display creativity, problem-solving, and even play. In one experiment an octopus used a pill bottle like a bouncing ball to entertain itself (Godfrey-Smith, 2016, p. 31). Play, along with other behaviours, demonstrates the non-subsistence activities that octopuses are known to engage in.



Fig. 10.4. An octopus carries a coconut across the seafloor, climbing inside it as a den when predators are near (Agarianna76/Shutterstock).

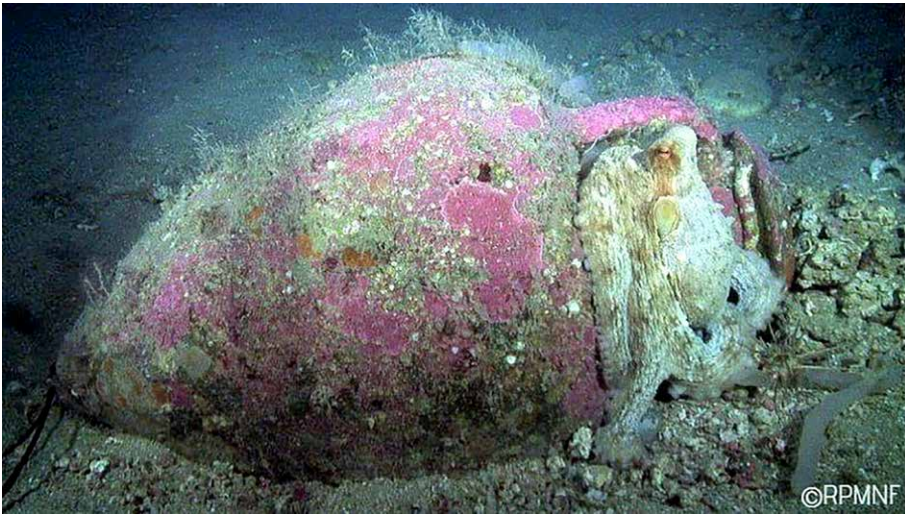


Fig. 10.5. Octopus den, né amphora, on the Battle of the Egadi Islands site (RPMNF/ Soprintendenza del Mare).

However, octopus intelligence also differs considerably. They can think through their arms in distributed intelligence. Their arms are not simply brains, but versatile and sensitive sensory organs, even perceiving light (Katz et al., 2021). Each arm possesses 2000 suckers, each of which is independent. These also have chemical receptors that perceive touch (chemotactile) and distance (olfaction) (Jozet-Alves et al., 2014, p. 152). The arms are both tools and weapons, serving as primary means of predatory behaviour, self-defence, and engaging with the world (curiosity, play, etc.). The arms are used for communication and deception, as octopuses use shape changes to blend into the environment or intimidate other octopuses or species. Octopuses are capable of changing colour for communication and camouflage through colour receptors in the skin. While humans are a social species, octopuses are not, making them an example of non-social intelligence. There is no social teaching or knowledge exchange between generations, as parents die before the young are able to interact with them.

Octopuses undertake what is known as ‘ecosystem engineering’ (Scheel et al., 2018). This consists of modifying the environment to suits their needs, primarily through re-use of materials in den creation. They have excellent spatial awareness, using sites for different purposes, constructing a den where they live, maintaining a territory in which they hunt and collect resources, and identifying egg-laying sites. Figure 10.4 shows an example of an octopus using a coconut for mobile protection (notably not a marine material), transporting it across the open and sandy seafloor where predators might easily catch an unprotected and vulnerable octopus. This demonstrates several key characteristics. First, tool use in the manipulation of an object for its own purposes. Second, forethought to carry the object through areas where it is exposed. It demonstrates planning to meet future needs, as the octopus has to ‘imagine the future and connect the dots between past events, current actions, and future events’ (*Real Science*, 2020). This is, importantly, an understanding of causality. Third, it displays environmental and spatial understanding,

including areas where it might be vulnerable. Fourth, it shows individual thought, as there is no social training among octopuses and the transportable shelter is a novel concept that this octopus had to conceive of rather than being taught.

Perhaps the most impressive example of ecosystem engineering is a site in Australia nicknamed Octopolis (Godfrey-Smith and Lawrence, 2012; Godfrey-Smith, 2016; Scheel et al., 2017, 2018). A group of Gloomy octopus (*Octopus tetricus*) created a series of dens among debris and co-habitat, unusually since octopuses are a non-social species. The site was formed by the deposit of a metal object from a boat and perhaps scallop shells in the 1980s or 1990s (Godfrey-Smith and Lawrence, 2012). There are therefore 30-40 years, or 15-20 generations, of behavioural change and environmental engineering visible on the site. Over the years, the number of scallop shells has increased as the octopuses feed, growing the site and the amount of den-building material. While currently the only known octopus co-habitation site, there may be others since material has been deposited on the seafloor by humans for thousands of years which create oases in the ocean's deserts where octopuses can live.

### **Octopodology: Non-Human Material Culture**

Can a study of octopus material culture be undertaken? This is a human approach to the archaeology of octopus 'culture'. Culture here is without a doubt a problematic term since octopuses are a non-social species; however, it refers to the use of objects in the octopus' environmental engineering, play, and curiosity-driven collection. An examination of the Battle of the Egadi Islands reveals octopus behaviour in the debris field of a battle (Fig. 10.5). The engagement occurred on March 10, 241 B.C. and was the decisive battle of the First Punic War between Rome and Carthage. The survey has run from 2005-2021 and mapped over 270 km<sup>2</sup> of seafloor between the islands of Marrettimo, Levanzo, and Favignana off western Sicily. The battle is spread over a vast debris field and the main concentration of artifacts measures approximately 4 x 2 km (Fig. 10.6). The project has mapped 1,376 artifacts, including 1,092 *amphorae* and ceramics and nearly all display evidence of octopus (*Octopus vulgaris*) use at present or in the past (Tusa et al., 2021, p. 169). The piles of material (e.g., stones, shells, etc.) that develop outside the octopus dens serve as new structures that modify the seafloor and change the flow of the current, leading other species to subsequently inhabit them. These structures remain in use and affect the environment, even years later after the amphora which initially formed the den is removed by fishing nets or archaeologists. Octopolis in Australia provides an estimated 30-40 years of octopus site development, but the Battle of the Egadi Islands provides over 2,250 years of octopus archaeology. While the timespan that the Egadi battle site has been submerged represents approximately 90 generations of humans, it is over a thousand generations of octopuses. Coupled with the fact that the ships were floating for a few years but have been octopus habitation sites for 2,250 years, the site stands as an excellent comparison of human versus non-human archaeology.

The site plan of the battlefield is shown in Figure 10.6, composed of a basemap of multibeam data, which color-codes depths. The lighter colours indicate shallower regions, while darker are deeper. In the centre of the site plan one can see the main concentration of artifacts clustered to the east of a rocky reef system, shown in green. To the east is a flat plain of sandy seafloor, which looks like a lunar landscape when viewed through

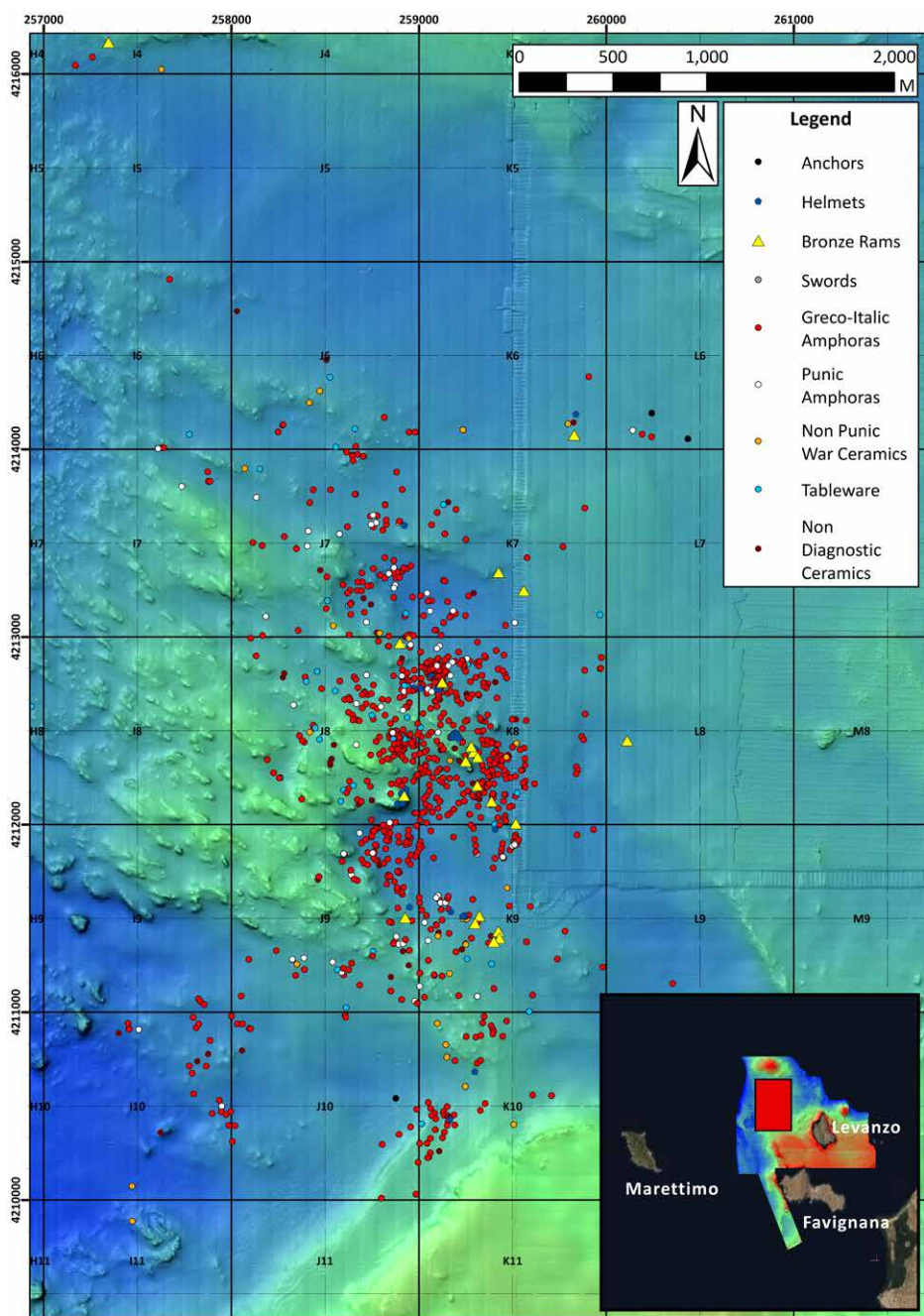


Fig. 10.6. The site plan of the Battle of the Egadi Islands, showing the distribution of artifacts in an area of approximately 6x4km; each grid square measures 1x1km (RPMNF/ Soprintendenza del Mare).

the remotely-operated vehicle's (ROV) cameras. This is a landscape that is not conducive to octopus habitation or hunting, nor is it suitable for other species which typically live among reefs such as eels, fish, and others. However, following the deposition of the battle artifacts, this region became filled with small oases suitable for reef species. As a result, the large sandy plain east of the rocky reef is now inhabited by a wide range of species that could not have lived outside the reefs prior to 241 BC, creating an ecosystem through deposition of the shipwrecks. Most artifacts are no closer than 20 m in proximity to each other, many are further apart, since the ships broke apart at the surface and percolated through the water column to the seafloor. The battle therefore served as a prompt for the current ecosystem, creating inhabitable spaces for the species living on the reef to venture further out into the sandy territory to the east.

Pétursdóttir argues that 'Traditionally, *meaning* in archaeology is constructed through the inherent, hierarchical ordering of archaeological assemblages confined to certain localities, and relations between these' (2017, p. 196). These criteria are found with the octopus' dens and territories. The octopuses demonstrate spatial awareness and a cognitive map of the territory that they collect resources within. At the Sheytan Deresi shipwreck, the octopus could distinguish its den in a specific pithos from the other *pithoi* on site. At Egadi, it is the same. Octopuses have large territories for hunting and they bring prey, as well as objects that they collect, back to their dens from this catchment area. The seafloor is largely non-descript, with stones and other objects few and far between. Upon arrival at an amphora, however, one immediately sees a cluster of objects surrounding it. These represent generations of octopus foraging, collecting shellfish, stones, and artifacts around their den. If looking for a human parallel, this would be termed a shell midden, which are key features of human habitation sites, especially in prehistoric societies (Gamble, 2008, p. 142). There is also an awareness of temporality, so far as the octopus life cycle, as each octopus site is occupied for two years and then re-organized by the next inhabitant.

Within the dens, there are three categories of objects that octopuses have made use of. The dens on the Egadi site are composed of ceramics, typically *amphorae*, bronze helmets and warship rams, or piles of artifacts, stones, and shells. These dens serve as dwellings, as well as locations for attaching eggs. Inside the dens are occasionally found the beaks of octopuses, the only hard object in their bodies that preserves, indicating their death due to age or consumption by predators. The first category of object associated with the den is, naturally, food items and much of the material around the entrance to dens are indigestible material from food sources, such as scallop shells (Fig. 10.7, left side). These discard piles create shell middens. In natural areas without *amphorae* these discard piles can be re-formed as building material to make new dens.

Second, octopuses maintain doors for their dens, which are flat or wide objects which can be held over the entrance when they are inside the den to block predators (Fig. 10.7c). The rocks are brought to the den from the surrounding region; in the area of the Egadi battle they must have been brought from quite a distance, as rocks are uncommon on the sandy seafloor. These 'doors' are always at hand, or tentacle, ready for deployment. While not constructed or modified, the doors represent conscious tool use and are, in fact, composite tool use of the den and door. Figure 10.7 demonstrates door use in an amphora den. If one views the video stills in sequence, one can see the octopus focused on the 1.5-ton ROV robot outside its den. It subtly and skilfully pulled the rock resting on



Fig. 10.7. A series of video frames showing an octopus demonstrating the door or shield method of protection, as it reaches out of the amphora to grasp stones and pull them into the mouth of the amphora (RPMNF/Soprintendenza del Mare).

top of the scallop shell with one tentacle. Note the twin scallop shells outside the amphora. Both are placed upside down and are equidistant from the entrance, and both contain large stones that can block up the entrance. Whether this placement of 'doors' on scallop shells is coincidence or purposeful is unknown, but certainly the mapping of octopus dens as sites warrants further study.

Third, octopuses collect objects of interest, which are neither food items nor objects that serve a functional purpose. Significantly, while items of categories 1 and 2 are typically kept at the entrance to the den, category 3 are often kept inside the den. It was noted earlier that octopuses will steal objects that have weight, colour, textures or affect light behaviour differently from those in the surrounding environment. Touch and curiosity are key features of cephalopods, and non-marine and unusual objects appear to be curiosities for octopuses. Inside amphoras that have been converted into dens, archaeologists have found ceramics, nails, bronze pieces, and ballast stones (Fig. 10.8). The objects found inside the amphoras differ from those outside, which is evidently part of a housekeeping element within the den. There is, then, a separate relationship between the objects outside the den (food remains and protective tools) versus the inside (curiosities). If one examines the objects in the den through the lens of the assemblage's relationships, there are strong relations between the den-amphora and categories 1 and 2, as their spatial relationships fit interconnected roles of protection and subsistence. However, category 3 has weak relationships with the rest of the assemblage. These objects have no relation to the other objects, but instead relate to the octopus' emotional response to their sensual characteristics.<sup>9</sup>

Octopus tool use, either with the portable coconut 'shell' or the prepared rock 'doors', raises the question of whether octopuses theorize. As discussed earlier, they are able to conceptualize space and problematize, as readily evident in the use of the coconut shell as a portable tool to cross open areas where they are at risk. In Figure 10.7, does the octopus consider the stone within its relations to the shell it rests upon, the entrance to the amphora, and its own vulnerable fleshy body? Would an eight-limbed Heidegger distinguish between ready-to-hand and present-at-hand if its brain is in its hand (Heidegger, 2010) – in other words, is use and theorizing separate for the octopus? The octopus' distributed neurons may result in the den assemblage being ready-at-tentacle for unconscious use in the manner of humans, but equally it could mean there is no distinction for the cephalopod.

In *Tool-Being*, Harman argues that Heidegger misunderstood that present-at-hand in fact reflects that objects are withdrawn from humans, but also other objects (Harman, 2002, pp. 2–6). The octopus, living inside a post-human amphora at the bottom of the sea, which is also colonized by a dozen invertebrate species, likely has some understanding of the inexhaustibility of objects. Unlike Heidegger's hammer, the octopus' tools already exist as many things. Olsen argues that Norwegian fishermen are aware of the OOO nature of objects, even if they do not read contemporary philosophy. He writes, 'these very northern fishers knew well the OOO wisdom that the boat (as well as the sea) is more than what it is doing at any moment and, and their use did not at any time fully exhaust its reserve of

---

9 This is exempting the non-octopus lives of the objects, but the focus here is on the deposition of the assemblage by the octopus.



Fig. 10.8. A conservator catalogues the items found inside an amphora found on a shipwreck site in Fournoi, Greece, which included ballast stones, tableware, amphora fragments, lead sheathing, shells, and natural stones, much of which was likely brought inside by octopuses (Author; Fournoi Underwater Survey).

potentials’ (Olsen, this volume). The same may be true for the octopus, who interacts with objects in a myriad of ways while immersed in the hyperobject ocean.

When examining amphora re-use as an octopus den, it is evident that it is not the same as colonization by non-conscious species like sponges and corals. Instead, octopuses repurpose the interior space, modify it and the exterior environment, and form a collection of tools and materials that appear to have meaning to the inhabitant. Therefore, using an archaeological approach, it is possible to construct meaning from an octopus assemblage. There is a dwelling and shell midden, three categories of material objects forming the den and its use, as well as beak remains and territories. This is, however, a human approach to non-human archaeology and, as the following discussion examines, the octopus might conceive of things quite differently.

### Discussion

140 million years ago the octopus discarded its shell, giving it mobility and intelligence, but requiring it to find or create a dwelling. 4.2 million years ago *Australopithecus* stood on the plains, leaving the safety of the trees. Both octopus and human are beholden to our origins and creating material existences, the octopus a den and humans a social

connection. Octopuses pile detritus to create their homes. Walking the vast underground voids of pozzolana mines outside Rome, one cannot help but think that humans, too, pile up materials to create our homes.<sup>10</sup> Ecosystem engineering is evident with both, with the primary difference being the extent of the metamorphosis of the material.

So far, we have, quite purposefully, considered octopus dens in human terms – settlements, shell middles, conceptual space and territory, etc. The purpose was to demonstrate a consciousness in the material record of octopuses. Now we must consider the human material culture from the octopus' perspective, an altogether different exercise. This is something unknowable and recalls Thomas Nagel's 'What Is It Like to Be a Bat?' (1974), where human conception of what it is to be a bat is outside our conception since we have not been a bat from birth. In *Speculative Annihilationism*, Matt Rosen considers the material culture from the Lomekwi 3 site, which was created approximately 3.3 million years ago by *Australopithecus* (2019, p. 4). How can human archaeologists interpret the material record of a non-human species, although hominin, that has been extinct for over a million years? We know practically nothing about *Australopithecus* and imagining one becomes a correlationist trap. The archaeologist is interpreting 'what it would be like for a human (and a human in our time and in our culture and with our scientific method, etc.) to imagine being the *Australopithecus* who made or used these artifacts' which is quite different to an objective examination of the *Australopithecus* (Rosen, 2019, p. 9). While *Australopithecus* was a hominin species with a related physiology, the octopus takes us even further afield. This is, then, a thought experiment with a human in the guise of an octopus. We must, as Flusser and Bec argue for the vampire squid, adjust the mirrors to view ourselves from the octopus' perspective. The minds of cephalopods are inaccessible but imaginable (Flusser and Bec, 2012, p. 30).

The octopus inhabits a world that is not simply composed of objects in immediate view, but one in which the octopus conceives of space and objects, arranging them to suit its needs. The Egadi battle is an exceptional example, as where humans see the carnage of a battle, the octopus sees a relative utopia of ideal homes. The battle deposit increased the octopus' range from the western rocky reef into the eastern sandy plains, allowing them shelter in new regions. It must have expanded the population and, though octopuses do not share information socially or from parent to child, led to generations of octopuses modifying their environments based around amphora dens. As these generations of octopuses created and maintained spatial territories for hunting and exploration, they brought artifacts, stones, shells, and other materials to these nodes in the landscape. It is evident from the categories of objects discussed above that octopus 'materials' are focused on arranging and re-use, modifying the environment to suits its territory. However, the third category suggest that individual octopuses collected curiosities with no functional or subsistence purpose. Within this category lies something we might recognize as culture. Based colour, weight, feel, chemical taste or smell, or behaviour in light, the octopus seemingly finds meaning in these objects and brings them into its protected space within its environment. While biologists have observed octopus 'play' with artificial objects in a

---

10 While exploring the mines with the author, Duncan Keenan-Jones observed that for all the building upwards in Rome, there was an equal quarrying downwards in pozzolana, stone, and other materials.

lab, there is little understanding of these types of behaviours in nature. Archaeological sites may offer insight into thousands of generations of the octopus mind.

The octopus experiences our material culture as alien. Whereas humans often create through reductive (e.g., woodworking, stonework, butchering) or additive (e.g., ceramics, textiles, metallurgy) processes (Gamble, 2007, p. 141), conception of these processes is foreign to the octopus who relies on foraging and adaptive re-use. As a social species, humans are interested in evidence for – and developing theories of – cultural and societal change. However, as a non-social species an octopus archaeologist would not share that approach. The octopus might wonder what the amphora meant to an individual and, as a result, we might better consider a *den assemblage* and its meaning to the individual octopus that collected the objects – a difficult challenge using the social methods that humans have developed. The octopus would be focused on individual motivations: hunger, protection, procreation, play or curiosity, and how these manifest materially. If human archaeologists perhaps err too much toward social-ritual interpretations, then the octopus might focus on individual-material interpretations. The individualism of the octopus offers an alternative to the social nature of humans when considering non-human archaeologies.

The octopus would also focus on material aspects of artifacts rather than their appearance. As our species first stood upright to look out for predators and resources, sight became the dominant sense for experience and language. Sight is the means of conceiving knowledge and communicating that conception. The male gaze, as identified by Feminist Theory, highlights the primacy of sight among humans. Therefore, human study relies primarily on visual data collection and presentation, rather than our other senses. There is, then, a difference with the octopus, who primarily experiences its world through the touch of their tentacles. It is, however, a fundamentally different touch from that of humans, as each tentacle possesses chemical receptors and neurons. It is as if the octopus probes an object with touch, chemical ‘smelling’ or ‘tasting’, and its mind, so conception and knowledge may be understood through grasping or holding. When examining new materials brought to its environment in the fieldwork examples discussed earlier, the octopus grasped the objects in order to interrogate them. When Flusser and Bec ask ‘Is it the same world, only seen from a different perspective?’ (Flusser and Bec, 2012, p. 30), the octopus might pose the question about humans by asking, ‘Is it the same world, only held-thought from a different perspective?’

The octopus conceives of humans, in an octopocentric manner, as a fellow surface dweller, but in Earth’s second ocean. The atmosphere is less dense than the water, but it is an ocean of air that separates us from the vacuum of space. Because we exist within the atmosphere we rarely conceive of it in this way, but it would be evident from the octopus’ perspective. The question, ‘do fish perceive water?’ could be asked of humans and air, as it is easy to overlook the atmosphere-ocean as an entity we exist within. If the cephalopod archaeologist were able to study our being, it would see us as surface dweller in the atmosphere ocean, creating dwellings that we heap up in a similar manner to themselves. We also take mobile ships across open, vulnerable spaces much as the octopus does with coconuts on open seafloor. The octopus might find kin with us as both predators and prey that possess vulnerable fleshy bodies that require dens on the bottom of oceans – albeit different densities - through ecosystem engineering.

## Reflexivity and Alien Archaeologies

While archaeology is often a mirror for our own values, in the octopus we find consciousness and evidence that material culture may not solely be the domain of humans. After considering octopodology, it is worth examining the prerequisites for archaeology extracted from the anthropocentrism. What is required for the study of material remains to understand consciousness in a species' actions?

- Does the organism have a sense of time and space?
- Does it show an understanding of the connection between past events, current actions, and future events?
- How does the organism orient their world? Is it surface dwelling or pelagic?
- Does the organism have a sense of self and other?
- Is the organism social or non-social?
- Does the organism undertake ecosystem engineering? Does this include materials that are preserved as a physical record?
- What behaviors are observable? Are these subsistence or non-subsistence behaviors?
- Does the organism attribute meaning to certain objects or environmental features?

These questions aim to broadly address material records of 'other minds' and aid the interpretation of material records created by non-humans. Much of archaeology has focused on understanding large-scale social behaviour through material remains, but the octopus demonstrates that social behaviour is not a prerequisite for consciousness or material remains that reveal information about the past. Instead, it is evident that a conception of self and other may be more important than social systems, as this is fundamental to consciousness. The questions serve as a guide, while attempting to minimize our anthropocentric biases.

## Conclusion: Oceanic Thought and Pelagic Being

The persistence of human objects in the sea meets with a consciousness older than our own, resulting in the octopus re-using archaeological materials as part of their ecosystem engineering. Despite our physical differences, the octopus and human are surface dwellers, one on the seafloor and the other on atmosphere-floor. Our bodies evolved as bilateral and our conception of the world is inherently surface-based. There is another, more alien, form of being that is worth considering: the surface-free and unencumbered pelagic being where the majority of Earth's biomass experiences life. Free-floating species exist devoid of surfaces, boundary-less in an ever-changing environment of water and currents. Whereas elements of existence are recognisable in the surface dwelling of the octopus, pelagic-being is quite alien. For this we return to Flusser and Bec's vampire squid living in the ocean abyss. If humans wish to consider alien archaeologies then we need to venture outside our self-limiting views and unbound our thought from surfaces. If one day humans conduct archaeology in space, it will not be on a surface but hurdling at 27,500 km per hour in space around the planet – a pelagic proxy.

Pelagic is a term that refers to the intermediate zone within the ocean's stratigraphy. Imagine a water column from the deep ocean to the surface. At the bottom are the benthic and demersal layers, where creatures inhabit the seafloor surface. Between the

surface that interacts with the atmosphere and the seafloor are the pelagic layers, from near surface epipelagic to the deep mesopelagic inhabited by the vampire squid. Pelagic being consists of a multitude of creatures, from the most plentiful species on Earth – the microscopic plankton – to the largest on the planet – the blue whale. Pelagic species are diverse in nature, but share one commonality: they live free of surfaces, free floating or swimming in an enormous environment.

Rarely do humans consider pelagic being and, initially, one might think that there is little material culture in the pelagic zone. However, archaeology is present. There is the exceptional, such as a whale that carried a stone harpoon in its side for 133 years (George et al., 2011), to the commonplace, such as microplastics which float endlessly throughout the oceans and form a global layer (Cole et al., 2011). Then there are the much larger and troubling trends, such as shark migrations that shifted, not temporarily, but permanently through deepwater areas due to the European slave trade as the enslaved were murdered by drowning in the thousands (Rediker, 2008; Samuelson, 2018). Pelagic being is culturally shaped, such as the shark migration patterns, and culturally shaping as seen with political entities, such as the Hanseatic League, and settlements, such as Copenhagen, would not exist without the pelagic herring.

However, more than archaeology, pelagic thought is useful as a metaphor and device for thinking differently, rejecting the conception of surfaces and moving toward a truly oceanic perspective. This is because the ocean is an exceptional example of objects in OOO, where the real object is pelagic, but we perceive only interactions at surfaces. We most often interact with the surface of the ocean and relatively shallow depths (e.g., sailing, swimming, etc.) and the seafloor surface (e.g., diving, dredging, mining, etc.). As evident in maritime archaeology, marine legislation, and literature, humans conceive of the ocean from the perspective of these surfaces. However, the ocean, the *real* ocean, is primarily pelagic with all of its great scale, mass, and pressure. Absent a surface to stand on, humans only see water and consider it – without form or landmarks – to be nothing. Lacking interaction between surfaces to display change (e.g., storms and erosion) humans have difficulty conceiving of time and space. I raise this not only to be reflexive about how human perception and thought are surface-oriented, but because the ocean is a wonderful example of objects in OOO. Objects are withdrawn and it is only their sensual characteristics that interact with other objects (and us). Objects can be conceived as pelagic and we typically only interact with surfaces. Humans only interact with the edges of the ocean, and its surfaces where it touches the atmosphere and land. However, the ocean interacts with the moon, creating currents, and the atmosphere interacts with the sun, creating winds. The greatest storms rage at the interface of the ocean and atmosphere, the ocean absorbs the forces such that a calm exists throughout the ocean's depths except for the small layer where the sensual characters interact.<sup>11</sup> Human perception of the sea is shaped by a small proportion of the vast waters. Accounts of the ocean leap from the surface to the seafloor, where the waters are in contact with the atmosphere or Earth

---

11 There is opportunity for life in these interaction zones, however. Where objects interact, such as land and sea, or sea and atmosphere, life experiences an efflorescence. In an object-oriented ecology, tide pools, for example, and are among the world's most diverse ecosystems.

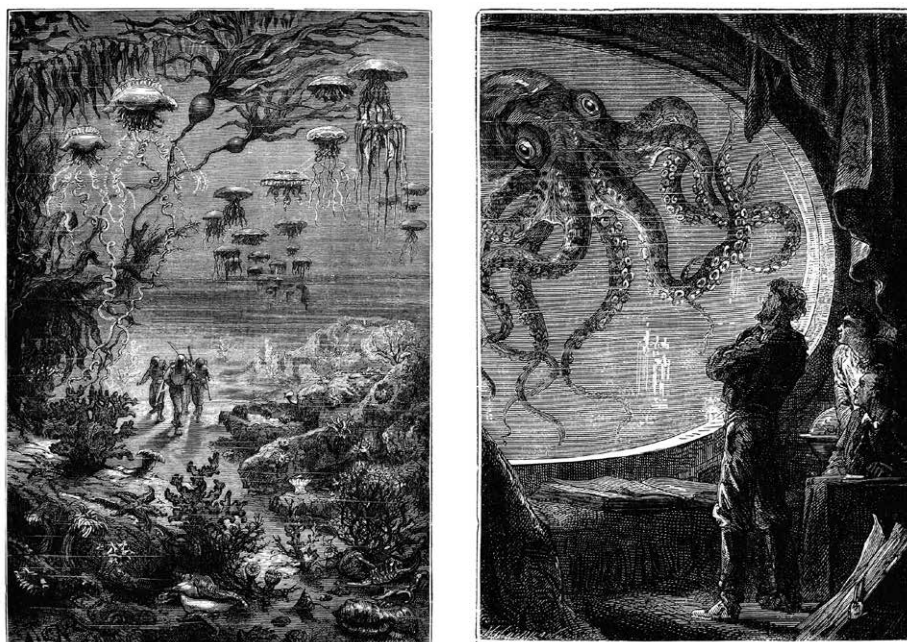


Fig. 10.9. Jules Verne conceived of humans inhabiting the seafloor surface as they do on land, despite the movement of the submarine *Nautilus*, and the mesopelagic species such as jellyfish and giant squid are portrayed as alien and terrifying (Alphonse de Neuville).

and interactions animate the objects, but away from the surfaces – withdrawn and imperceptible – is the vast, real object.

What does this mean? Our understanding of the ocean is that of surfaces, where the ocean object interacts with objects such as the atmosphere and land. Within the excluded area is the heart of the ocean, the pelagic space that drives global climate and weather, and the water cycle that sustains life on Earth. It is as if the ocean is a book and humans focus on the front and back cover, while the bulk remains largely unread as humans skim between surfaces. As the Blue Humanities and Oceanic Thought have been a means of gaining new perspective by thinking through the sea (Mentz, 2009; Steinberg and Peters, 2015), Pelagic Thought can build on these and attempt to break humans of our dependence on surfaces. Surfaces are deeply ingrained in our conception of being and the world. There is no better evidence of humans as surface-thinkers than when, in 2010, Russia planted its flag on the seafloor at the North Pole. Located under 4,261 m of water and meters of ice, it is unviewable to any human and meaningless to sea creatures, existing as a dark artifact. Meanwhile, in the surrounding water, pelagic thermonuclear reactors at the heart of war machines pass by each other to transport warheads that can destroy entire cities on the surface, manned by hundreds of humans who can neither look outside nor perceive the environment they float through. Instead, they pass dumbly, deprived of organic senses or tactility, seeing through sound waves that bounce off the surfaces of the marine environment to ensure their pelagic bubble is preserved intact.

In *Twenty Thousand Leagues Under the Sea*, Jules Verne conceived of Captain Nemo's crew living and collecting resources from the seafloor as if the surface of the land (Fig. 10.9). The pelagic beings in Verne's conception of the ocean, such as the giant squid and jellyfish, are portrayed as strange and displaying otherness. Pelagic life is even more alien than the octopus. The vampire squid is said to dwell in 'nothingness' because there is no surface that we recognize as a place to dwell. But the squid might see it as dwelling in 'everything' because its pelagic home is near limitless mobility. The squid exists fully in its environment in every direction, not simply on a surface. When turning to look back at ourselves from the squid's perspective we can see how much of our thought is framed by our existence on surfaces. Pelagic thinking might offer a greater perspective moving forward. The transformative challenge of the Anthropocene is experienced throughout existence from the molecular to planetary scale. The 'aggregate monstrosity' permeates every aspect of Earth from soil to water to air (Witmore, 2019, p. 143). The Anthropocene is, then, pelagic in that it inhabits both very small (e.g., DNA) and immense (e.g., global climate) spaces at once, absorbing and enmeshing life on Earth. Addressing the persistence of Anthropocene objects will require humans to look beyond surface-thinking, adopting new perspectives about the afterlives of objects and moving away from the human mindset that led us to the present circumstances.

## Works Cited

- Abulafia, D. (2019) *The Boundless Sea: A Human History of the Oceans*. London: Allen Lane.
- Bass, G.F. (1976) 'Sheytan Deresi: Preliminary Report', *International Journal of Nautical Archaeology* 5(4), pp. 293-303.
- Bruchac, M. (2014) 'Decolonization in Archaeological Theory', in C. Smith (ed.), *Encyclopedia of Global Archaeology*. New York: Springer, pp. 2069-2077.
- Bryant, L.R. (2014) *Onto-Cartography: An Ontology of Machines and Media*. Edinburgh: Edinburgh University Press.
- Campbell, P.B. (2020) 'The Sea as A Hyperobject: Moving Beyond Maritime Cultural Landscapes', *Journal of Eastern Mediterranean Archaeology Heritage Studies* 8(3), pp. 1-22.
- Cole, M., P. Lindeque, C. Halsband, and T.S. Galloway (2011) 'Microplastics as Contaminants in the Marine Environment: A Review', *Marine Pollution Bulletin* 62(12), pp. 2588-2597.
- Dolwick, J.S. (2008) 'In Search of the Social: Steamboats, Square Wheels, Reindeer and Other Things', *Journal of Maritime Archaeology* 3(1), pp. 15-41.
- Flusser, V. and L. Bec (2012) *Vampyroteuthis Infernalis: A Treatise, with a Report by the Institut Scientifique de Recherche Paranaturaliste*. Minneapolis: University of Minnesota Press.
- Gamble, C. (2007) *Origins and Revolutions: Human Identity in Earliest Prehistory*. Cambridge: Cambridge University Press.
- Gamble, C. (2008) *Archaeology: The Basics*. 2<sup>nd</sup> ed. New York: Routledge.
- George, J.C., E. Follmann, J. Zeh, M. Sousa, R. Tarpley, R. Suydam, and L. Horstmann-Dehn (2011) 'A New Way to Estimate the Age of Bowhead Whales (*Balaena mysticetus*) Using Ovarian Corpora Counts', *Canadian Journal of Zoology* 89(9), pp. 840-852.
- Glissant, É. (1997) *Poetics of Relation*. Ann Arbor: University of Michigan Press.

- Godfrey-Smith, P. (2016) *Other Minds: The Octopus, the Sea, and the Deep Origins of Consciousness*. New York: Farrar, Straus and Giroux.
- Godfrey-Smith, P. and M. Lawrence (2012) 'Long-Term High-Density Occupation of a Site by *Octopus tetricus* and Possible Site Modification Due to Foraging Behavior', *Marine and Freshwater Behaviour and Physiology* 45(4), pp. 261-268.
- Haraway, D.J. (2016) *Staying with the Trouble: Making Kin in the Chthulucene*. Durham: Duke University Press.
- Harman, G. (2002) *Tool-Being: Heidegger and the Metaphysics of Objects*. Chicago: Open Court.
- Harman, G. (2016) *Immaterialism*. Cambridge: Polity Press.
- Heidegger, M. (2010) *Being and Time*, J. Stambaugh (trans.). Albany: State University of New York Press.
- Hudson, M.J. (2014) 'Dark Artifacts: Hyperobjects and the Archaeology of the Anthropocene', *Journal of Contemporary Archaeology*, 1(1), pp. 82-86.
- Hymes, D. (1999) *Reinventing Anthropology*. Ann Arbor: University of Michigan Press.
- Jozet-Alves, C., A.-S. Darmaillacq, and J.G. Boal (2014) 'Navigation in Cephalopods', in A.-S. Darmaillacq, J. Mather, and L. Dickel (eds), *Cephalopod Cognition*. Cambridge: Cambridge University Press, pp. 150-176.
- Katz, I., T. Shomrat, and N. Neshet (2021) 'Feel the Light – Sight Independent Negative Phototactic Response in Octopus' Arms', *Journal of Experimental Biology*, jeb.237529.
- Kirksey, S.E. and S. Helmreich (2010) 'The Emergence of Multispecies Ethnography', *Cultural Anthropology* 25(4), pp. 545-576.
- Landsberg, T. (2018) 'Krone Oder Eimer? Wenn Archäologen Irren', *MSN*, 27 December. Available at: <https://www.msn.com/de-at/nachrichten/wissenundtechnik/krone-oder-eimer-wenn-archäologen-irren/ar-BBRtD1Q?li=BBqg9qG> (Accessed: 17 December 2022).
- Liboiron, M. (2016) 'Redefining Pollution and Action: The Matter of Plastics', *Journal of Material Culture* 21(1), pp. 87-110.
- Malm, A. (2018) *The Progress of This Storm*. London: Verso.
- McCoid, C.H. and L.D. McDermott (1996) 'Toward Decolonizing Gender: Female Vision in the Upper Paleolithic', *American Anthropologist* 98(2), pp. 319-326.
- McDermott, L. (1996) 'Self-Representation in Upper Paleolithic Female Figurines', *Current Anthropology* 37(2), pp. 227-275.
- Mentz, S. (2009) 'Toward a Blue Cultural Studies: The Sea, Maritime Culture, and Early Modern English Literature', *Literature Compass* 6(5), pp. 997-1013.
- Morton, T. (2013) *Hyperobjects: Philosophy and Ecology after the End of the World*. Minneapolis: University of Minnesota Press.
- Morton, T. (2016) *Dark Ecology: For a Logic of Future Coexistence*. New York: Columbia University Press.
- Muckelroy, K. (1978) *Maritime Archaeology*. Cambridge: Cambridge University Press.
- Nagel, T. (1974) 'What Is It Like to Be a Bat?', *Philosophical Review* 83(4), pp. 435-450.
- Olsen, B., M. Shanks, T. Webmoor, and C. Witmore (2012) *Archaeology: The Discipline of Thing*. Berkeley: University of California Press.
- Parker, A.J. (1981) 'Stratification and Contamination in Ancient Mediterranean Shipwrecks', *International Journal of Nautical Archaeology* 10(4), pp. 309-335.
- Pétursdóttir, Þ. (2017) 'Climate Change? Archaeology and Anthropocene', *Archaeological Dialogues* 24(2), pp. 175-205.
- Pilaar Birch, S. (2018) *Multispecies Archaeology*. New York: Routledge.

- Real Science, (2020) 'The Insane Biology of the Octopus', *Real Science*, November 14. Available at: [https://www.youtube.com/watch?v=mFP\\_AjJeP-M](https://www.youtube.com/watch?v=mFP_AjJeP-M) (Accessed: 17 December 2022).
- Rediker, M. (2008) 'History from Below the Water Line: Sharks and the Atlantic Slave Trade', *Atlantic Studies* 5(2), pp. 285-297.
- Rich, S.A. (2021) *Shipwreck Hauntography: Underwater Ruins and the Uncanny*. Amsterdam: Amsterdam University Press.
- Rosen, M. (2019) *Speculative Annihilationism: The Intersection of Archaeology and Extinction*. Alresford: Zero.
- Samuelson, M. (2018) 'Thinking with Sharks: Racial Terror, Species Extinction and the Other Anthropocene Fault Lines', *Australian Humanities Review* 63, pp. 31-47.
- Scheel, D., S. Chancellor, M. Hing, M. Lawrence, S. Linquist, and P. Godfrey-Smith (2017) 'A Second Site Occupied by *Octopus tetricus* at High Densities, with Notes on Their Ecology and Behavior', *Marine and Freshwater Behaviour and Physiology* 50(4), pp. 285-291.
- Scheel, D., P. Godfrey-Smith, S. Lindquist, S. Chancellor, M. Hing, and M. Lawrence (2018) 'Octopus Engineering, Intentional and Inadvertent', *Communicative & Integrative Biology* 11(1), e1395994.
- Shanks, M. (1995) 'Archaeological Realities: Embodiment and a Critical Romanticism', in M. Tusa and T. Kirkinen (eds), *The Archaeologist and Their Reality: Proceedings of the 4th Nordic TAG Conference*. Helsinki: University of Helsinki, pp. 1-30.
- Sinamai, A. (2020) "'We are Still Here": African Heritage, Diversity and the Global Heritage Knowledge Templates', *Archaeologies* 16(1), pp. 57-71.
- Steinberg, P. and K. Peters (2015) 'Wet Ontologies, Fluid Spaces: Giving Depth to Volume Through Oceanic Thinking', *Environment and Planning D: Society and Space* 33(2), pp. 247-264.
- Throckmorton, P. (1964) *The Lost Ships: An Adventure in Undersea Archaeology*. Boston: Little, Brown, and Company.
- Tusa, S., P. Campbell, M. Polakowski, W. Murray, F. Oliveri, C. Buccellato, A. Fresina, and V. Li Vigni (2021) 'The Battle of the Aegates Islands, 241 BC: Mapping a Naval Encounter, 2005-2019', in C. Prescott, A. Karivieri, P. Campbell, K. Göransson, and S. Tusa (eds), *Trinacria, 'An Island Outside Time': International Archaeology in Sicily*. Oxford: Oxbow, pp. 167-179.
- Ward, I.A.K., P. Larcombe, and P. Veth (1999) 'A New Process-Based Model for Wreck Site Formation', *Journal of Archaeological Science* 26(5), pp. 561-570.
- Westerdahl, C. (1992) 'The Maritime Cultural Landscape', *International Journal of Nautical Archaeology* 21(1), pp. 5-14.
- Witmore, C. (2007) 'Symmetrical Archaeology: Excerpts of a Manifesto', *World Archaeology* 39(4), pp. 546-562.
- Witmore, C. (2019) 'Hypanthropos: On Apprehending and Approaching That Which is in Excess of Monstrosity, with Special Consideration Given to the Photography of Edward Burtynsky', *Journal of Contemporary Archaeology* 6(1), pp. 136-153.

# Water as a Hyperfact

Johan Normark

## Abstract

Most entities studied by archaeologists share the same basic necessary conditions. They are limited spatiotemporal units which are continuous within a human frame of sensorial reference. These entities cannot dissolve into their constituent parts without affecting their function, capacity, and morphology. Further, they usually occupy one physical state at a time. The *hyperfact*, on the other hand, is vastly distributed, it can dissolve into most of its parts without affecting its ‘essence’, and it can be in several physical states at the same time. Water is a typical hyperfact, existing on multiple scales, from molecules to the hydrological cycle. In this text I show how local manifestations of this hyperfact can be found in ceramics, architectural features, agriculture, water management systems, and regional settlements of the Coahuah region in southern Mexico.

*Reprint of Normark, Johan. 2014. Water as a Hyperfact. Current Swedish Archaeology 22:183-206.*

## Water Is Neither Natural Nor Cultural

Water is one of the most common substances humans deal with but at the same time it is one of the least studied archaeologically. Indeed, Edgeworth (2011, p. 26) states that water (or rather the river) is the ‘dark matter’ of landscape archaeology. The traditional dichotomy between realist/materialist and idealist approaches dominates views of water in archaeology. In materialist accounts water is the source of power and control through irrigation, drinking, seafaring, etc. (Davies 2008; Scarborough 2003). In traditionally ‘idealist’ (and constructionist) approaches the role of water as a symbol, metaphor, or discursive element is vivid (Strang. 2004; Tvedt and Oestigaard, 2010). In this dichotomy between materialist/scientific and idealist/humanistic approaches the division between nature and culture remains important.

Although Tvedt and Oestigaard (2010) criticize the division, it is still central to their text. In their own words: ‘nature and the physical water world, and society and culture,

exist as two distinct systems, and this differentiation is indispensable and real' (Tvedt and Oestigaard, 2010, p. 8). I disagree. When water is argued to be 'natural' one ignores that the concept of nature itself has some 'cultural' qualities such as hierarchy, authority, harmony, purity, neutrality, and mystery (Morton, 2010, p. 3). There is also a distinction between nature and culture in Edgeworth's (2011, p. 26) study on rivers, even though he suggests we should overcome this divide. For Edgeworth '*most rivers are neither natural nor cultural,*

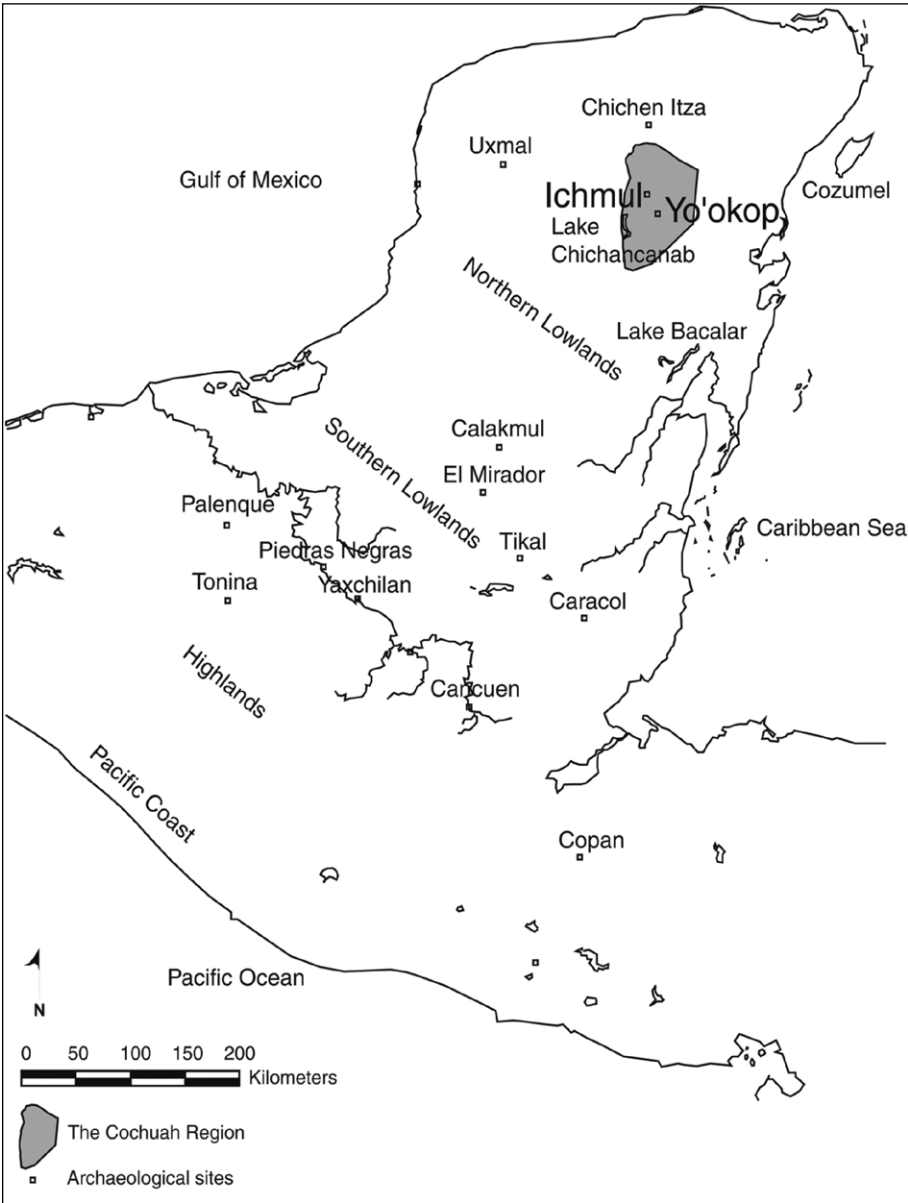


Fig. 11.1. The Maya area and location of the Cochuah region.

*but rather entanglements of both'* (Edgeworth, 2011, p. 15, emphasis original). I rather see these rivers as entanglements of many objects that are neither natural nor cultural.

This dichotomy is mirrored in Maya studies, from where I will draw most of my archaeological examples in this text (Fig. 11.1). Scarborough (1998, 2003), Lucero (2002), and Davis-Salazar (2006) have explored aspects of water management and its economic and socio-political role, cave specialists emphasize the ritual and symbolic importance of water (Prufer and Brady, 2005), and palaeoclimatologists see the availability of rain and moisture as determinant of agricultural potentials (Gill et al., 2007; Hodell et al., 2007). Some Mayanists have taken a broader perspective on water/sea, including water as a medium for transport (Finamore and Houston, 2010).

The above perspectives on water set the human and/or the culture in the centre where human agents or society (often as a totality) exploit or symbolize water resources or are affected by water's presence or absence. For example, Houston (2010, p. 72) argues that the ancient Maya conceptualized waters as living beings that 'redefined the nature of water from physical substance to a creature with its own will and capacity for action: now a living being and no longer a thing'. This quotation suggests that the Maya redefined an inert physical substance as a living being, as if they made such a distinction in the first place. This separation, where inorganic things are inanimate, is a hylomorphic view. *Hylomorphism* is Aristotle's idea that matter is inert and its various forms can only be received through an external agency (Bonta and Protevi, 2004). I doubt that the ancient Maya separated 'physical substance' from 'living' beings. This distinction is relevant to a Western intellectual tradition and reflects the problems of making a distinction between the animate and the inanimate. Houston (2014) emphasizes that to the Maya most materials had animistic qualities, but they are specific to the Maya. However interesting these perspectives are, these are not at issue in this article. This article will take us where few social scientists and humanists studying water have gone; it will look at water from 'its own' *hydrocentric* perspective.

## **Matter Is No Matter**

The past three decades of archaeological discourse have revolved around concepts like material culture, materiality, materialism, materials, materialization, and matter. Ingold (2007) points out problems with the term materiality, although it is the root concept of matter that poses the original problem. Although matter often is defined as anything that has volume and mass, the word stems from the Latin word *materia*. The Greek equivalent is *hyle* (wood, timber), or particularly wood which is given a form by a craftsman (Liedman, 2006, pp. 69-77). The term matter therefore derives from the ancient hylomorphic idea. It is a passive substance.

In the past decade various archaeological studies have become influenced by *posthumanist* and/or *new materialist* ideas, collectively referred to as *process-relationism* (Normark, 2006, 2010; Olsen, 2007; Witmore, 2007). Usually these perspectives either *undermine* objects by proposing a more fundamental process behind/within objects, as in Deleuze's virtuality, or they *overmine* the objects by claiming they exist because of their external relations, as in Latour's work (Harman, 2009). Thus, matter is seen as the result of an immanent process and/or part of a greater network. Object-oriented philosopher Graham Harman (2011a) suggests that matter (and its cognates by extension) relate to

an idealist perspective rather than a realist one. Matter exists nowhere, not in atoms, quarks, and strings. For these reasons it is a term seldom used in contemporary physics, chemistry, etc. Matter is therefore an idealist concept that refers to no known real substratum. Although Bryant (2014) defends matter and materialism as realist terms, I choose to follow Harman in this regard.

Posthumanism and new materialism maintain a *correlationist* approach (Meillassoux, 2008). Correlationism is the idea, traced back to Kant, that subject and object cannot be thought of separately. They are always correlated with each other. Once you think of an object you have made it into a thought, i.e., a correlate of the subject. Kant turned the human mind into the only entity that can define objects. Correlationism has given us dialectics, phenomenology, psychoanalysis, structuralism, poststructuralism, practice theory, etc.: i.e., basically most of the main ideas in humanist and social sciences during the past two centuries. Thus, dominating in various forms of thought, including archaeology, are ‘totalizing structures that seek to explicate a phenomenon, behavior or state in its entirety’ (Bogost, 2012, p. 13). Bogost argues that a final, holistic and definitive explanation is assumed. The two dominating structures are scientific naturalism (‘processual archaeology’) and social relativism (‘postprocessual archaeology’). Both structures ‘embody the correlationist conceit’ (Bogost, 2012, p. 14). The correlation between subject and object is therefore the Gordian knot that must be untied in archaeology since it focuses on human finitude and the great outdoors is reduced to representations, discourses, symbols, etc.

Breaking this never-ending correlationist circle is a central theme for the ‘*speculative turn*’ in continental philosophy. Following Meillassoux (2008), one of the speculative realists, I suggest that archaeological entities are defined from a *Principle of Necessity*, i.e., a necessary condition that grounds the entity in something more profound (an undermining strategy in Harman’s terminology). The necessary entity exists beyond time and space from where everything else can be derived, such as the laws of nature (as in physics), God (as in religion), or consciousness (as in correlationist philosophies from Kant and onwards). In archaeology the necessary entity varies from context to context, but as described in the beginning the contexts tend to include the distinction between nature and culture, and they are usually anthropocentric, i.e., objects are defined from how they relate to humans (their cognitive system, culture group, gender identity, etc.). Further, I argue that most entities studied by archaeologists, whether or not they are called objects, materials, material culture, materialities, artefacts and ecofacts, share these same basic necessary conditions:

1. They are limited spatiotemporal units, such as lithic tools, buildings, and burials, but even settlements and landscapes are limited. These entities are spatiotemporally continuous within a human frame of sensorial reference. They are tangible and can be handled or be in contact with, observed, etc. (for example lithic tools), or they are indices of intangible properties like ancient language recorded in stone (*incorporeal machines* as Bryant [2014] calls them).
2. They cannot dissolve into their constituent parts without affecting their function, capacity, and morphology. A building collapsing into minor parts will affect its function, capacity, and morphology. The object has become a new object.

3. They usually 'occupy' one physical state at a time. Liquid or gaseous entities usually are not spatially stable within an archaeological context unless they are confined within solid frames. Hence, most archaeological entities are in a solid state.

## Object-Oriented Ontology (OOO)

The lesson Meillassoux teaches us is that necessary conditions for archaeological objects are not necessary at all. I will not stretch the argument as far as Meillassoux himself since he claims that only *absolute contingency* is necessary. This will contradict the *Principle of Sufficient Reason* where there is a reason why something exists rather than it does not exist. However, water as an archaeological object does not follow the three conditions described above; they are not sufficient enough. Water is neither cultural nor natural; it can be described from both anthropocentric and non-anthropocentric perspectives. Water has a great variety of spatial and temporal dimensions, ranging from recently formed water molecules in a laboratory to ancient oceans. In fact, most of the water here on Earth is older than the planet itself (Cleeves et al., 2014).

Further, bodies of water can be divided without affecting the function, capacity, or morphology of water itself. Water often appears in different physical states at the same time, such as icebergs floating in liquid water. Thus, water can be used to develop a new category of archaeological entities different from artefact, ecofact, landscape, material, materiality, and material culture. This is the *hyperfact* which is a vast object in which human individuals or communities are located. It is present everywhere but from our human perspective it is a process. Seen from the outside it is an object.

Liquid or fluid water is a common metaphor in process-relational perspectives. Here water stands for change and becoming. Objects are defined from their relation to other objects or to previous versions of themselves. In this article, however, I shall *not* 'go with the flow' and view water primarily as a process or a relation but as an object in an object-oriented way. To Bryant (2011, 2014) and Morton (2013) processes are simply objects doing something. Processes do not precede objects, they occur within these objects. Graham Harman's (2009, 2010, 2011a) version of object-oriented ontology has become the best known in contemporary continental philosophy, and a brief summary of his main ideas is in order so that the reader can see where Bryant's and Morton's ideas overlap with those of Harman and also where they differ.

Basically, Harman turns phenomenology into a realist ontology. To Harman the only existing entities are *real objects* and their interiors which are filled with *sensual objects*. Based on Heidegger, Harman states that all real objects *withdraw* from one another and from themselves (i.e., not just human *Dasein*). We can never access water in itself. No matter how many perspectives we use to describe water, those perspectives will never be able to explain the real object of water because it is never 'exhausted by its series of encounters with other entities, since there is always more to the entity than it shows' (Harman, 2010, p. 54). Relations between objects occur but they do not define them as they do for Latour (Harman, 2009).

Based on Husserl, Harman introduces a split between the real object and the sensual object. The sensual object is an interpretation of the real object made by another real object. If I observe rain, it is only my own sensual profile of the rain that I relate to and can access. The real rain withdraws from me. Therefore, the sensual object never affects the real object. Whereas real objects withdraw, sensual objects do not withdraw; those

are the ones we perceive and interact with. The sensual object (rain) and the observing real object (me) reside inside a real third object (rain+me) and all processes and relations occur within this third object (Harman, 2010, p. 160). I form one sensual profile of water and water forms another sensual profile of me and this is not a dialectical version of mine. It is entirely different because it is hydrocentric.

Water does not easily cease to exist. Ice can melt, liquid water can freeze, boil, evaporate, percolate, etc. but it will remain as water as long as the H<sub>2</sub>O molecule does not break up into hydrogen and oxygen. That is, it may change its state, location, and qualities but not its *essence*. In OOO, a real object has an essence, specific to itself, independent of external relations. It is an essence devoid of essentialism (Harman 2011a).

To Harman (2011a), time is the tension between the sensual object and its sensual qualities. Only if the sensual qualities change in a sensual object can time be experienced. Space is the tension between the real object and its sensual qualities. That is, a real object only relates to a sensual object and that relation is space. In short, time and space are always on the inside of an object. Objects are not located in time and space, they emit time and space. What we experience to be on the outside of ourselves is always on the inside of a much larger object. This means that there is no universal time or space. Objects change according to how they internally deal with their encounters with other objects. The rate and extent of that change depends on the constitution of the object, not a predefined 'Newtonian' space and time container.

One may have problems with the idea that objects 'sense' other objects as this implies some kind of 'panpsychism'. However, what Harman attempts to do is to turn the animate into an aspect of the inanimate, which is the opposite of posthumanist and neoanimist attempts. While studying water as an archaeological object it may be useful to maintain a hydrocentric perspective as much as possible. Some of the criticism of anthropocentrism inherent in posthumanism fails because anthropocentrism really is not a problem. There is nothing wrong with 'centrism'. Bogost (2012, p. 80) writes that 'one can never entirely escape the recession into one's own centrism'. It is inevitable. If you can read this text you are most likely a human being and you can never sense what it is like to be water (although you consist of roughly two-thirds water). It is because the real water of your body is withdrawn even from yourself. We can only approach a hydrocentric perspective through interpretation, i.e., through the sensual objects.

Maintaining a complete hydrocentric perspective in archaeological contexts is impossible and probably not desirable for most archaeologists since their interest lies in the human/social realm. Therefore I shall combine the hydrocentric view with an *anthropodecentric* perspective, for the lack of a better term, where humans are present but decentralized in 'relation' to the other object(s) under study. Otherwise, there is a risk that human beings are reduced to the status of being catalysts within or behind other objects.

## The Sorites Paradox

How do we define the limits of a study of water as an archaeological object? Spatial scale is important since it affects how water behaves in relation to other objects. The H<sub>2</sub>O molecule has characteristics that make it different from the ocean because trillions of H<sub>2</sub>O molecules behave differently than one molecule does due to gravity, winds, salinity, water temperature, density, etc. Water is therefore a good example of the problem of the *sorites*



Fig. 11.2. Sweatbath in Yo'okop. Photo: Justine M. Shaw.

*paradox* (i.e., Morton, 2013). Sorites means heap, and the paradox here is that we cannot say at what point in the act of adding one grain of sand to another grain we have a heap (and vice versa by removing grains from a heap, when does it stop being a heap?). In other words, when do water molecules become droplets and when do droplets become an ocean, etc.? This paradox is less of a problem for other archaeological objects since they have limited spatiotemporal extent and occupy one physical state.

Water on different scales can do different things. If we begin at a scale where most archaeological studies begin, the scale perceived and interacted with by humans, such as buildings, landscapes, artefacts, i.e., day-to-day encounters, we will see that water affords many different activities. For example, the sweatbath near the *aguada* at the site of Yo'okop in the Cochuah region in southern Mexico once supported a square stepped vault that covered a single room with two parallel benches and a walkway (Fig. 11.2). A light burning on the floor of the walkway suggests that fire was used to create steam. Water from the *aguada* would have been used to pour over heated stones inside the building (Shaw, 2002).

Sensual qualities of water were important in the human-steam object that emerged inside the sweatbath. Water has the ability to alter the temperature of an organic body because water has a thermal conductivity that is twenty times greater than that of air (Strang, 2004). The steam in the sweatbath conducted heat throughout the building and organic bodies. The sweatbath, or *pib naah* ('oven house'), was the birthplace for deities at Prehispanic sites like Palenque where some of the temples were called *pib naah* (Houston, 1996). Sweatbaths were and still are associated with fertility and birth in the Maya area.

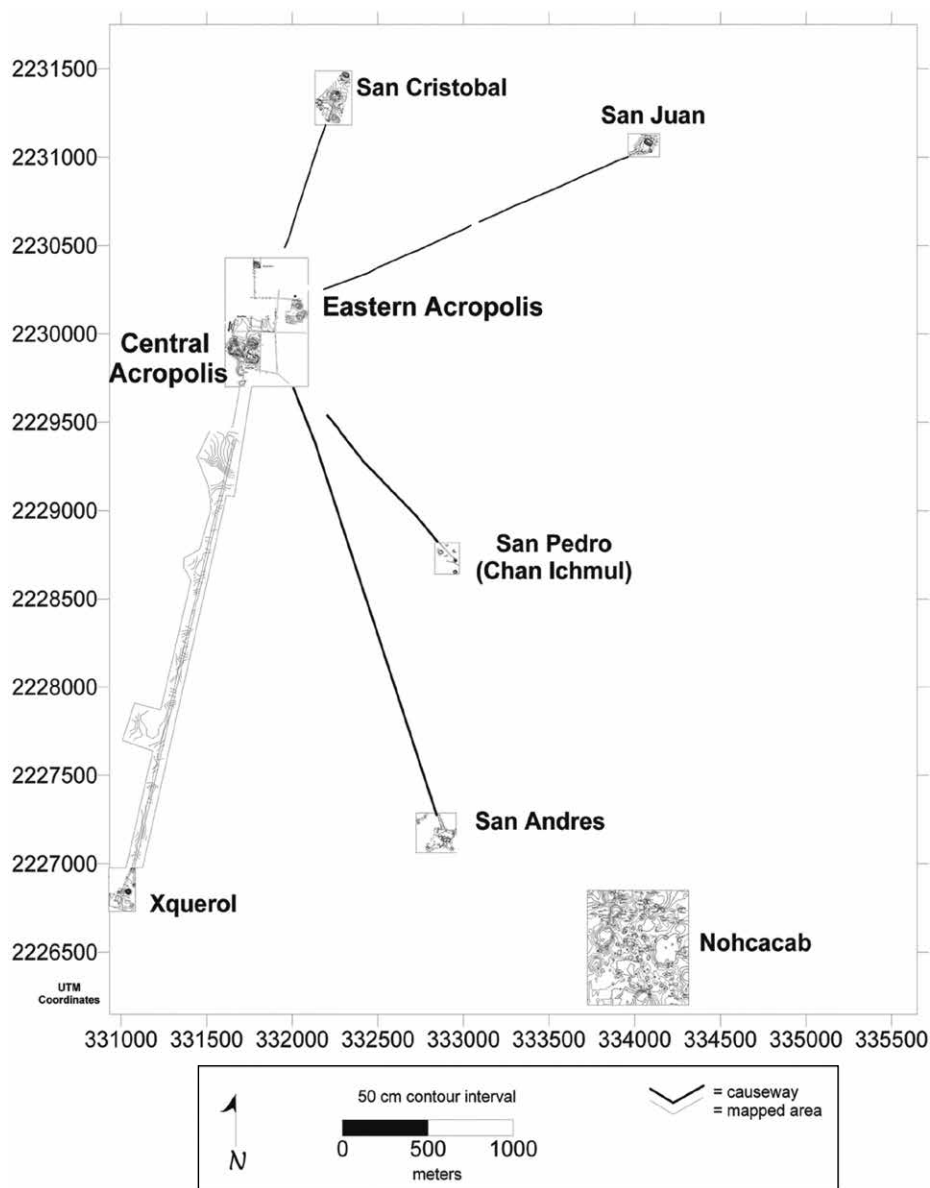


Fig. 11.3. The causeway system of Ichmul (modified from Flores and Normark, 2005).

On a somewhat greater spatial scale, many Maya causeways (*sacheob*) were connected to water in one way or another. Some causeways were raised to provide dry passage in wetland areas and others channelled and collected water (Davis-Salazar, 2006; Scarborough, 1998). Shorter causeways were more likely to function within a water management system. In other cases, causeways were related to water in a less utilitarian manner. Ichmul, 27 km north-west of Yo'okop, has five causeways that make up two different patterns (Fig. 11.3). Three of these causeways (to Xquerol, San Andres, and San Juan) appear to have been part of a single construction programme since they

have similar construction date, width, height, and connect older settlements with a new terminus plaza between the older major building and the causeway. The trajectories of these causeways intersect in the altar area of the contemporary Blister (Black) Christ church of Ichmul. Textual sources from 1550 mention the presence of two sinkholes in central Ichmul. None of these can be found today but since the Black Christ is associated with karstic features there is a likelihood that this 19th-century church stands on top of a funnel-shaped sinkhole (Normark, 2006, 2010). In short, a karstic feature formed by water and also containing water was probably the central feature of both the Prehispanic causeway system and the Colonial period church. One may say that this watery feature emitted a local time and space, crucial for both Prehispanic and Colonial worlds.

## Onticology/Machine Oriented Ontology (MOO)

Whereas Harman's object-oriented perspective is the widest known today, I shall focus on Levi Bryant's (2011, 2014) *onticology*/MOO since it offers interpretative opportunities not found in Harman's work. In his most recent book Bryant (2014) uses the term machine instead of object since it escapes the subject/object dichotomy and the term also indicates that the entity produces differences. However, I prefer the term object in this text.

Bryant returns to Aristotle's discussion of *substance*. Substance has been out of fashion in Western philosophy since Locke argued that there is nothing behind qualities and therefore substance is only a bare substratum, much like matter (Bryant, 2011, p. 78f). Like Harman, Bryant (2011, p. 72) argues that if objects are not predicated on anything else this means that objects are not the same as their parts. A human being is not the same as the water, cells, and bones it consists of. It is an entirely different object. Objects are not their qualities either. Substances are not in objects, they are the objects themselves. Even if a substance ('water') is made up of other substances ('hydrogen' and 'oxygen') it is still one substance different in kind from its parts. Substances are therefore non-dialectical, there is nothing contrary to them. There is no 'anti-water'. If contraries exist it is only among qualities (such as steam and ice) (Bryant, 2011, p. 73ff).

A substance can actualize different qualities at different times and it can also fail to do so (Bryant, 2011, p. 85f). Statistically normal amounts of rain in a given waterscape are good for crops, but too low amounts and we have a drought and too much water we have a flood. These differences actualize different qualities and capacities of rainwater (such as people dying of thirst, sustaining plants, transporting contagions and drowning people). Bryant (2011, p. 88, emphasis added) argues that the *virtual proper being* of an object 'is what makes an object properly an object. It is that which constitutes an object as a *difference engine* or generative mechanism'. No object encounters the virtual proper being of another object since its substance is forever withdrawn. Thus, Bryant's virtual proper being is basically synonymous with Harman's real object.

Real objects are not the same as the events they produce. Events produced by real objects are called *local manifestations* and are actualizations in Deleuzian terminology and sensual objects in Harman's terminology (Bryant, 2011, p. 69). The virtual proper being/real object can only be inferred from its local manifestations/sensual objects. Local manifestations are geometrical whereas the virtual proper being is topological (Bryant, 2011, p. 91). A lump of clay mixed with water can be formed into different geometrical

shapes. Thus, the virtual proper being of wet clay allows the actualization/emergence of local manifestations such as bricks, pots, clay tablets, flutes, etc.

## Regime of Attraction

Water has sensual qualities, such as being fluid at normal Earth temperature, evaporating when heated, expanding when freezing, etc. Why are these sensual qualities rather than real qualities? It is because water's fluidity is dependent on its *exo-relations* (relations external to an object) to temperature, pressure, gravity, etc. What Bryant calls a *regime of attraction* is a stable set of *exo-relations* which actualizes an object and its qualities in a stable, predictable way and gives it persistence. Water that exists in a particular regime of attraction leads to specific local manifestations/sensual objects such as liquid, steam, or ice. The physical states of water relate to the degree the molecules can move, i.e., the amount of kinetic energy water contains. As solid ice the molecules are fairly fixed. As a liquid the molecules allow more movement and as a gas there is no constraint on their movement. Hence, a gas contains more energy than the other states (DeLanda, 2011, p. 10). Thus, gaseous water emerges only within specific *exo-relations*. At a higher altitude/ lower pressure water boils at lower temperature because the relations that make up the regime of attraction have changed slightly. A more extreme, extraterrestrial, example of a different regime of attraction is the so-called 'hot ice' on exoplanet Gliese 436b located 33 light-years from us. There, 439 °C hot water remains solid as ice due to extreme pressure (Gillon et al., 2007).

By entering different *exo-relations* with other objects, water can create or become part of a variety of different objects where new capacities emerge within the specific regime of attraction. Water eroding caves actualizes other capacities than when water extinguishes fire. Thus, regimes of attraction 'play an affording and constraining role with respect to the local manifestations of objects' (Bryant, 2011, p. 205). Some of the affordances of water are that it 'causes the wetting of dry surfaces. It affords bathing and washing, to elephants as well as to humans. Streams of water can be dammed, by beavers as well as by children and hydraulic engineers. Ditches can be dug and aqueducts built. Pots can be made to contain water, and then it affords pouring and spilling' (Gibson, 1979, p. 38).

The affordances of water make it a catalyst in objects of multiple scales beyond the chemical reactions that make hydrogen and oxygen form water. Water is often needed to make objects stick together but it need not itself remain within the emergent object once the whole production is over. For example, a ceramic vessel is an object formed from parts that it shares with other vessels, such as clay, temper, water, the potter, fire, etc. Clay for ceramics in the Maya area was sometimes removed from watery contexts like riverbanks, wetlands, caves, and sinkholes. Sand, volcanic ash, and ground terracotta were added as temper (Miller and O'Neil, 2010). Not only had clay sedimented in watery contexts, water was needed to mould the clay into a vessel. The actual form of a vessel emerged when these parts were sorted and combined by ceramic-producing activities (a regime of attraction for the vessel). During the firing process the water content evaporated but it had been instrumental in the production of the vessel.

After the emergence of the ceramic vessel, it became a container for water or other liquids in the formation of objects of larger scales but shorter duration compared to the vessel. Liquids were used in short-term ritual events or feasting or for long-term social memory and identity (Lecount, 2001). With a ceramic vessel water could be moved from

larger bodies of water or it could capture rain. Another effect of the ceramic water-vessel object was that these heavy clay-based objects made people more stationary and more entangled with other objects (Hodder, 2014). The presence of limited water sources in Yucatan made the water source a larger-scale public domain which would have encouraged the use of higher-quality vessels as status markers (Fry, 2003). Hence, water in scarce supply intensified social status as an expression of the greater water-ceramic vessel object.

It is also the specific physical state of water that affords the emergence of certain objects. Whereas liquid water can be used to forge clay, temper, and fire into a ceramic vessel, ice does not have that capacity. Ice has other affordances. Differences in temperature and density of water afford objects that may lack long-term duration in themselves but which catalyse long-term effects in other objects. For example, King Karl X Gustav of Sweden (1654-1660), made a risky but successful march across the Danish Belts in 1658. His surprise attack on Denmark was made possible because of the thick ice that covered the Belts (Isacson, 2002). As a result, Denmark lost its eastern part (Scania) to Sweden, and so it remains today due to that cold winter over 350 years ago. In a more intensive state the water would have been liquid or the ice would have been less thick, which could have changed the whole outcome of the war and the current boundaries of Sweden.

## Hyperfact

Considering the sorites paradox, what scale should one choose while studying water in the various archaeological and historical contexts mentioned above? Should one reduce it to the molecule level or to scales where humans more easily interact with water? The object oriented theorist Timothy Morton's (2013) concept of the *hyperobject* offers some solutions. These are massively distributed objects, and humans and other objects are located within them often without being able to perceive them directly. He primarily discusses global warming and radioactivity as contemporary hyperobjects. I suggest that the *hydrological cycle* is such a hyperobject as well. We see its local manifestations as rain, rivers, dew, body fluids, steam in sweatbaths, karstic features, ceramics, but never the hydrological cycle itself although it is always there and affects time and space for communities, such as when and where to plant, when to go to war, where to build, etc.

There are certain characteristics of Morton's (2013) hyperobjects:

1. They are viscous, which means that they stick to other objects involved with them because the hyperobject preexists many other objects and incorporates them. The hydrological cycle preexists all humans, and since we constantly interact with water we are stuck to it.
2. Hyperobjects are molten, i.e., they contradict the Newtonian idea of a fixed, concrete, and consistent spacetime. They exist on a scale beyond humans.
3. Since they are widely distributed they can never be observed in a specific local manifestation. This non-locality means that information of the object is distributed among parts that occupy a seemingly non-continuous 'spacetime'. Water in my body is seemingly cut off from the glaciers in Antarctica, yet they are local manifestations of the same hydrological cycle.
4. Hyperobjects are phased. A phase-space is the set of all possible states of a system/object. When the time that one object emits intersects with the time of another object

we get an interference pattern (phasing). The Earth's orbit around the sun affects seasonal changes in the hydrological cycle and the moon's orbit around the Earth affects tides at the same time.

5. The effects of hyperobjects are shown interobjectively. Interobjectivity is the 'abyss in front of things', it is what we usually term 'spacetime'. They are created by the exo-relations of many objects. An object can only perceive a hyperobject upon another object.

Instead of using Morton's term hyperobject I shall use the term hyperfact for archaeological contexts where 'fact' has the same connotations as in artefact and ecofact. Here fact means something made. From a non-correlationist perspective, all real objects are made into sensual objects through 'interpretations' by other objects. Therefore, objects are selectively open to some objects but closed to others. Hyper refers in this case to something beyond the scale 'embodied' humans usually can grasp. All water on Earth is part of the same hyperfact and it is the hydrological cycle that best fits this description. One could probably replace the term hydrological cycle with the term *hydrosphere*, but the former term includes the idea of an internal cyclical process that produces different effects. Even though people have knowledge about its parts, most people are ignorant of the massive object itself.

As a hyperfact all local manifestations in rivers, rain, swimming pools, water in concrete, in beer, are of the same flat ontological status, not differentiated by a nature-culture divide that suggests different ontological treatments between various disciplines. For example, contemporary depletion of 'natural' groundwater in central California, due to excessive water use by the 'cultural' activities of a large human population, has increased ('natural') seismic activity that will affect 'cultural' infrastructure, etc. (Amos et al., 2014). There is no ontological justification for a nature/culture division here since the regime of attraction behind these processes is complex.

The hydrological hyperfact is not defined by a physical state. Its parts may be in one or several of these states simultaneously but the hyperfact itself is so massive in scale that it cannot be described with just one physical state. Parts of the hydrological cycle are stored in glaciers, liquid water fills your kitchen sink, and a steam engine moves a vehicle. The hydrological cycle is not a process in this perspective because, 'seen from a suitably high dimension, a process just is a static object' (Morton, 2013, p. 120). Further, the hydrological cycle/hyperfact emerges from the regime of attraction caused by the sun, the atmosphere, gravity, and bodies of surface- and groundwater. Seen from this grand perspective hydrological processes are *endo-relations* (internal relations) of a vast object.

Changes occur within this hyperfact yet its essence remains unaltered until the Earth is swallowed by the expanding sun billions of years from now. Thus, the hydrological cycle is not eternal but it has a very large finitude. Contemporary problems such as CO<sub>2</sub> emissions, rising temperatures and sea levels cause drastic changes in human infrastructure, but not in the hydrological cycle as such. Climate change occurs on different temporal scales such as 'millennial (solar radiation), centennial (Dansgaard-Oeschger/Heinrich events), decadal (North Atlantic oscillation), annual (El Niño/La Niña) and daily (pressure systems)' (Cooper, 2012, p. 48). Most of these larger temporal scales are clearly not accessible to ordinary humans in their daily life.

The hydrological cycle includes aspects of meteorology and hydrogeology, and these fields of research usually focus on a scale well beyond the single human. The

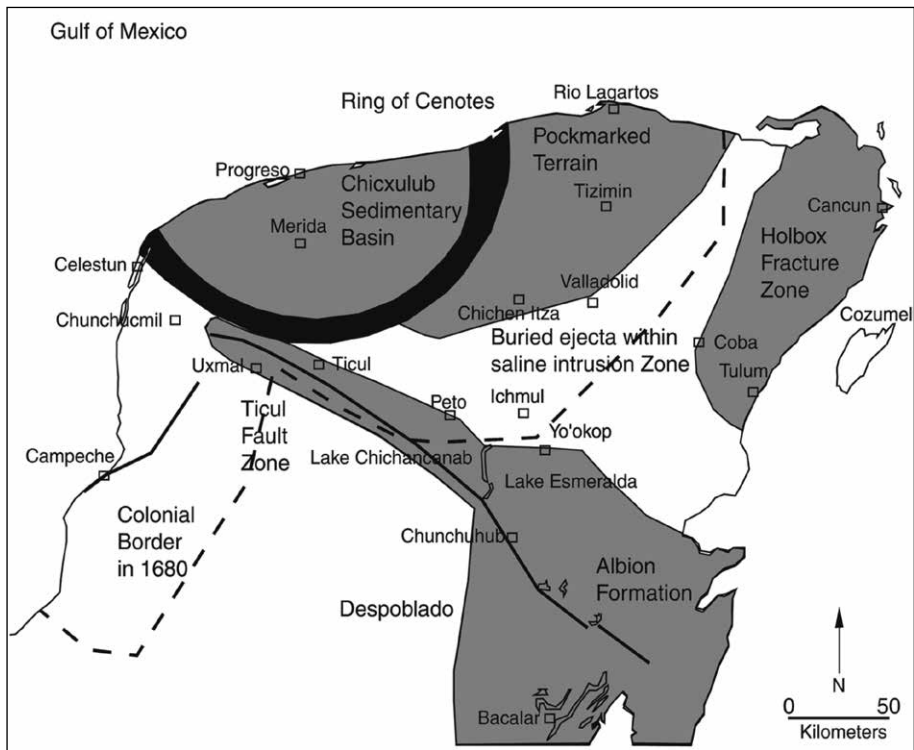


Fig. 11.4. Hydrogeological regimes of northern Yucatan (composite map from Alexander, 2012; Perry et al., 2003; Perry et al., 2009).

meteorological conditions of the Coahuah region in southern Mexico can be divided into three seasons: the warm and dry season (March-May), a rainy season (June-October), and a winter storm season (November-February) (Schmitter-Soto et al., 2002). The rain arrives by south-easterly trade winds which mean that the south-east receives more rain than the north-west. More than 80% of the annual precipitation falls in the six wettest months (Hodell et al., 2007). The regularity of rainfall is important since this affects when to clear, burn, plant and harvest (Dahlin et al., 2005). However, the weather is unpredictable due to localized thunderstorms, hurricanes, and droughts. If the rainy season is late the ashes from the swidden field could be blown away and the soil becomes poor. If the rainy season is too early, the humidity will lower the combustion and less ash will be produced (Bonnafox, 2011). Hence, this regional pattern of the hydrological cycle produces challenges to cultivation on a local level. In short, this rainfall pattern is a regime of attraction for Maya slash and burn agriculture.

Another challenge is the permeability of the limestone bedrock. Pure limestone often dissolves in contact with water and leaves no residue. The permeability that emerges from the solution of the limestone remains high since no sediments fill solution channels and decrease the permeability. Because of this permeability, the water table in much of Yucatan is related to sea level (Back, 1985; Escolero Fuentes, 2007). The hydrogeology of the peninsula has also been greatly affected by the Chicxulub meteorite impact 66 million

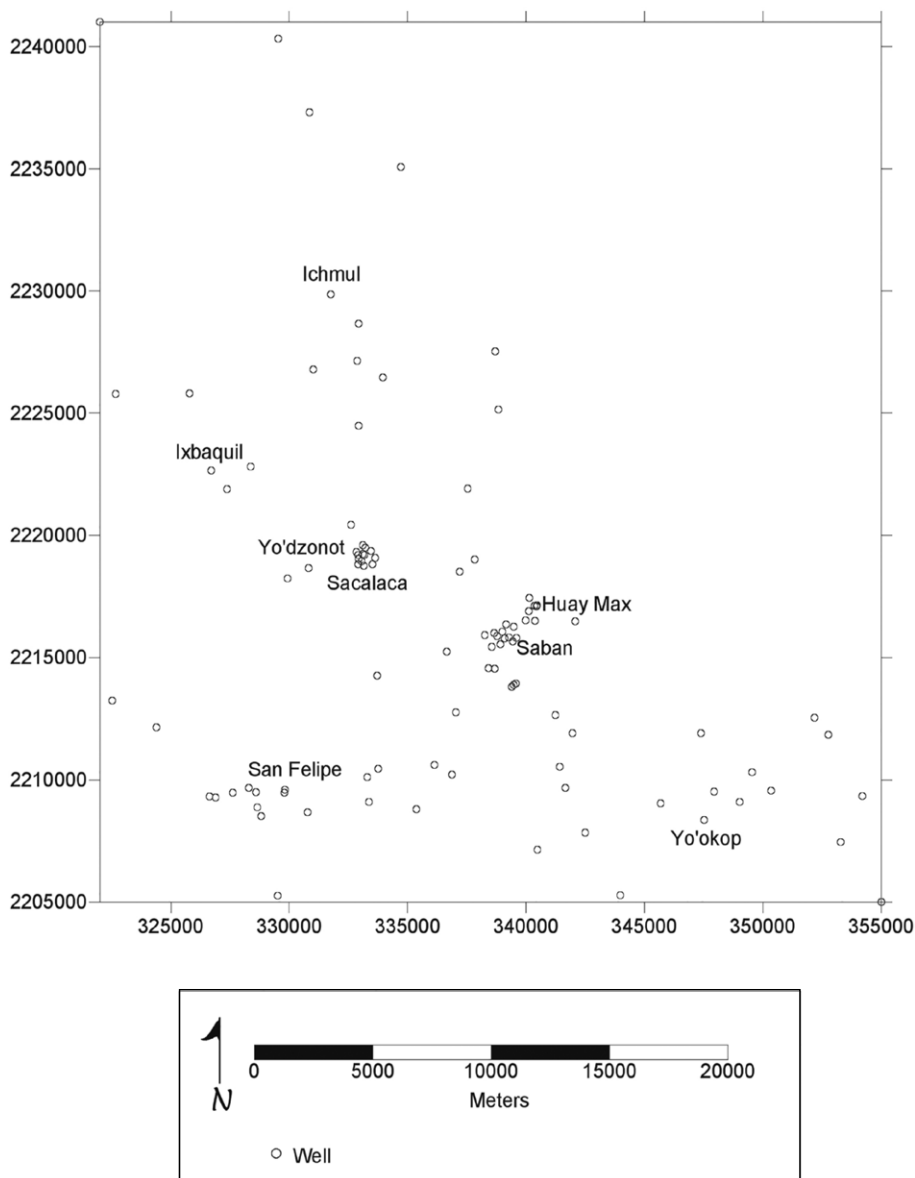


Fig. 11.5. Distribution of wells in the Coahuah region.

years ago. The distribution of caves, sinkholes and other water sources partly follows the layer of breccia ejected at the impact (Fig. 11.4) (Campos-Enríquez et al., 2004; Perry et al., 2003). Sinkholes with access to groundwater can be found north of the so-called Albion formation. South of this area groundwater is not accessible and rain-fed water reservoirs are more prevalent (Perry et al., 2009).

The hydrological and meteorological conditions of the hydrological cycle have affected the distributions of settlements and buildings throughout 2,600 years. So far 84 sites

have been documented in the Coahuah region. On a regional scale, the distribution of Colonial period (c.1540-1810) settlement is confined within specific hydrogeological regimes, i.e., those where groundwater is less than 30 m below the surface. In this area man-made wells are common. In fact, 100% of all documented Colonial period sites had at least one groundwater source. Fig. 11.5 shows a dense concentration of wells in Colonial and modern towns, and the dispersed distribution of single wells reflects a Prehispanic pattern. Prehispanic settlements were not limited to groundwater sources. Seventy-one percent of these sites have a groundwater source and many sites were also located where wells were non-existent. These sites depended on rain. In short, Prehispanic sites relied on meteorological conditions and Colonial period sites relied on hydrogeological conditions (Normark, 2008). This difference affected geopolitics. The Spanish Colonial border largely followed the depth of wells reaching the aquifer. These were needed for cattle. The Prehispanic Maya had no such needs and their settlements were far more scattered across the same landscape (Fig. 11.4).

On another large scale we have the ocean that partially surrounds the Yucatan peninsula (the Mexican Gulf and the Caribbean). In Classic period inscriptions the ocean is called *Kahk Nahb*, or Fiery Pool, referring to the fact that for a Maya observer the sun rose and set in this ocean (Finamore and Houston, 2010). The Maya had limited coastal trade, and seldom ventured offshore in their canoes. Hence, the ocean became an isolating medium. That was not the case for the Spaniards. The ocean allowed them to conquer the Americas, but their ships formed a 'globalized' disease pool (Crosby, 2006, p. 283). The Americas before the European conquest had no pandemics. This all changed with Columbus. It undermined the chances for the Maya populations to survive a meteorological or hydrological drought since they were already weakened by diseases (Normark, 2015).

In short, local and regional settlement changes in the Coahuah region were affected by the hydrological cycle in many ways. Many of these changes cannot be seen in single local manifestations such as a well, a drought event, or a disease-spreading rat. Only a multiscale view will reveal these patterns.

## Conclusion

A hyperfact primarily differs from artefact, ecofact, material culture, materiality, etc. because it is not 'material'. To Harman materialism is simply an idealist argument as it suggests there is an extended stuff (matter) that grounds all objects. However, this matter is nowhere to be found in the objects. But neither is the hyperfact a process. It is an object with a multitude of endo-relations.

In archaeological contexts water as a hyperfact can be inferred from its catalytic capacity, particularly in its liquid state. Liquid water has been used to create ceramics, plaster, concrete, bricks, and to cool metal. Liquid water can also be inferred from human-made wells, water reservoirs, canals, aqueducts, pipes, and sewage system. Ships, canoes, and other vessels for aquatic communication often relate to liquid water but also ice (as in the *Titanic's* fatal collision with an iceberg) and steam in steamboats.

Oceans, rivers, lakes, wetlands, rain, hail, snow, and glaciers are water objects that have had a direct impact on terrestrial conditions, creating caves, sinkholes, eskers, erratic blocks, beaches, deltas, etc. Catastrophic events like tsunamis, hurricanes, and droughts have short-term effects on terrestrial conditions whereas erosion caused by water has

long-term effects. Indirect consequences of water on terrestrial conditions are several, including: the post-glacial rebound in Scandinavia where Bronze Age rock carvings once located along the waterfront now are located far inland; the melting of the same ice-age glaciers has submerged coastal caves in Mexico; when contemporary glaciers melt in Norway archaeological remains are uncovered.

The human body consists of water in various degrees. The bones contain the least amount of water and the most amounts we find in blood and the lymph. Mummies are preserved due to their dehydrated state and bog corpses are preserved because they are located in anaerobic and acidic peat bogs. Hence, the hyperfact of water can be found in many archaeological contexts, and each local manifestation may differ quite substantially from how the hydrological cycle itself is conceptualized in hydrological literature. Hence, one justification for the term hyperfact is that it erases the differences between scientific and humanist views of water.

In this multiscalar perspective I have pointed out how water can be found directly or indirectly in spatiotemporally limited objects such as ceramics, humans, buildings, wells, sinkholes, hydrogeological regimes, the atmosphere, and the ocean. These are accessible through our senses, yet they are all local manifestations of a much larger object, upheld by a regime of attraction that is even greater (as it includes the sun as the primary energy source, the moon affecting tides, etc.). The water molecule will not easily dissolve into its constituent parts, but neither will the hydrological cycle. Water as a hyperfact is a preferred starting point for a multiscalar study of water. It is not a 'holistic' attempt to include all other local manifestations of water in existence, since water exists elsewhere in the solar system, as on Mars and Jupiter's moon Europa, but the hyperfact avoids the sorites paradox here on Earth where archaeologists work. Future archaeologists working on Mars need to treat its hydrological cycle as different from the one on Earth.

Are there other hyperfacts than the hydrological cycle? A plausible one would be the atmosphere (see Simonsen, 2009). Since it is a layer of gas (nitrogen, oxygen, carbon dioxide, etc.) it differs from the hydrological cycle because it does not consist of multiple physical states (unless we include snow and rain). Because the atmosphere consists of oxygen it can be locally manifested in fire, which is rapid oxidation through combustion. Fire has many affordances and can be used in cooking, ceramic and metal production, slash-and-burn agriculture, warfare, light houses, indoor heating, cremation, etc. Without oxygen there would be no fire so fire itself cannot be a hyperfact. The atmosphere also creates winds which afford sailing, windmills, aligning buildings to catch or avoid wind, etc. To some extent the hydrological cycle and the atmosphere overlap in various local manifestations, but they can still be treated as different hyperfacts.

## Acknowledgements

The article is the result of the project 'Water as Archaeological Material', financed by Riksbankens Jubileumsfond. I have used data collected under Justine Shaw's and Dave Johnstone's INAH permit for fieldwork in the Coahuah region (2000-2005, 2008, 2010, 2012 and 2014). Their fieldwork has been financed by Antigua Foundation, the Foundation for the Advancement of Mesoamerican Studies, Inc., the H. John Heinz III Fund, the Selz Foundation. Thanks also to three anonymous reviewers.

## Works Cited

- Alexander, R.T. (2012) 'Maya Collapse or Resilience? Lessons from the Spanish Conquest and the Caste War of Yucatan', in G.F. Braswell (ed.), *The Ancient Maya of Mexico: Reinterpreting the Past of the Northern Maya Lowlands*. Bristol: Equinox, pp. 325-347.
- Amos, C.B., P. Audet, W.C. Hammond, R. Bürgmann, I.A. Johanson, and G. Blewitt (2014) 'Uplift and Seismicity Driven by Groundwater Depletion in Central California', *Nature* 509, pp. 483-486.
- Back, W. (1985) 'Hydrogeology of the Yucatan', in W.C. Ward, A.E. Weidie, and W. Back (eds), *Geology and Hydrogeology of the Yucatan and Quaternary Geology of the Northeastern Yucatan Peninsula*. New Orleans: New Orleans Geological Society, pp. 99-119.
- Bogost, I. (2012) *Alien Phenomenology, or What It's Like to Be a Thing*. Minneapolis: University of Minnesota Press.
- Bonnafox, P. (2011) 'Water, Droughts, and Early Classic Maya Worldviews', in C. Isendahl and B. Liljefors Persson (eds), *Ecology, Power, and Religion in Maya Landscapes*. Markt Schwaben: Verlag Anton Saurwein, pp. 31-48.
- Bonta, M. and J. Protevi (2004) *Deleuze and Geophilosophy: A Guide and Glossary*. Edinburgh: Edinburgh University Press.
- Bryant, L.R. (2011) *The Democracy of Objects*. Ann Arbor: Open Humanities Press.
- Bryant, L.R. (2014) *Onto-Cartography: An Ontology of Machines and Media*. Edinburgh: Edinburgh University Press.
- Campos-Enríquez, J.O., F.J. Chávez-García, H. Cruz, J.G. Acosta-Chang, T. Matsui, J.A. Arzate, M.J. Unsworth, and J. Ramos-López (2004) 'Shallow Crustal Structure of Chicxulub Impact Crater Imaged with Seismic, Gravity and Magnetotelluric Data: Inferences About the Central Uplift', *Geophysical Journal International* 157, pp. 515-525.
- Cleeves, L.I., E.A. Bergin, C.M.O. Alexander, F. Du, D. Graninger, K.I. Öberg, and T.J. Harries (2014) 'The Ancient Heritage of Water Ice in the Solar System', *Science* 345, pp. 1590-1593.
- Crosby, A.W. (2006) 'Infectious Diseases as Ecological and Historical Phenomena, with Special Reference to the Influenza Pandemic of 1918-1919', in A. Hornborg and C.L. Crumley (eds), *The World System and the Earth System: Global Socioenvironmental Change and Sustainability since the Neolithic*. Walnut Creek: Left Coast Press, pp. 280-287.
- Dahlin, B.H., T. Beach, S. Luzzadder-Beach, D. Hixson, S. Hutson, A. Magnoni, E. Mansell, and D.E. Mazeau (2005) 'Reconstructing Agricultural Self-Sufficiency at Chunchucmil, Yucatan, Mexico', *Ancient Mesoamerica* 16, pp. 229-247.
- Davies, H.C. (2008) *The Archaeology of Water*. Gloucestershire: The History Press.
- Davis-Salazar, K.L. (2006) 'Late Classic Maya Drainage and Flood Control at Copan, Honduras', *Ancient Mesoamerica* 17, pp. 125-138.
- DeLanda, M. (2011) *Philosophy and Simulation: The Emergence of Synthetic Reason*. London: Bloomsbury Academic.
- Edgeworth, M. (2011) *Fluid Pasts: Archaeology of Flow*. Bristol: Bristol Classical Press.
- Escolero Fuentes, O.A. (2007) 'The Hydrogeology of the Yucatan Peninsula', in L. Holiday (ed.), *Sustainable Management of Groundwater in Mexico: Proceedings of a Workshop*. Washington DC: National Academies Press, pp. 62-68.

- Finamore, D. and S.D. Houston (2010) 'Introduction', in D. Finamore and S.D. Houston (eds), *Fiery Pool: The Maya and the Mythic Sea*. New Haven: Yale University Press, pp. 14-17.
- Flores, A. and J. Normark (2005) 'The Central Portion of Ichmul', in J.M. Shaw (ed.), *Final Report of the Coahuah Regional Archaeological Survey's 2005 Field Season*. Eureka: College of the Redwoods, pp. 7-24.
- Fry, R.E. (2003) 'Social Dimensions in Ceramic Analysis: A Case Study from Peripheral Tikal', *Ancient Mesoamerica* 14, pp. 85-93.
- Gibson, J.J. (1979) *The Ecological Approach to Visual Perception*. Boston: Houghton Mifflin.
- Gill, R.B., P.A. Mayewski, J. Nyberg, G.H. Haug and L.C. Peterson (2007) 'Drought and the Maya Collapse', *Ancient Mesoamerica* 18(2), pp. 283-302.
- Gillon, M., F. Pont, B.-O. Demory, F. Mallmann, T. Mayor, T. Mazeh, D. Queloz, A. Shporer, S. Udry, and C. Vuissoz (2007) 'Detection of Transits of the Nearby Hot Neptune GJ 436 b', *Astronomy & Astrophysics* 472, pp. L13-L16.
- Harman, G. (2009) *Prince of Networks: Bruno Latour and Metaphysics*. Prahran: re.press.
- Harman, G. (2010) *Towards Speculative Realism: Essays and Lectures*. Winchester: Zero.
- Harman, G. (2011a) *The Quadruple Object*. Winchester: Zero.
- Harman, G. (2011b) *Quentin Meillassoux: Philosophy in the Making*. Edinburgh: Edinburgh University Press.
- Hodder, I. (2014) 'The Entanglements of Humans and Things: A Long-Term View', *New Literary History* 45, pp. 19-36.
- Hodell, D.A., M. Brenner, and J.H. Curtis (2007) 'Climate and Cultural History of the Northeastern Yucatan Peninsula, Quintana Roo, Mexico', *Climatic Change* 83, pp. 215-240.
- Houston, S.D. (1996) 'Symbolic Sweatbaths of the Maya: Architectural Meaning in the Cross Group at Palenque, Mexico', *Latin American Antiquity* 7, pp. 132-151.
- Houston, S.D. (2010) 'Living Waters and Wondrous Beasts', in D. Finamore and S.D. Houston (eds), *Fiery Pool: The Maya and the Mythic Sea*. New Haven: Yale University Press, pp. 66-79.
- Houston, S.D. (2014) *The Life Within Classic Maya and the Matter of Permanence*. New Haven: Yale University Press.
- Ingold, T. (2007) 'Materials Against Materiality', *Archaeological Dialogues* 14(1), pp. 1-16.
- Isacson, C.-G. (2002) *Karl X Gustavs krig: Fälttågen i Polen, Tyskland, Baltikum, Danmark och Sverige 1655-1660*. Lund: Historiska Media, pp. 1-16.
- Lecount, L.J. (2001) 'Like Water for Chocolate: Feasting and Political Ritual Among the Late Classic Maya at Xunantunich, Belize', *American Anthropologist* 103, pp. 935-53.
- Liedman, S.E. 2006. *Stenarna i Själens Form och Materia från Antiken till Idag*. Stockholm: Albert Bonniers Förlag, pp. 1-16.
- Lucero, L.J. (2002) 'The Collapse of the Classic Maya: A Case for the Role of Water Control', *American Anthropologist* 104, pp. 814-826.
- Meillassoux, Q. (2008) *After Finitude: An Essay on the Necessity of Contingency*. London: Continuum.
- Miller, M.E. and M. O'Neil (2010) 'The World of the Ancient Maya and the Worlds They Made', in D. Finamore and S.D. Houston (eds), *Fiery Pool: The Maya and the Mythic Sea*. New Haven: Yale University Press, pp. 24-37.
- Morton, T. (2010) *The Ecological Thought*. Cambridge: Harvard University Press.

- Morton, T. (2013) *Hyperobjects: Philosophy and Ecology After the End of the World*. Minneapolis: University of Minnesota Press.
- Normark, J. (2006) *The Roads In-Between: Causeways and Polyagentive Networks at Ichmul and Yo'okop, Coahuah Region, Mexico*. Göteborg: University of Gothenburg.
- Normark, J. (2008) 'Caves, Water Sources and Climate Change in the Coahuah Region', in J.M. Shaw (ed.), *Final Report of Coahuah Regional Archaeological Survey's 2008 Field Season*. Eureka: College of the Redwoods, pp. 210-232.
- Normark, J. (2010) 'Involutions of Materiality: Operationalizing a Neo-Materialist Perspective through the Causeways of Ichmul and Yo'okop, Mexico', *Journal of Archaeological Method and Theory* 17, pp. 132-173.
- Normark, J. (2015) 'Colonial Period Analogies and the Mega-Drought Hypothesis for the Maya Collapse', in C. Tamignau and P. Eeckhout (eds), *Post-Apocalypto: Crisis and Resilience in the Maya World*. Markt Schwaben: Verlag Anton Saurwein.
- Olsen, B. (2007) 'Keeping Things at Arm's Length: A Genealogy of Asymmetry', *World Archaeology* 39, pp. 579-588.
- Perry, E., A. Paytan, B. Pedersen, and G. Velazquez-Oliman (2009) 'Groundwater Geochemistry of the Yucatan Peninsula, Mexico: Constraints on Stratigraphy and Hydrogeology', *Journal of Hydrology* 367, pp. 27-40.
- Perry, E., G. Velazquez-Oliman, and R.A. Socki (2003) 'Hydrogeology of the Yucatan', in A.G. Pompa and S. Fedick (eds), *21st Symposium on Plant Biology*. Binghamton: Haworth Press, pp. 115-138.
- Prufer, K.M. and J.E. Brady (eds) (2005) *Stone Houses and Earth Lords: Maya Religion in the Cave Context*. Boulder: University Press of Colorado.
- Scarborough, V.L. (1998) 'Ecology and Ritual: Water Management and the Maya', *Latin American Antiquity* 9, pp. 135-159.
- Scarborough, V.L. (2003) *Flow of Power: Ancient Water Systems and Landscapes*. Santa Fe: SAR Press.
- Schmitter-Soto, J.J., F.A. Comín, E. Escobar-Briones, J. Herrera-Silveira, J. Alcocer, E. Suárez-Morales, M. Elías-Gutiérrez, V. Díaz-Arce, L.E. Marín, and B. Steinich (2002) 'Hydrochemical and Biological Characteristics of Cenotes in the Yucatan Peninsula (SE Mexico)', *Hydrobiologia* 467, pp. 215-228.
- Shaw, J. M. (2002) 'Operation 6: Structure S3E1-5', in J.M. Shaw (ed.), *Final Report of Proyecto Arqueológico Yo'okop's 2002 Field Season: Excavations and Continued Mapping*. Eureka: College of the Redwoods, pp. 28-63.
- Simonsen, D.G. (2009) 'Luftrum' in T. Damsholt, D.G. Simonsen, and C. Mordhorst (eds), *Materialiseringer: Nye Perspektiver på Materialitet og Kulturanalyse*. Århus: Århus Universitetsforlag, pp. 39-70.
- Strang, V. (2004) *The Meaning of Water*. Oxford: Berg Publishers.
- Tvedt, T. and T. Oestigaard (eds) (2010) *A History of Water, Series 2, Vol. 1. The Ideas of Water from Antiquity to Modern Times*. London: I.B. Tauris.
- Witmore, C.L. (2007) Symmetrical Archaeology: Excerpts of a Manifesto. *World Archaeology* 39(4), pp. 546-562.



## Drift

Þóra Pétursdóttir

*Reprint of Pétursdóttir, Þóra. 2018. Drift. In Multispecies Archaeology (Suzanne E. Pilaar Birch, ed.), pp. 85-101. Abingdon: Routledge.*

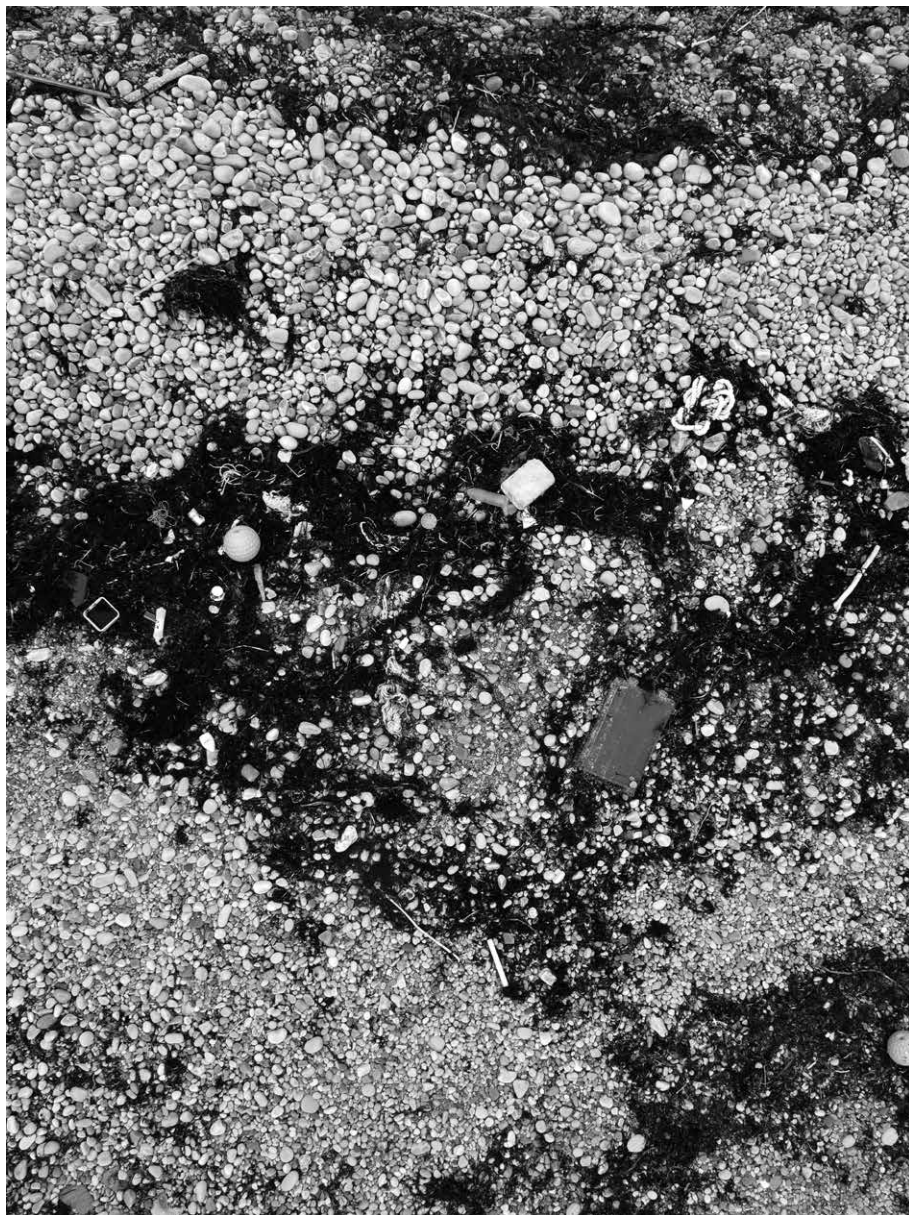
‘Back to the edge of the sea, where the drama of life played its first scene on earth and perhaps even its prelude; where the forces of evolution are at work today, as they have been since the appearance of what we know as life; and where the spectacle of living creatures faced by the cosmic realities of their world is crystal clear’ (Carson, 2015 [1955], 14).



## **Prelude: Eidsbukta 70.96262°N 26.66342°Ø**

This chapter gathers some thoughts and fragments from fieldwork conducted on a beach in Northern Norway. The fieldwork is part of a project reverberating around the phenomenon of the North Atlantic drift beach in past and present, its nature, its use and changing identity, and its implications for archaeological conduct and reasoning.

The beach, Eidsbukta, a small cove at the northern tip of Sværholt peninsula, is located at roughly 71° northern latitude, across the Porsanger fjord from North Cape, the northernmost point of Norway. Facing the open Barents Sea to the northwest, with the circulating surface waters of the North Atlantic current from the south and the Bear Island



current from the northwest, Eidsbukta is ideally situated to capture large quantities of drift material from incoming tide and storm. Its effectiveness is bluntly recalled in the local name it was given by residents in the small, now long-abandoned, fishing hamlet on the east side of the barren Sv.rholt peninsula. 'We always called it the Driftwood beach [Rekvedfjæra]', Gunnlaug Sagen states, 'that is where we went for wood' (Sagen, pers. com.).

The aspirations of this chapter are to delineate, or hint at, some tensions, thoughts, and frictions provoked along this strip of land, in the tidal zone of Eidsbukta. Tensions that summon different species and kinds, other natures and ecologies and that may be of significance at the dawn of a new Anthropocene Era. Far removed from the hassle of civilization, the smog of urban centres, the spotlights of media and environmental discourse, and far removed from the comforts of modern lifestyles, Eidsbukta emits, in her own unkempt and unpretentious tongue, an argument both for and against an idea of this 'Age of Man'. With her indiscriminate collection of drift, resulting from a persistent collaboration with the forces of gravity, tide and storm, Eidsbukta both centres and decentres us humans. Through her worlding, her untiring gathering and making of her own environs, which also has sustained her valued legacy as a drift beach, she manifests the tensions between – and the strains within – notions of nature, culture, environment, pollution, resource, Anthropocene, archaeological record and time. And by so doing, by allowing things – species – of different kinds and origins to be 'thrown together' (Stewart, 2008) she confronts, challenges and invites archaeological thinking.

## Patina

Colours are not detached phenomena. Much like the taste, smell and texture of Proust's madeleine, colours may bring us beyond a moment, beyond what is seen. Colours recall, resonate, associate. And so it is that ecology, environment, eco, mostly resonates with various shades of green (Buell, 2013). Green is the colour of life, of health and of a pristine inhuman nature. Green is the hope at the dawn of Anthropocene.

Grey, on the other hand, 'Grey is the fate of color at twilight' (Cohen, 2013, p. 270). Grey's immediate association isn't hopeful and optimistic, but dull, lifeless, deprived. 'A grey ecology', as Cohen explains, 'might therefore seem a moribund realm, an expanse of slow loss, wanness, and withdrawal, a graveyard space of mourning' (ibid.). Grey is the shade of sickness. It may be the hue of Anthropocene, of anxiety, regret and bleakness. The lowering light preceding the apocalypse.

But grey is also a liminal shade, withdrawn in its prosaic patina it allows the elements to rest. It flattens the plane, soothes contrasts and brings differences closer. Grey brings us another landscape – not one that is colourless, dull and lifeless, but a landscape tinted by tranquility, enabling the eye to glide unhindered between elements of different kind. Grey pacifies our preconceptions and tones down our definitions.

In reality, the colours of Eidsbukta are stark and faded, bright and bleached. Among its grey beach pebbles, whitewashed driftwood and kelp, is a dense decoration of foreign elements in fiery orange and yellow, bright green and blue. Radiating in stark contrast to what is considered the native patina of these northern latitudes these elements immediately stand out as foreign. As intruders. As contamination. As something opposing the environment.



But this is the *nature* of Eidsbukta. This is her worlding, her making of the environment, and her legacy as a drift beach. Her environment, her ecology has never discriminated between kinds or colours. Her ecology was always one of drift, gathering, and becoming. Hence, depicting Eidsbukta and her collection of drift in tones of grey is not a depriving of her nature, but an attempt to bring it closer – to actually see her.

## Contours

The notion of Anthropocene brings forth a rhythmic tension, breechings in notions of time, frictions between what has been and what is becoming, between the abrupt and the gradual, the now and the distant. When is the dawn of the Anthropocene, and how deep lies its boundary?

Like contour lines on a map, or growth rings in wood, Eidsbukta's gathered topography delineates a geological, earthly biography. Repeating her contours like ripples in water, fossilized shorelines behold the faint and distinct silhouettes of her youth, her ageing, and infinity. Folding inland, like waves reaching shore they recall a telling of postglacial rebound, a rising of land, and the infinite return of the tide. The motion involved in her ever becoming – the rhythmic dance of pushing and pulling in the boundless affair of water and land.

Along the lowest of these fossilized ridges is the main wrack zone; a thick and coarse belt of debris, a tinted rosary stretching from one end of the cove to the other, draped in plastic, wood and shining colours, topographically reflecting the discrepancy and continuity between before and after, Holocene and Anthropocene.

Walking this plane of temporal ridges folded against each other, rising and falling simultaneously, like waves in water, generates a different notion of time and event. Time becomes spatial and here becomes both distant and near, past and present, grounded and intangible, real and poetic – '*I dag er det prekambrium*' (Ulven, 1981), today is Precambrian, and today is Anthropocene.

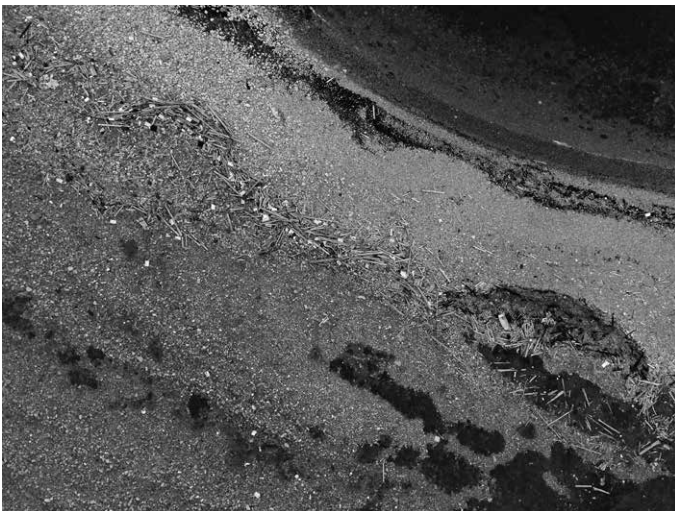
## Tide

Time in Eidsbukta is tide, like *tíð* in Norse is time. Time in Eidsbukta is neither linear nor cyclic, but rhythmic, spatial and enduring, folded through frequencies of currents and rapids, intensities and uproar, sometimes slow, sometimes fast, strong and vague, constructive and destructive.

The waves on the shore, like ripples in space-time, mount in a distance so infinite but break now and here. And then, to the roaring sound of rolling pebbles they pull back, to endure the becoming of new risings and breakings, again, and again. 'The very pulse of the sea, not only its perpetual motion', Zerzan notes, 'has us imagining that it is drawing breath. Inspirations and exhalations of a living, if unimaginably vast animal' (Zerzan, 2012, p. 2).

Time in Eidsbukta, tide in Eidsbukta, is tenacious and vast. It is now. Becoming rather than waning.

Its scale is not a lifetime, a generation, decades, centuries, millennia. Neither human, nor stretched, but magmatic, folded and pressed. Here.







## Borderland

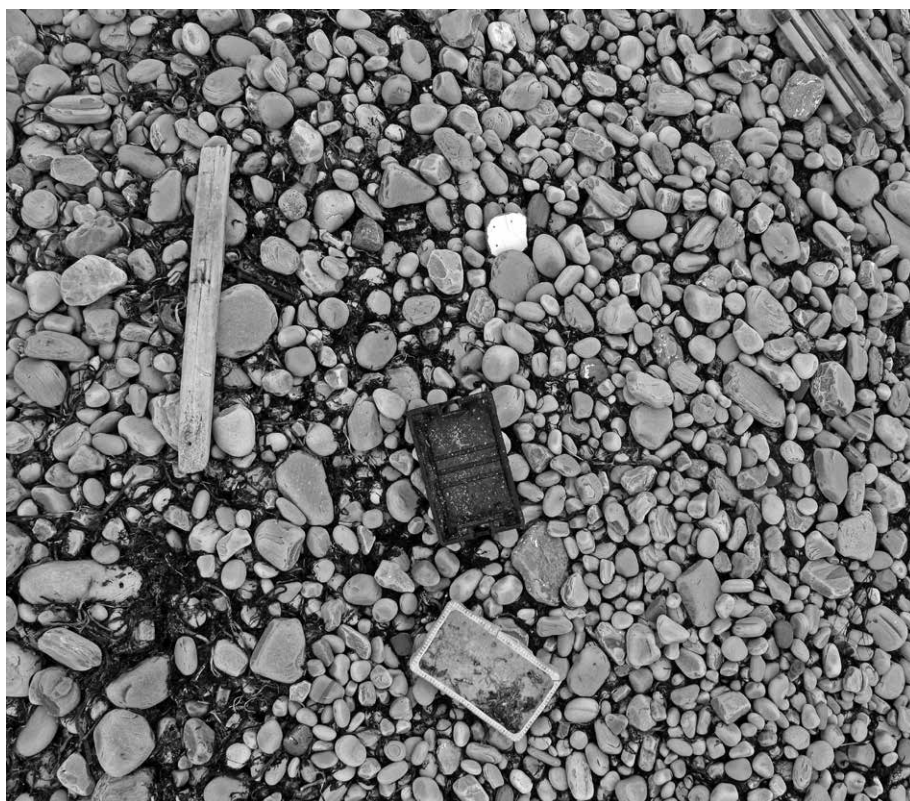
For many the coastline is home shore and the ocean an acquaintance that is respected and sometimes feared. The intensity of standing on the shore, breathing the overwhelming, ‘absolute, (anti-)monumental There of it’ (Zerzan, 2012) makes you shrink and grow, bow and rise – as if becoming one with the unceasing motions of this fluid infinity. The ocean is often spoken of as the last great wilderness, a ‘last remaining lair of unparalleled wildness’ (ibid.), to a human mind ‘the best emblem of unwearied unconquerable power, the wild, various, fantastic, tameless unity of the sea’ (Ruskin, 1918, p. 35). The coastline, here, is a frontier and meeting place; an edge where imaginations are born and explorations launched.

It is almost too telling that along this imagined border, in the liminal zone between the known and unknown, the distant and proximate, we find things; accumulating in increasingly intimidating quantities – the unruly mongrel of *material culture*.

Acquainted with seaside landscapes you are familiar with the ‘wrack zone’; the shelf mounting above the part of the shore that slopes down toward the water, where high tide and winter storms relentlessly deposit layer by layer of kelp, driftwood, things and debris. Childhood memories from days on the beach recall wondrous archaeological explorations in these exotic zones. Digging through salty, slimy and shrivelled piles to encounter strange things and creatures, washed ashore from faraway places: fishing nets, bottles and plastic containers, birds carcasses, glass balls, rubber boots and sandals, gutted fish, stranded seals, timber boards, and more.

Riches beyond compare.

Archaeological riches of unparalleled affluence. And yet, nostalgia set aside, these gathered deposits are unruly anomalies, contesting everything and all archaeology strives for. Thrown together in hybrid mixtures by forces beyond human control. Neither cultural



nor natural, far removed from origin and function, in essence neither from here nor representing an anywhere.

Riches literally out of context.

The coastline, in Eidsbukta, is a frontier and meeting place. The intensity of standing on the shore, breathing the overwhelming, 'absolute, (anti-)monumental There of it' (Zerzan, 2012) makes you wonder beyond cultural context, history and casualty, species and kinds, towards the potentials of a borderland archaeology.



## Coincidence

Time – tide, in Eidsbukta is folded and pressed – here, gathered, thrown together and reordered. Exposed and inundated, brought in and acquired. ‘Things arrive unannounced, then disappear again under the waves; buried history comes to the surface; traces of the past are exposed and erased’ (Sprackland, 2012, p. 236).

The riches of Eidsbukta fold space and time, distance and proximity, in a way archaeological chronology rarely tolerates. Things *don't just add up* (Stewart, 2008), rationally, sequentially, stratigraphically. The assemblage remains infinitely unfinished, a gradual poesis of the before, the yet not, the possible, failed and lost. ‘Something throws





itself together and then floats past or *sticks*’, as Stewart writes (*ibid.*, 74). That is the coincidental challenge of Eidsbukta’s collection.

It doesn’t just add up. It doesn’t *represent* anything evidently coherent, causal, meaningful – and is, above all, *presence*.

Therefore, attending to these riches, the rational of a borderland archaeology, is not one of suspicious scrutiny, aiming ‘to get their representation ‘right’” (Stewart, 2008, p. 73). Rather, it is to allow oneself to wonder what alternative ways of nearing and knowing may already radiate from this tumbled collective. A trust in sensation and presence beyond that of *representation* and reference. A sympathy for that which cannot be explained (Malpas, 2012, p. 260).

Things are thrown together – they don’t just add up. They drift. That is the condition of the real, our existential condition, and the condition of Anthropocene. ‘Nothing is static. Nothing remains the same’, Ryan states, which allows the spatial nature of the coastline to ‘tangibly highlight the fluidity of the world – its ongoing and ever-emergent dynamic’ (Ryan, 2012, p. 9).

But fluid as it is, its ever-emergent potential and becoming is empowered through persistency. Not a static, inflexible persistency but a stubborn, boisterous volatility of matter – drifting, gathering, dispersing.

## Drift

Until recently, drift matter was a natural resource and the drift beach valued and prized. In Old Norse mythology, drift was the matter of creation, and the drift beach the cradle of mankind. The first of men, Askur and Embla, were carved from driftwood found on the beach.

Approaching Icelandic shores towards the close of the ninth century, prospecting settlers, descendants of Askur and Embla, threw overboard their high-seat pillars, followed their drift and established their settlements where they washed ashore. Making



their posts part of *drift matter* – the matter of creation – possibly rendered them rightful settlers, natives of the environment.

Drift matter is world making.

Think of dark matter, that utterly unseen and unknown density of everything that makes up the most. That unidentified, uncanny mass of dark energy that permeates space. Then think of drift matter. That unknown, drifting mass, that persists and worlds. Fluid as it is, its ever-emergent potential and becoming is empowered through its persistency. Not



a static, inflexible persistency but a stubborn, boisterous volatility of matter – drifting, gathering, dispersing. A dark ecology (Morton, 2016) – a dark energy, beyond human control, definition and knowledge.

The Anthropocene – the ‘Age of Man’ – is in essence an age of drift matter. Regardless of its anthropocentric labelling, the Anthropocene, above all, bears witness to the longevity and volatility of matter, things, big and small. A reminder not only of an exclusively human footprint, but also of an unruly heritage of material and more-than-human relations.

The problem is not that things become buried deep in strata but that they endure, outlive us, and come back at us with a force we didn’t realize they had. A dark force of ‘sleeping giants’ (Harman, 2016) that worlds in a way we did not and could not foresee.

## Afterlife

We like to speak of the *afterlife* of things. How they carry on after we have produced them, used them, let them go, worn them out, disposed of them, lost them, forgotten them. We might see Eidsbukta as the terrain of such subsistence – meaningless, functionless, pointless.

But then, take a brief moment to think of all those places you have visited on your journeys. Some only briefly. Some only in passing, while rushing through an airport or gazing through the window of a running train. Then think of all the places you haven’t visited. All those valleys, moors, islands and skerries that will never see your arrival.

Think of all those species you know, all those familiar and friendly, exotic and strange. Then think of all those creatures never seen, never known, because their being and scale doesn’t comply with the complexity of your senses.



Think of gravitational waves washing past earth, incidentally detected in the blink of an eye, and through that minute collision forever changing our view upon the heavens. Then consider that they were formed through the merger of stellar ghosts, two gigantic black holes, 1.3 billion light years away.

We like to speak of the *afterlife* of things.

But take a brief moment to consider that speaking of the afterlife of things makes us central in their becoming and evolving. We become the authors, the axis of their lives. But the truth often is that we only incidentally cross paths with them. We happen to them rather than the other way around.

Think of all those places you've only seen in passing.

## Environment

Consider the *nature* of Eidsbukta, how she allows things, creatures of different kinds to gather on this verge of human realm. Imagine the journeys of these things, their stretched post-human lives. And picture the way they interact, how they drift and come together. You see that no conventional archaeology or culture history is able to talk about these things? You see how our naming, definition, classification would be a violation of their being?

They do not belong to that context.

You see, that to talk about drift, which is an object agency, has nothing to do with intention? You see, that it has everything to do with potential, coincidence, contingency, sleeping giants and dark forces? You see the significance in acknowledging this agency?

This is the environment of Anthropocene – the climate of Anthropocene.

A paradox of this 'Age of Man', as argued by Liborion, is that it 'both centralizes and decentralizes humans' (Liborion, 2016, p. 103). Not in the sense of questioning the gravity of the situation, or humans as actors, but by foregrounding how, in a world that is mixed and polluted, tropes of anthropocentric measures, human time and human pasts, are unable to fully articulate the intricacy of these relations.

Things don't just add up. Thrown together the nature of Eidsbukta may or may not involve human agency, but cannot be tackled without considering things' own endurance, their dark sides, and consequential affairs; affairs between plastic bags, sewages, fishing nets, currents, driftwood and drift ice, seagulls, temperatures, UV rays, winter storms, postglacial rebound and the moon's gravity.

Therefore, what a borderland archaeology – an environmental archaeology – calls the 'environment', must not be a web of harmonious, symmetrical relations between a multitude of species, between nature and culture, humanity and environ, but rather full of asymmetry, full of darkness, and full of regions devoid of human presence. Regions and affairs unmoved by our naming, knowledge and ignorance.

## Acknowledgements

I would like to express my thanks to Bjørnar Olsen and Tim Flohr Sørensen for reading and discussing the passages of this chapter, to Ingar Figenschau for help with drone imagery, and to Stein Farstadvoll for his capturing of the whale carcass.

## Works Cited

- Buell, L. (2013) 'Foreword', in J.J. Cohen (ed.), *Prismatic Ecology: Ecotheory Beyond Green*. Minneapolis: University of Minnesota Press, pp. ix-xii.
- Carson, R. (2015) *The Edge of the Sea*. London: Unicorn Press Ltd.
- Cohen, J.J. (2013) 'Grey', in J.J. Cohen (ed.), *Prismatic Ecology: Ecotheory Beyond Green*. Minneapolis: University of Minnesota Press, pp. 270-289.
- Harman, G. (2016) *Immaterialism*. Cambridge: Polity Press.
- Liborion, M. (2016) 'Redefining Pollution and Action: The Matter of Plastics', *Journal of Material Culture* 21(1), pp. 87-110.
- Malpas, J. (2012) *Heidegger and the Thinking of Place: Explorations in the Topology of Being*. Cambridge: MIT Press.
- Morton, T. (2016) *Dark Ecology: For a Logic of Future Coexistence*. New York: Columbia University Press.
- Ruskin, J. (1918) *Selections and Essays*, F.W. Roe (ed.). New York: Charles Scribner's Sons.
- Ryan, A. (2012) *Where Land Meets Sea: Coastal Explorations of Landscape, Representation and Spatial Experience*. Farnham: Ashgate.
- Sprackland, J. (2012) *Strands: A Year of Discoveries on the Beach*. London: Vintage Books.
- Stewart, K. (2008) 'Weak Theory in an Unfinished World', *Journal of Folklore Research* 45(1), pp. 71-82.
- Ulven, T. (1981) *Forsvinningspunkt: Dikt*. Oslo: Gyldendal.
- Zerzan, J. (2012) 'The Sea', *Anagnori* [online]. Available at: <https://anagnori.wordpress.com/2012/09/08/featured-essay-the-sea-by-john-zerzan/> (Accessed: 24 May 2014).



# Contemporary Philosophies for Maritime Archaeology

A Response

Joe Flatman

## Introduction

In responding to the chapters in a book such as this – one that is perhaps uniquely personal and people-focused – I begin by identifying myself and my biases. My perspective comes as one long-engaged in broadly archaeological (from a British-led: anthropological from a US-led) analyses of the recent past, of historical archaeology in the western theoretical tradition dating back to the European Middle Ages. While trained as an archaeologist, I could not honestly define myself as one these days: my lived experience of late is as one paid to manage environmental change, an environment both cultural and natural, historic and contemporary. My ultimate objective, and my responsibility as a conservation practitioner, is to at least render no harm to these environments, and ideally to improve them for future generations. My wider perspective is then as an overtly politicised individual who considers it a moral imperative to engage in acts of what I term social justice, but which others might define as political correctness or, the latest iteration of that term, wokeness. It is based upon these frameworks that I write, and it is from these perspectives that I focus on certain themes within the book that particularly speak to me. I split my response into three parts – present; past; future – to help structure my thoughts. I thank the editor / authors of this book, Sarah Rich and Peter Campbell, for inviting me to contribute to it, and to the contributing authors for their efforts in producing such a thought-provoking work.

## Present: Creating Lasting Legacies

To begin, I focus on the now – late 2021. As I noted above, the chapters in this book are perhaps uniquely personal and people-focused for a work of archaeology, which I present as no criticism. I suspect that the book is not what the editors or contributors imagined it would be when it was first suggested to and approved by the publisher some years ago, before the Covid-19 pandemic changed everything. This is I propose

one of the first ‘pandemic’ archaeological works, its contributions made anew by the accelerated climate of the Covid-19 era, a particularly challenging cultural climate of debate and interaction where emotions run strong. Upon reading it, I am struck how ‘un-archaeological’ it is in comparison to how a book on such a topic would have read even a few years ago, let alone a decade or more. This is an avowedly emotive and engaged book, a politically aware and self-conscious book, and it bears a much greater resemblance to recent works of contemporary social history and museology – for example, Dan Hicks’ *Brutish Museums* (2020) and Alice Proctor’s *Whole Picture* (2020). I consider this to be a good thing. Archaeologists ought to care, emote, be alive to the lives of others and wider social contexts. But that is nonetheless, at least for now, still an unusual perspective to take in an explicitly archaeological work. Despite Mortimer Wheeler’s call back in 1954 (p. 13) that ‘archaeology is a science that must be lived, must be ‘seasoned with humanity’, most archaeological works still remain in his words ‘dead archaeology... the driest dust that blows’ (ibid). This work is not one of those, and it is in my opinion even more valuable for that humanity. There is a rich ecosystem at work here. It is a book that has clearly evolved rather than been ruthlessly structured. And it is, I would suggest, more about the history – including lived experiences – of contemporary archaeologists than about the archaeological exploration of the past. Consequently, it will not be to everyone’s taste, and its contributors must steel themselves for some critical reviews from those who would have us put our emotions back into dusty boxes hidden away on high shelves. In the face of such criticism, they should not be disheartened. We need works that better situate our practice, and this isn’t a ‘zero sum game’. A book on how contemporary archaeologists practice their craft does not take away from or diminish other books on the details of past societies informed by the former’s perspectives. We can, and we ought, to have both.

Turning to specific chapters that caught my attention on the theme of archaeology in the present day, I was particularly drawn Steve Mentz’s consideration of interpretative landscapes in shipwreck assemblages (Chapter 3, this volume). Steve writes with real verve, poetically in places, as in one sentence that caught my eye that ‘shipwrecks move in two directions at once; they are both scatterings and formations. They rupture and also suture’. This proposition – of destruction and creation, loss and renewal, shaping and reshaping – is a thread continued by several other chapters, including those by Matt Edgeworth (Chapter 4, this volume), Claire Watson (Chapter 6, this volume), and Chelsea Cohen (Chapter 7, this volume). As we each of us seek to reposition our daily lives and identities in the face of the ongoing global pandemic, and as we frame those immediate responses amid the ever-more vividly understood, existential threat posed by climate change, these archaeological narratives of sites and finds, lives and livelihoods both shaping, and shaped by, contemporary society have a stunning resonance. The practice and process of archaeology has always been transformational, both ‘to’ sites / finds and ‘upon’ individuals / communities, be this knowing or unknowingly. But an early 21<sup>st</sup> century landscape shaped by the ‘three C’s’ of Covid [19], Culture [Wars] and Climate [Change] brings this reality of practice into sharp perspective. Here we are, making and also made by sites and finds, activities and processes. Events outside of our control increasingly shape our daily lives and our near futures, more so than was the case even a few years ago, and archaeology

ought to adapt to that reality, both in how we undertake our work, and in how we present it. We must ask ourselves: has the pandemic accelerated our movement into fully Anthropocene-era archaeologists, alive to the realities of climate-driven analyses that blend culture and nature and to the creative possibilities that life literally ‘on the edge’ in such circumstances presents?

To provide context to the above from my own professional experience, I spend my life at present managing change in the historic environment. I work for the conservation charity the National Trust in the United Kingdom, in a role (as the manager of an interdisciplinary environmental consultancy team), that offers perhaps unique perspectives on the making and re-making of places both cultural and natural, historic and contemporary. The organization has a set of four core values (National Trust, 2021) that it asks staff and volunteers to use as a guide to their working lives, as follows:

***We love people and places***

*People and places need each other to thrive. We care for nature, beauty and history for everyone, for ever.*

***We welcome everyone***

*We are for everyone. We play a positive role locally and nationally connecting and inspiring people.*

***We think now and for ever***

*Be part of creating a lasting legacy for the future by valuing what we have, embracing change and moving forward.*

***We make it happen***

*We move forward with purpose and focus, always aiming to simplify and improve.*

When I consider these values re-framed in the context of the thinking of the authors of this book, I am struck by the importance of Mentz’s ‘sutures’, a narrative process of renewal in the environment both tangible and intangible that we as practitioners are wise both to remember and to share more widely. These values echo down the ages but have a particular resonance amid our current troubled times, where their emphasis on respect for and renewal of the environment, of living in the moment and gaining pleasure from experiences as much if not more than from acquisition, hold special appeal. For example, in the autumn of 2021 while writing this response, I have been deeply involved in developments to further support specialist craftspeople and craft-skills, embedding within the organisation the necessary inter-generational craft skills used to renew our special places. The craftspeople, in Mentz’s terminology, literally rupture and suture. Like a medic, they must – through both training and experience – cut and remove; graft and repair; build and develop. Their skills must take what survives of the old, and intermesh these with the best of the present, to think for the future. The benefits of undertaking this iterative process, upon both the craftspeople themselves, and upon those with whom they interact, are as important as the work that they physically undertake. And that work itself becomes part of the narrative history of these sites, as for example the current generation of craftspeople discovery and examine the evidence of their forebears.

## Past: Curating Decay

Moving on to my second element of response, I turn more formally to the place of the past in the present day. In the previous section, I reflected upon the lives of contemporary heritage practitioners as they seek to develop and situate their practice. In this section, I reflect directly upon sites and finds themselves. This book makes clear that the coast / marine / underwater zones are the literal 'front line' of the archaeology of the Anthropocene. Chapters such as Steve Mentz's (Chapter 3, this volume), Matt Edgeworth's (Chapter 4, this volume) and Sara Rich, Leila Hamdan and Justyna Hampel's (Chapter 9, this volume) all speak strongly to me as I consider the material evidence of our contemporary societies, and how archaeological perspectives traditionally used to analyse the 'distant past' are of value in our consideration of the more 'recent past' and of modern-day societies. Considerations of plastic 'waste' in particular, a consistent theme across this book, fascinate me here, for this is an issue that like so many of us I confront, literally and figuratively, in my daily life both personal and professional.

Three 'archaeological' approaches to such issues help situate my thinking here. The first is the work of the late, great William Rathje, initiator of the Tucson Garbage Project in 1973, arguably the first ever archaeological analysis of contemporary society (see Rathje and Murphy, 1992). The conclusions that Rathje reached about people's behaviour (in terms of what they acquire and what they admit to disposing of versus what they *actually* dispose of, and about the long-term survival of materials in the environment), have a stunning relevance today. Rathje's work sits at the nexus of contemporary debates concerning individual and collective behaviours in the face of apparently insatiable consumer appetites that exist far beyond our planetary resource. The second is the work of Caitlin DeSilvey (2017, 2021) on 'curated decay' – sometimes also referred to as 'managed decline' or 'adaptive reuse', and the decisions that we must make, individually and collectively, about what we 'preserve' and what we let 'decay' – I would suggest in the context of this book, rather, evolve, transform, and metamorphose. DeSilvey and their colleagues have been focused on coastal locales. But the lessons learned in their integration of practice and increasingly government policy have a far wider resonance, including on shipwreck sites. The third approach that situates my thinking here is then the currently unpublished work of an unnamed archaeologist / environmentalist whom I discovered on Twitter, under the name @LegoLostAtSea, who Tweets about, and is writing a formal book upon, their discoveries of plastics, especially Lego, washed up along the coast of south-west Britain. Their work crosses boundaries, literally and figuratively. It blurs along the coastline, crosses the foreshore, is part archaeology and environmentalism; part past and part present; part heritage and part ecology. The finds that they make – of lost and discarded materials transformed, colonised, and adapted by marine life – are as much 'found art' as they are archaeological discoveries. And their work of interpretation and presentation is then as much about creativity, curation and display as pure 'research'. These three writer / researchers, Rathje in the recent past, DeSilvey in the contemporary past, and LLAS in the present/future past, all give me insight into and inspiration upon what Sara Rich, Leila Hamdan and Justyna Hampel refer to as 'shipwreck afterlives', of sites and finds as other places, as 'sources of... community; biodiversity; nutrients; toxicity; waste; contemplation; and knowledge'. I am struck by how creative and how 'unscientific', in traditional perspectives, such works are, harking for example back to Matt Edgeworth's

chapter about site formation and so analytical approaches deployed. There is a strange beauty in such sites' creation, erosion, change and metamorphosis. We ought to recognise these as uniquely transitory, dynamic, creative spaces, and we must approach them as such, re-thinking archaeological approaches to them in a far more creative way.

To again provide context to the above from my own professional experience, one of my current roles at the National Trust is to work with colleagues such as curators and conservators of sites in our care to determine what of the recent and contemporary past we ought to preserve for future generations. This process involves acknowledging the long-term curatorial and conservation implications of these decisions. In the types of historic sites that the National Trust often manages, this increasingly means confronting the reality of 'Anthropocene' artefacts such as early forms of plastic and other types of synthetic material dating to the 19<sup>th</sup> and 20<sup>th</sup> centuries. Early (and even far more recent) forms of such synthetic material, used in the manufacture of a diverse array of objects and even in the maintenance and repair of sites and structures, present huge conservation challenges. Such materials are often fragile, unstable, and hard to conserve; they may also present health and safety threats to both the wider environment and to those who handle them as they decay and release polluting or even directly harmful elements into the atmosphere. But for all their challenges, such objects are nonetheless a crucial part of the identity and narrative of such sites, and they often function as touchstones of wider social change. To name three examples of plastics requiring care by the National Trust, there are those used in the manufacture of the first telephones in private homes; of the emergence and rapid expansion of the private car in daily life; and of the deployment of synthetic fabrics by the fashion industry. Examples of these three life-altering components and more of many 20<sup>th</sup> century communities survive in the care of the National Trust, from their introduction into existing historic sites, some of great antiquity, such as at Alfriston Clergy House in East Sussex (a house constructed around 1400 AD that remained in church ownership until it was sold to the National Trust in 1896)<sup>1</sup>, to large-scale 'new' country houses such as Castle Drogo in Devon (constructed between 1911 and 1930)<sup>2</sup>, and in turn to more modest but socially significant locales such as 251 Menlove Avenue in Liverpool, the childhood home of the Beatles' John Lennon, a 1933-built semi-detached house<sup>3</sup>. Which plastics in such circumstances are, if not 'good' then 'significant'? Which do we keep, and which do we dispose of? And can we dispose of these safely at all?

## Future: Accepting a Loss of Control

In my third and final section of response, I look to the future and to the challenges set by Sara Rich and Peter Campbell in their introduction (Chapter 1, this volume). There is so much to consider here, so many possible responses, that I focus upon some inter-related challenges set by the authors in their sub-sections on 'collapse', 'cataclysm' and 'eruption' that touch upon topics and approaches that I addresses in the previous two sections. All the elements below that include in *italics* are Rich and Campbell's original text.

---

1 Alfriston Clergy House, National Trust; <https://www.nationaltrust.org.uk/alfriston-clergy-house>.

2 Castle Drogo | National Trust; <https://www.nationaltrust.org.uk/castle-drogo>.

3 Beatles Childhood Homes | National Trust; <https://www.nationaltrust.org.uk/beatles-childhood-homes>.

- *If maritime archaeology is to increase within the Global South, then room has to be made for more non-Western theoretical approaches to archaeological practice; so how can maritime and nautical archaeologies more substantially and significantly include and account for collapsed Indigenous perspectives?*
- *If object-oriented ontologies, criticisms of heritage, de-anthropocentric approaches to fields within the humanities and arts, and critical evaluations of the Anthropocene all have urgent real-world implications, how can we as theorists, researchers, and educators effectively translate complex theories into pedagogical, public-engagement, and public-policy praxis?*

I respond here with a recognition of my intergenerational, inter-contextual privilege. I am not of the communities that make up the Global South, and I proceed with great caution, and respect, when speaking of those places and peoples. I am mindful here of making suggestions that risk patronizing and parentalizing, of being in as much of a colonial mindset as my forebears by thinking that I can provide solutions to the geopolitical complexities of a stunningly diverse array of communities and cultures. From my own, recent lived experience, I therefore only make some modest links to provide food for thought and to provoke further debate. I am particularly mindful of the lessons learned by the National Trust in its work in and around the ‘Colonial Countryside’ led by Corinne Fowler (2020)<sup>4</sup>. Here, authors, writers, historians, and primary school pupils (e.g., ages 4-11) explored some National Trust country houses’ Caribbean and East India Company connections, undertaking historical research while engaging in creative writing and other production of new narratives that offer spaces for people to engage with, and emote about, an often misunderstood and for some, very painful, past as well as present / future. Challenging established perceptions and creating space for new and/or under-represented voices and narratives, was and remains central here. I do not propose a simple replication of such approaches on a larger scale – e.g., of archaeologists of the Global South being commissioned to approach and reinterpret existing / new archaeological sites (although there may be a place for specific examples of such approaches). That would be to simplify and demean all parties. But I do wonder if the basic premise of this approach is applicable, that privileged communities and organisations in the Global North ought to far more proactively than at present seek to create spaces and opportunities for the marginalised voices of the Global South. I put it to my academic peers that individual researchers, and especially research organisations, in the Global North ought to proactively partner with individuals and organizations in the Global South to share their privilege, to open-up access to funding and facilities for research that is led in all regards by Southern communities. I would dare to go even further, to prompt grant-giving organisations to *de-prioritize* grant applications from the Global North that do not include such equitable partnership. Linked to this in terms of research agendas, I challenge us all to consider how the principle of ‘polluter pays’ comes into play in the context of COP26 discussions regarding international

---

4 Colonial Countryside Project | National Trust: <https://www.nationaltrust.org.uk/features/colonial-countryside-project>; Colonial Countryside, University of Leicester: <https://le.ac.uk/colonial-countryside>.

support to the Global South for climate mitigation and adaptation responses. Given the recent history of the mass-movement of ‘waste’ products (especially metals, plastics, etc.) from the Global North to the Global South for disposal and/or ‘recycling’, might a reasonable extension of such existing environmental laws be to place a percentage levy on the movement of such materials that is used to support research into, and by, Global South environments impacted by such mass-movements of objects and materials? Such research could range from the very small (the Lego blocks mentioned previously) to the very big – the super-tankers, oil rigs and other marine industrial architecture that litters the coastlines of the world. Such approaches could transcend geopolitical, cultural, disciplinary and environmental boundaries – blending tangible and intangible cultural heritage, the historic and the natural environment, science and the humanities, the land and the sea.

### *Cataclysm*

- *How can maritime archaeology use object-orientation to become action-oriented toward coastal resiliency?*
- *What can nautical archaeologists offer to mitigation efforts of polluting Industrial-era and contemporary shipwreck sites?*
- *Understanding the fundamentally public nature of these problems, if nature and culture as distinct domains are dissolved, what happens to tangible and intangible forms of heritage?*

I begin by urging caution here: we cannot ‘fix’ everything and we need to get out of the habit of thinking in such a technologically obsessed perspective. As emphasised by several authors throughout this book, we – both we as archaeologists and we as individuals – need to become more familiar with, and more accepting of, loss not as ‘loss’ but as change and metamorphosis. Some action is about accepting not loss of the coast, but rather change to that coast; some mitigation is recognizing that polluting shipwreck sites still bring benefits in terms of ecosystems. This isn’t laziness nor hopelessness: it is about recognising the fundamental lesson of archaeology, that we have always lived in a changing environment and have consistently – and often highly successfully – adapted to that change. If archaeology tells us anything, it is that our problem at present is that we have fallen, especially in some parts of the Global North, into the misconception that we can somehow ‘control’ the environment, constrain and contain it, compartmentalise and commodify it. We need to use archaeology more vividly and proactively to remind of the observable reality of the *lack* of control of most people, in most places, for most of the time in the past, and that adaptation to change is, arguably, the defining characteristic of humanity. This then feeds into the wider benefits of ‘nature’ and ‘culture’ being dissolved as distinct domains, and the benefits of *that* process in terms of the appropriate re-entangling of tangible and intangible forms of heritage. Ultimately, this comes down to breaking down barriers and boundaries, freeing our spaces and so our thinking. An emotive, visceral, creative response that is to a greater or lesser extent intangible cultural heritage is a legitimate part of the re-engagement of many disengaged, disenfranchised communities with their environments. To challenge Sara Rich and Peter Campbell back:

perhaps maritime archaeology ought actively *not* seek to use object-orientation to become action-oriented toward coastal resiliency, but instead to quite literally go with the flow, to study the curated change of such places. This would involve embracing co-creation with ecologists, biologists and other environmental specialists involved in the next iteration of such places and spaces, as well as creating additional room for creative communities to examine that change, sharing the journey of self-discovery that it will bring.

### *Eruption*

- *With the understanding that ships were the mechanisms of European colonialism, how can maritime archaeology contribute to post- and anti-colonial narratives, instead of reiterating that of the seafaring colonizer as ‘Great Man’?*
- *In what ways can maritime archaeologists convert their knowledge of waterways into concrete changes to public policy on nuclear waste disposal, fossil-fuel pollution, sea- and airborne pandemics, microplastics pervasion, wastewater and runoff?*

*An overarching question that encompasses the whole catastrophic triad raises the issue of pedagogy: how can we establish effective programs for public discourse and teaching that do not fall back on the dystopian languages of hopelessness (‘there’s no use in trying’) or apocalypticism (‘divine (or technophilic) intervention will fix it, so there’s no use in worrying’)?*

The series of suggestions that I have made above in response to the ‘collapse’ and ‘cataclysm’ sections of Sara Rich and Peter Campbell’s introductory challenges go some way to formulating my responses to this final section and so my concluding comments. We need to partner more, and more effectively, between the Global South and the Global North; we – a ‘we’ of the Global North – need to recognise our privilege and undertake forms of restitution in response to the intergenerational, inter-contextual nature of that privilege. We need to be proactive in this as an underlying piece of collective social responsibility: it is a moral responsibility that we cannot shirk. Archaeology then also offers a unique, positive ability to re-connect with an environment, both ‘cultural’ and ‘natural’, tangible and intangible, that so many of us have lost touch with. And that process of re-connection gives us a wider range of emotional tools to deal with the reality of accelerating change in an uncertain environment, re-accepting that the physical world that we take for granted has foundations both more unstable, and yet more flexible, than we all perhaps realise. This process will be transformational. Here then is my final response to Rich and Campbell’s overarching question of effective programs for public discourse and teaching:

Experiencing change is innate to humans, and we are exceptional in adapting to such changes both individually and collectively. Adaptation to the worst of those changes is part of our communal mitigating response, and for such adaptation and mitigation to be successful, we need a creative as much as a technological response to help navigate our emotions and memorialise that process of change.

Things – places and communities alike – will be different in the future as much as they were in the past. Some places will change irreconcilably and indefinitely. We cannot fix

everything, and we ought not to attempt to. We ought to embrace instead the beauty in change, and to record that process through the creative spaces identified as necessary in my first point above.

There is benefit in trying, both individually and collectively, to adapt in response to change, for part of the benefit of that response is the creative processes that it engenders, a creativity that can be at once both tangible and intangible, producing a diversity of responses. This production of ideas and emotions is as, if not potentially more, important than any attempt to forestall change to existing sites and structures, or to memorialise their passing in physical terms.

## Works Cited

- DeSilvey, C. (2017) *Curated Decay: Heritage Beyond Saving*. Minneapolis: University of Minnesota Press.
- DeSilvey, C., H. Fredheim, H. Fluck, R. Hails, R. Harrison, I. Samuel, and A. Blundell (2021) 'When Loss Is More: From Managed Decline to Adaptive Release', *The Historic Environment: Policy and Practice*, doi:10.1080/17567505.2021.1957263.
- Fowler, C. (2020) *Green Unpleasant Land: Creative Responses to Rural England's Colonial Collections*. Leeds: Peepal Tree Publishing.
- Hicks, D. (2020) *The Brutish Museums: The Benin Bronzes, Colonial Violence and Cultural Restitution*. London: Pluto.
- National Trust (2021) *Our Values*. Swindon: The National Trust. Available at: [https://www.nationaltrustjobs.org.uk/files/5116/1789/0753/Our\\_values.pdf](https://www.nationaltrustjobs.org.uk/files/5116/1789/0753/Our_values.pdf) (Accessed: 17 December 2022).
- Proctor, A. (2020) *The Whole Picture: The Colonial Story of the Art in Our Museums and Why We Need to Talk About It*. London: Cassell.
- Rathje, W. and C. Murphy (1992) *Rubbish! The Archaeology of Garbage*. New York: Harper Collins.
- Wheeler, M. (1954) *Archaeology from the Earth*. London: Penguin.
- Williams, T. (2022) *Adrift: The Curious Tale of the Lego Lost at Sea*. London: Unicorn.



# OOO, Archaeology, and the Anthropocene

## Comments on Maritime Archaeology and Anthropocene Philosophy

Christopher Witmore

### Maritime Archaeology and Anthropocene Philosophy

Ever since Columbus mistook Cuba for Japan, Christian-Europeans have struggled to come to terms with their ancient terrestrial prejudices. With their repeated circumnavigations of the globe in the age of European land-appropriation, Early Modern, risk-taking mariners initiated an iterative process of revision where Earth, what for them had been experienced hitherto as predominately land-based, was reimagined as a waterworld (Schmitt, [1942] 2015; also see Sloterdijk, 2013, pp. 40-46). The masterless ocean, upon which the sun never set, overran the terrestrial globe and through the new world pictures of this age (Heidegger, 2002, 68), Europeans learned how what they called Earth would have been better named *Oceanus*. Long-distance engagements between sailors, ships, maps, instruments, new lands, and world-encompassing oceans teeming with creatures gave rise to a new sense of space that, as Carl Schmitt recognized ([1942] 2015), shaped a common consciousness and ushered in an epoch of profound economic, cultural, and political transformation. After the disclosure of the oceans' true proportions, the boundless blue offered navigable routes for transportation, seemingly inexhaustible hunting grounds for whale oil and fish, a vast clandestine dump for the malefeasance of land-lubbers, and so much more. Of course, there are limits to how much terrestrial ignorance the maritime can absorb. Now human-induced alterations to and within the briny deep suggest a radical shift in relations, for we eight billion humans entangled with trillions of other things now seem to rival the oceans themselves with a comparable collective agency. Let us register this new sense of proportionality. Given the planetary-wide challenges of global warming, ocean acidification, plastic pollution, widespread environmental degradation, and incomprehensible biodiversity loss spiraling into mass extinctions, the revelation of finitude with respect to the oceans and their bounty is perhaps of even greater scope than that of their sublime eminence, for it shatters all previous sensibilities shaped by the sea. If it seems like a tall order to connect changing

definitions of the maritime, modern consciousness, ships, and the oceans themselves with the aftereffects of globalizations in the Anthropocene, then this is precisely what the present volume rather ambitiously seeks to accomplish.

Sara Rich and Peter Campbell have assembled a welcome and timely transdisciplinary anthology of maritime (and terrestrial) archaeology, philosophy, and literary studies that we may place under a broader umbrella of object-oriented approaches. Like a flotilla of barques, caïques, gulets, Nordlandsbåts, and sampans on the high seas, this volume heaves to and fro across a range of topics – from the ship of Theseus, complicit statues, and shipwrecks on literary shores to Christian-ship metaphors, tide-cut sections in refuse dumps, and wharves fashioned from scrapped ships to seafloor museums, ships-turned-habitats, the amphora-abodes of octopodes, and the planetwide state of emergency associated with the Anthropocene. As a route into this motley ensemble of chapters we may take the two primary aims specified by Rich and Campbell in their lead chapter as our port of embarkation: ‘1) to help usher the alienated subdiscipline of maritime archaeology into the broader discourse of the humanities; and 2) to issue a call to action for fellow maritime archaeologists to respond to ecocide more urgently, more cross-disciplinarily, and more responsibly with new interventions into old research questions’. With their alien archaeologies for the Anthropocene, Rich and Campbell seek to make good on these aims by advancing ‘an explanation of object-oriented approaches for maritime archaeology’.

It probably never dawned upon Modern sea-farers that we humans were latecomers to the revelation of an oceanic Earth. As a thing-in-itself, oceanic Earth, as we learn from Object-Oriented Ontology (henceforth OOO), does not haunt merchant marines, whalers, or pirates alone, for its blue proportions are also a problem for other objects. In the course of their routine migrations, for example, bluefin tuna, sooty shearwaters, leatherback turtles, and blue whales undertake world-circles – migratory routes whose dimensions are planetary, or nearly planetary, in scale – through, or above, the Earth’s aqueous volumes. For an OOO, all entities, shipwrecks, solar radiation, Theseus, surface temperature readings, ballast, green algae, continental-weather patterns, plastic bags, loggerhead turtles, the Mediterranean Sea, and Captain Ahab are equally objects, that is, units that can neither be broken down into their parts nor reduced to their effects (Harman, 2013, pp. 6-7; also Witmore, 2014a, p. 206). To grasp the ‘object’ of OOO, one must strip the term of its Cartesian baggage, which imposes arbitrary hierarchies of value and preformed tenets concerning the nature of the real (Witmore, 2020a). If by now the fundamental principles of object-oriented ontology have been repeated with such frequency and clarity that to recite them hardly seems warranted (see, for example, Harman, 2011, 2018), then I do so here, particularly with respect to its chief architect Graham Harman, for the benefit of archaeological readers unfamiliar with the OOO method.

All forms of human knowledge reduce objects to caricatures of themselves either by considering a thing in terms of what it is made, what it does, or some combination of the two. OOO often helps its would-be adherents understand how not to inflict harm upon objects by prohibitively warning them against reducing an object to its components (thou shall not *undermine*), its effects (thou shall not *overmine*), or both its parts and consequences (thou shall not *duomine*) (Harman, 2018, pp. 41-52). As autonomous entities, all objects withhold something of themselves from relations with other objects. So, it is not only that we, whether archaeologists or philosophers, may only ever approach the

reality of a shipwreck obliquely, but also that *being* is a problem shared by all entities – a shipwreck withholds its reality from barracudas, barnacles, and scuba divers alike. If the reality of an object lies deeper than its relations, then an object may only relate indirectly by means of a sensual object, that is, a relational object generated through the encounter. Still, shipwreck, barnacles, and barracudas are not identical with their properties, those qualities that differentiate them from other ships, barnacles, barracudas, or anything else. It is here, between an object and its properties, that OOO posits a fundamental tension, one which constitutes the locus of change. Even though it may have been known by various names, FS-278, *Range Recoverer*, *Reedville*; even though it offered itself to various purposes as a WWII freight and supply vessel, a missile range instrumentation ship, a purse seiner, an artificial reef; a ship is still the same ship after it sinks.<sup>1</sup> Real change for the *Reedville* can only occur retroactively through the ship entering into a symbiosis with another object, a polyhaline community of blue mussels, barnacles, sponges, hydroids, bryozoans, northern coral, etc. (on polyhaline communities in Delaware, see Steimle, 1995; also see Rich et al., this volume). Out of this fusion where a polyhaline community interferes with the relationship between the *Reedville* and its own properties, emerges a different object, a habitat for reef fish in Delaware #11 Artificial Reef. For OOO, the onefold of each and every object has a fourfold character of its own – real objects, real qualities, sensual objects, sensual qualities – and the basic interactions between these poles are known as time, space, essence, and eidos (Harman, 2011, 2018). We should note two points here. First, OOO grants every object their autonomous reality and the fourfold offers a model that explains how that reality lies deeper than an object's component parts and external relations. Second, the basic interactions between the four poles of any object are emergent rather than primordial, which is why any object-oriented approach worth its salt begins with its objects before moving on to understand their relevance in a given situation or their place in the world.

OOO is very much a philosophy in the making, which benefits with the addition of each and every compelling example. This, to be sure, is one of the reasons that this anthology is so exciting. At the same time, it is extremely rare in the history of the discipline, as Rich and Campbell recognize, for world-renowned Continental philosophers to take a direct interest in archaeology. This interest has not emerged from nowhere. If the thinkers behind OOO have recognized among archaeologists a kindred concern for the dignity of all objects without recourse to others (Harman, 2014a, 2016, 2019, this volume; Bryant, 2021a, 2021b; Morton, 2021), then it is because a subset of archaeology no longer subscribes to a teleocentric self-definition as the study of the past through its intermediaries, but rather recognizes the field to be the study of things in the present with an aspiration to understand their pasts and their relevance to life (Olsen et al., 2012; Witmore, 2019, 2020b). Thus, the relationship between OOO and archaeology has, from its beginnings over a decade ago (Olsen, 2010; Witmore, 2012; Harman, 2014a, 2016), been forged around a shared concern for objects of all shapes and sizes – from

---

1 One may profitably argue that the ship known as the *Reedville* had passed through several symbioses over its lifespan – I have withheld on these details for the sake of the example. On the *Reedville*, see: <https://www.maritime-executive.com/article/wwii-vintage-ship-latest-sunk-on-to-delaware-s-artificial-reef> and <https://news.delaware.gov/2020/08/13/dnrec-sinks-ex-navy-and-army-freighter-turned-fishing-fleet-boat-reedville-onto-delawares-artificial-reef-system/>.

the planetary ocean to oil-degrading bacteria – as the primordial grounds for reality. I will return to offer further thoughts on the relationship between OOO and archaeology below. For now, it is important to point out how Rich and Campbell rightly link this catastrophe to anthropocentrism, for ‘the ontological state of exception granted to *anthrōpos* in our intellectual tradition’, as Eduardo Viveiros de Castro argues, ‘was the ultimate justification, or cosmological precondition, of the Anthropocene’ (2019, p. S298).

In this present, as our waterworld continues to roil in the aftereffects of the oceanic turn that underwrites the second stage of globalization,<sup>2</sup> our planet becomes increasingly alien, not only for humans, but for all earthlings. Motivated by this planet-wide state of emergency, and a lack of engagement on the part of maritime archaeologists who continue to press ahead with business as usual, Rich and Campbell issue a call-to-arms for all archaeologists, especially those of a nautical persuasion. By arguing that ‘the fields of archaeology and philosophy, in particular, share several research domains relevant to understanding and responding to contemporary planetary crises’, they urge practitioners to embrace non-anthropocentric, object-oriented approaches in an effort to reconsider what we as archaeologists can do. ‘Our (inter)disciplinary efforts’, they contend, ‘should be at the forefront of conversations about Earth’s rapidly shifting reality’. The answers to be found in this anthology are varied. While I am quite sympathetic to Rich and Campbell’s marshalling call, the archaeology they seek in confronting the Anthropocene will have to be other than what so many of our colleagues have embraced to bring us here (consider González-Ruibal, 2008, 2018, 2019; Soli et al., 2011; Edgeworth et al., 2014; Witmore, 2014b, 2015, 2019, 2020c; Blaising et al., 2017; Caraher and Weber, 2017; Pétursdóttir, 2017; Bauer and Bhan, 2018; Olivier, 2019, 2020, 2021; Woodfill, 2019; Harrison and Sterling, 2020; Rosenzweig, 2020; Campbell, 2021; Hacıgüzeller, 2021; Olsen et al., 2021). My hope in what follows of this commentary is to flush out aspects of this object-oriented, Anthropocene archaeology by working with the papers that they have assembled in this volume.

For Rich and Campbell, our precarious reality takes form as a triad of crises – collapse, cataclysm, and eruption. Under each of these headings – collapse, cataclysm, and eruption – Rich and Campbell raise a series of big questions – or I should say, provocations posed as questions – related to how marine archaeologists might put their expertise ‘to the work of the Anthropocene’. By *collapse*, the authors draw attention to the ways ‘civilization’ falls from above, or is pulled down from below, as a consequence of its own excesses, its disproportionate effluence, which places the poor on the frontlines of present catastrophes. With questions that range from the political to the philosophical they reinforce the urgent need to act now, otherwise we – humans, along with countless nonhuman species – will all plunge headlong into disaster. By *cataclysm*, the authors refer to how a warming planet stirs things from below, whether with the deluge of melting ice-caps and rising waters or

---

2 Here, I am adopting Peter Sloterdijk’s scheme of three stages to globalization (2013). If the first stage is metaphysical, with the ancient revelation of the Earth as a sphere, then the second comes about through the terrestrial globalization of Christian-Capitalists on the high seas with their religiously legitimated political colonization of other lands. While the third opens with the advent of electronic communications in the Twentieth Century, it is very much the case that we continue to rely on large ships moving over the oceans in world-circles.

the increase in megastorms battering islands and seaboards.<sup>3</sup> Under this heading, Rich and Campbell urge marine archaeologists to enter conversations about sea-level-rise, coastal resiliency, mitigation efforts, and consider the philosophical background that brought us to the brink. By *eruption*, Rich and Campbell seek to draw attention to how the pressure builds through generations of oppression, violence, inequity, and genocide. From articulating anti-colonial narratives of Modern seafaring to thinking through present water crises, the authors question how marine archaeologists might turn the relief valves with building pressures of bigotry and injustice before a catastrophic outburst.

However nautical archaeologists react to Rich and Campbell's emergency summons, with the waters rising, more practitioners will join their ranks – and not only because anthropo-technically made objects will be submerged. All researchers become archaeologists in the Anthropocene (Shanks, 2012, pp.21-42), with a sizable portion of them being of the marine variety. When sperm whales are found with abandoned fishing nets, plastic cups, and tubing in their stomachs; when deep-water explorers reach uncharted areas of the ocean bottom only to be confronted with plastic bags; when the carcasses of Laysan albatross chicks are filled with cigarette lighters, bottle caps, plastic straws, and toothbrushes; then marine biologists, oceanographers, and photographic artists all must observe and measure what has become of human-generated malfeasance. Not all of this rubbish can be attributed to the last few decades of plastic-saturated excess. Some objects long frozen or buried resurface (Macfarlane, 2019, pp.13-14). From the melting permafrost, persistent carcasses of creatures long extinct return unbidden into the present; from buried landfill rubbish relinquished by 1920s London households endures to meet the briny touch of rising waters in a warming world (Edgeworth, this volume); across the debris field of an ancient sea-battle between Rome and Carthage, scattered amphorae, bronze helmets, and warship rams are found to have offered their persistent forms as humble abodes to octopodes across a thousand octopian generations (Campbell, 'Octopodology', this volume).

Notwithstanding the subsequent contributions of earthworms, microbes, tree roots, or burrowing animals, the totality of anthropogenically modified ground (including seafloor), as Matt Edgeworth suggests, constitutes the *archaeosphere* (also see Edgeworth, 2014a, 2016, 2021; Nativ, 2018). The archaeosphere is inclusive of all objects, seen as traces and residues, suggestive of past human activities. Though he explicitly takes no position on the debate in this volume, elsewhere Edgeworth has argued how the lower multifarious boundary of the archaeosphere provides a sound marker for the *diachronous* onset of the Anthropocene (Edgeworth et al., 2015). In other words, all human-modified ground, or at least that where humans have left a discernable trace, is part of the Anthropocene. Viewed from a human perspective, such an stance, one could argue, succumbs to the teleological fallacy where

---

3 Here, we should be mindful of the terrestrial biases of language users who walk on dryland, and celebrate the heights around them, for the Greek word, *kataklysmós*, which Rich and Campbell translate as flood or deluge, actually suggests the opposite of their meaning. While *klýsma* refers to the liquid used for washing out or the place washed by the waves, as in a sea-beach, *kata* denotes a motion from above, down from, downwards – namely, this term conjures images of violent waters plummeting from above. If we are, as the authors urge, to embrace oceanic thought then we must be ready to fashion our own neologisms when language is lacking (see Macfarlane, 2016). From the perspective of oceanic thought, as Rich and Campbell write, the waters swell upwards – therefore, I offer *anaclysm* as a modest alternative.

the end that is our present was never anything other than inevitable. At any point in the sixty-thousand year adventure of modern humans there were countless possible futures; this present just happens to be the one in which we find ourselves. Moreover, to state that the Anthropocene is deep it is to extend the responsibility for our precarious times to those who lived in radically different ways (Crossland, 2014). It assumes an all-inclusive *anthropos*, which deflects blame from those who pollute the most (González-Ruibal, 2018; Witmore, 2019; Woodfill, 2019). And yet, when ‘viewed from the perspective of a desert or an ocean, human morality looks absurd’, writes Robert Macfarlane, for it is ‘crushed to irrelevance’ (2019, p. 15). Edgeworth approaches the archaeosphere, and its relationship to the Anthropocene, from the angle of stratigraphy, where chthonic interactions between objects – from water tables to nitrogen-fixing bacteria to oak trees to continental plates – give rise to formation processes. In geologic terms, one may imagine a future several million years hence where portions of the Eridanos river channelized in Classical times, twentieth-century subway lines, rebuilt Hellenistic stoas, Ottoman mosques, and concrete gyro restaurants in the Monastiraki district of Athens are smashed and sintered into a wafer-thin melangery where any sorting of once historiographical consequence is totally obscured. Such ‘chrono-coalitions’ not only render historically meaningful dates irrelevant, they come about through the emergence of a composite object where all its constituent components lose their autonomous character; and that is precisely why they are so alienating from an archaeological perspective (Olivier, 2020).

It is on this discursive ground that Edgeworth enters into an engagement at the edge of the erstwhile Goshams Farm Landfill, what today is a pasture for ponies and mining ground for drift objects. Here, along a five-hundred-meter bank where the maritime meets dry land – what Edgeworth describes as an interface of hydrosphere and archaeosphere – 40 km east of central London, the mixing waters of the Thames Estuary carve and recarve section, form and reform beach, revealing what lies below a contrived mound of urban malefeasance harboring garbage from the 1920s until the late 80s or early 90s. Light and buoyant objects released by torrents and tides join other flotsam in gyres as polychronic ‘seafills’. Heavy and sinkable objects dislodged from the embankment coalesce into the fill of Bottle Beach. Somewhere in between, paints, stains, bleach, and legion pollutants mix and effuse as toxic leachates into estuary, eventually contributing to the liquid volumes of the North Sea. Along this eroding bank, where anthropogenic stratigraphies present themselves, Edgeworth finds the form of an Anthropocene section, which is defined by: 1) fossils in formation; 2) a deposit cut by greenhouse-gas-induced waters on the rise; 3) the entanglement of more-than-massive anthropo-technical modifications to the Thames; and 4) delayed human-induced pollution of marine environments. Edgeworth’s chapter turns to a detailed account of his archaeological engagement with this Anthropocene section and we come to appreciate how this extraordinary object invites thinking the geologic and the oceanic in archaeological terms. We also encounter yet another example that testifies to how the oceans are losing something of their *shimmer*.<sup>4</sup>

---

4 The Aboriginal aesthetic of bir’yun, “shimmer,” amplifies the brilliant glint of sun on the water into the vibrancy of the world around us, which draws upon one’s ability to behold and experience ancestral power. The loss of biodiversity is, for Deborah Bird Rose, akin to a world losing its shimmer (2017).

Garbage patches, increasingly acidity, overfishing, eutrophication through the agricultural run-off of phosphorus and nitrogen, dead-zones, oil spills, overfishing, urban-waste, shipping sewage, dark recesses hiding toxic military waste from Catalina to the Farallon islands to the Kara Sea, or the concomitant accidents with Fukushima, hypanthropic malfeasance is beginning to usurp the oceans' threshold of absorption. Without healthy oceans there would be far less breathable air to go around for those land-lubbers who imagine oxygen to only come from trees, unaware that more than half of it comes from marine plants and phytoplankton. Once treated in terms of a sublime, vast, and inexhaustible permanence, we now come to experience the oceans themselves as fragile, tenuous, and exhaustible, which occasions a change how we relate to them. Increasingly this involves extending protective spheres of governance and oversight to encompass the whole of what was formerly seen as a boundless, elemental other.

We may tie this sea change to the metaphorical framing of the Mediterranean seafloor as the largest museum gallery in the world, as discussed by Lisa Yin Han. While Han reads Brendan Foley's suggestion of a Mediterranean-wide museum exclusively as an artifact of technological reasoning, we might also read it as an artifact of awareness that emerges from the angle of fragility – that is, the sea and its immense holdings had to be experienced as losable before marine archaeologists could cast themselves in the role of curators. The ecological corpulence of a half-billion people living predominately in urban settings around the Mediterranean, and the billion others with their trillions of things that weigh upon its dwindling bounty (see Olsen, this volume), compels us to explicitly redescribe a once self-evident lifeworld as something that requires care and protection if it is to survive (Sloterdijk, 2016, pp. 61-66). Foley's perspective has also been conditioned through bearing witness to the indiscriminate destruction left in the wake of huge factory trawlers with their colossal nets indiscriminately obliterating everything in their path (Foley, 2009), whether ancient shipwrecks, lost bronze statues, or entire species of benthic and pelagic fish (Witmore, 2020c, pp. 337-338). The loss of once-teeming diversities known to past peoples and their fellow creatures from the entire Mediterranean is coterminous with an ongoing human estrangement from our former lifeworld. Where once there was a *Lebenswelt* of naively given experiences, artificiality now reigns (Husserl, [1936] 1970, pp. 48-53; Sloterdijk, 2016, pp. 66).

Alongside factory trawlers, the soft archaeologies of remote sensing have obliterated distances, robbing once out-of-reach objects of their former remoteness. Han skillfully turns around the paradox of the antecedent darkness of the deep and the manifest visibility of its saline galleries through exhibitions no more than a few clicks away from any viewer. Raising a series of concerns around the nature of museum objects, Han negotiates subtle differences – static versus dynamic, mobilized versus in-situ, present versus tele-present – between museums as we know them and a vast benthic version unaware of the full scope of its own collections. If through an engagement with media and science studies we are reminded how there is no transportation without transformation, then by placing critical emphasis on the workings of museum discourse, display, and exhibition, which are subject, as they always are, to selectivity through framing, emphasis, and rhetoric, Han opens thought towards the disjuncture between the soft manipulation (assimilation and control) of virtual objects and their referents – wreck objects that by virtue of their being and relations with other beings remain unassimilable and resistant

to the hard manipulation of would-be curators. Of course, not all ships find their way to into the watery collections of the Mediterranean, oceans, and other seas. Much of what is lost at sea washes up and accumulates in the wrack zone.

By scavenging shipwrecks along sea shores in the company of literary characters, Steve Mentz aims to submit Ian Bogost's claim that litanies 'are defamiliarizing structures that enable us to peer into the radically alien nature of our universe' to a trial of strength. In curating a motley list of what washes up on the coastlines of shipwreck literature – ship pintles, Ariel's Song, a coat, ten dollars, several lemon trees, and a verse from 'Tempest', a song by Bob Dylan – he slogs between ontographer and archaeographer, where things encountered on the page bear testimony to both their autonomous character and their former unity. Out of what Mentz presents as a shipwreck of objects, as he contends, we may fashion stories of our present age, where 'the subscended path of the hyposubject might help us remember that the Anthropocene is not an age for epics of conquest or the eco-tyrant's wrathful struggle'. 'The wreck-book of the present emerges from scattered objects in unbounded spaces'. Mentz builds his wreck-book from dejecta integrated into *a priori* narratives within literary texts. Thacher, for example, walks among jetsam understood from the angle of narrativized familiarity, for by being prepositioned as more than the dregs of what had been, the dissonance of encountering those objects washed ashore is heightened. The reader understands these things as grounded in loss, and empathizes. Would anyone other than the castaway have recognized a coat washed ashore as that of Thacher's son? Mentz is, to be sure, playing to this tension, but given the examples, readers remain firmly suspended within the twofold of human and world. No one stops to ponder what the tide or sands or sun made of the coat? At times, the examples are strained under the weight of their desired meanings, as with the pintles, the metal pivots upon which the rudder hangs. It seems a trivial observation, but I found myself perplexed as to how the lagan of metal pintles could possibly wash ashore amid flotsam and jetsam, without perhaps being attached to buoyant vehicles of unmentioned waveson (i.e., set within their gudgeons nailed to a rudder), save on the natant page. Given that the S. João lost its three pintles at sea (Mentz, 2015, p. 14), and even allowing reasonable space for the literary imagination, their presence on the beach is far removed from the realm of physical plausibility.

'Read the flotsam', Mentz enjoins, as a way to 'dismantle the apocalypse' (Morton and Boyer, 2021, p. 76). Walk the drift, I would respond. Along a drift beach those things that wash ashore are anything but encoded as legible from the start. Let us therefore ponder, given Mentz's purpose, a different litany of 'scattered objects' in an 'unbounded place' and walk, as Þora Pétursdóttir has done, among drift objects suggestive of the ecological shipwreck of the Anthropocene (Fig. 14.1). Try to step, while maintaining your balance, over the entangled linear jumble of wooden pallets, planks, poles, shattered wooden objects, PVC floats, polyethylene pipes, fishing nets, nylon ropes in mangled masses, whale carcasses, rubber boots, baby-doll heads, fishing crates, footballs, petrol cans, dead trees, or fused-plastic conglomerations (Pétursdóttir, 2017, 2018a (reprinted in this volume), 2019). No, this is not to make that empiricist claim that practical engagements with actual objects of drift carry more value than encounters with literary objects stranded on the page. My point is this: items that comprise the litany of things that drift ashore, the components of the motley assemblage that a beach strand like Eidsbukta gathers,



Fig. 14.1. Drift objects, Eidsbukta, Svaerholt, Norway. Photograph: courtesy of Þóra Pétursdóttir and Ingar Figenschau.

may harbor aspects of their own pastness, but few of these objects offer themselves as water-tight vessels for the past meanings of others. By burdening literary objects with far more than they can shoulder under the grim shadow of the Anthropocene, one might easily suppose that beach-wrecked objects off the page say more than they are capable of saying. At Eidsbukta the order of things is anything but already established. Rather than arriving before the reader with names known, meanings recollected, the objects of drift are mysterious and withdrawn. They resist precisely the kinds of narrative disclosure we find in Mentz's wreck-book (Bryant, 2018). At Eidsbukta, one has to put in the difficult work of observation and identification, which may lead no further than the catalogue that lists, among other things: 1) wooden pylons from anonymous harbors; 2) uprooted birch perhaps from northern Norway; 3) an unmarked fish container from an unknown vessel; or, 4) a wooden hand pike (Pétursdóttir, 2017). Still, perhaps true subsistence lies less in turning away by refusing to appropriate what washes ashore over to our own expectations, and more in the patent recognition that to fashion a story from drift objects, where the tensions between continuity and randomness are heightened, is an encroachment on their own idiosyncratic being (Pétursdóttir, 2018a, reprinted in this volume).

Latour litanies, to be sure, do genuine philosophical work. And one may say the same about a genuine archaeological catalogue of things encountered on a drift beach or a series of photographs without frames (Love and Meng, 2016; Pétursdóttir and Olsen, 2014). On Mentz's literary shores readers may be perplexed over which object they confront, the OOO version or the modernist one. For this confusion to enter is to rob the litany of what

it should do, which is annul the *prototype* (Bryant, 2010). Rather than falling back on the prototypical meanings supplied by the conceptual apparatus – in this case, the modernist constitution of objects on one side and subjects on the other or the OOO object and the hyposubject – is it possible for an author to withhold the framing so that the litanies and catalogues may do their work? The answer, of course, is tied to the rudder arm of aspiration; that is, the purpose which the litany serves.

If among the ancients the rudder alongside the cornucopia were the paired emblems of risk-taking and wealth associated with Tyche the fickle goddess of fortune, then the anchor and fish was a conjoined symbol of steadfastness and security in the Lord who provides salvation in the midst of turmoil. A frequent emblem within early Christianity (Kennedy, 1975; Stroumsa, 1992), that which steadies the ship suggested protection in treacherous nearshore waters. Of course, Christian nautical metaphors do not stop with the anchor, as Jeremy Killian and Sara Rich reveal in their chapter on Christian-capitalist metaphorical associations of ships with the body of Christ. The corpus Christi not only offered a circle of protection for those who ventured long distances at sea, it encompassed the whole of the wooden house without ground. If the ship was seen as the Almighty in the flesh, how, they ask, 'is it possible to reconcile the masculinity of Christ, which Renaissance artists labored to depict, with the femininization of so many vessels in the Western tradition?' Rather than content themselves with the fact that Christian history was beset by such common paradoxes, they 'argue that the lingering mysticism of Medieval Christianity directly affected how Early Modern ships embodied the humanity of Christ: particularly the suffering, nurturing, and self-sacrificing aspects of Christ that conflated him with his mother'. Killian and Rich embrace the ship as Christ christened as mother as opportunity to question Jane Bennett's suggestion as to whether anthropomorphism is really 'the best we can do to empathize with extrahuman things' (Bennett, 2010). Through the triptych of metaphor, mysticism, and morphism the authors come to endorse this suggestion for Early Modern mariners. '[B]y equating the wooden ship with the divine mother and fleshly god, who equated himself with humans, they [these mariners] could experience a more profound conception of their own humanity and divine origins'. By evoking Early Modern mariners without qualification, the reader is left to infer that this equation worked for all who ventured upon these ships. Did the whole crew of Spanish, Spanish Basque, Philippine, Mexican, and potentially African hands, for example, grasp 'at the ontology' of the *Santo Cristo de Burgos* as the Lord in more than in name alone when they set out from Manila on an ill-fated voyage across the Pacific in July of 1693 (La Follette et al., 2018)? Did their perspective change after the Spanish galleon met its end? Should we expect those castaways who may have approached the shipwreck for scrap on the Oregon Coast to go on anthropomorphizing it as the broken body of Christ? Would salvagers have regarded their harvested timbers as incarnations of ribs, spines, and flesh?

For Killian and Rich to argue how this Early Modern anthropomorphism operated on a lateral rather than vertical plane of existence does not do enough to explain how such leveling worked with mentalities shaped by the unfathomable rules of *mysterium iniquitatis*, where many may be called, but not all are permitted boarding cards (Sloterdijk, 2014, p. 246). Neither does it do enough to explain how those who found safe passage to new lands in the body of Christ, and felt at liberty to take possession of land from non-Christian, and, to their minds, *non-civilized*, peoples (Schmitt, [1942] 2015, pp. 59-64), could

then shake off their vertical dispositions for flat associations with their ships through metaphor – never mind the pervasive *scala sociale* that was maintained by these Christian-Capitalist European (colonialist and imperialist) seafarers. Anticipating criticism, Killian and Rich offer a procataleptic rejoinder on the dangers of projection, but the problem here lies more so in the way one works with object-oriented theory. When moving from the generality of Christian metaphor to the specificity of what others make of the world, does one fall to appropriating one group of objects over to the terms of another?

Chelsea M. Cohen considers the afterlives of six ships reused in the construction of expanding wharves in late 18<sup>th</sup>- and 19<sup>th</sup>-century Alexandria, Virginia. Thinking with the assemblage theory of Deleuze and Delanda, Cohen aims to draw our attention not so much to ships as they were, but what becomes of them (this angle on archaeology's object has been articulated by Olsen et al., 2012). In this, she moves between concepts of *strata*, historical formations fabricated from both the contents and expressions of ships, and *detrterritorialization*, which involves the subtraction of elements from an original object. With the latter, we may consider a ship through the disassembly of the upperworks reterritorialized perhaps as wharf cribbing or firewood, while the hull below the waterline was filled with rock and debris to form terrestrial strata that extend dryland into the Potomac River. Similarly, through the excavation of the wharf, its former foundations are transformed into open volumes ready to accommodate new architectures. These detrterritorializations lead to the construction of new objects, and the transformation of old ones, that now emerge as new objects worthy of our attention for what they are. Cohen reminds us how these new territories – ships-as-wharf-beds – may claim longer durations than they would have had as a seafaring ship. Given their material qualities, timbers offer themselves to ships and subsequent situations, whether as foundation or components of a warehouse.<sup>5</sup> Such use and reuse, when conceived in terms of processes of detrterritorialization and reterritorialization, and territory invites thoughts of flow, what Cohen regards as matter-in-movement.

Though these different theories share common foes – the bifurcation of the world into humans and everything else, for example – ‘matter’ has nothing to do with the identity of OOO's objects, at least insofar as Harman is concerned (Harman, 2014b; compare Bryant, 2014), for the reality of objects always lies at a greater depth than any consideration of their physical components. To place emphasis on *matter*, and by extension the ‘material’ attributes of the ship, is not to reveal, as it is often assumed, a deeper substrate somehow lurking below conceptual meanings, but rather it is to define the object from without (compare Ingold, 2007; Conneller, 2011; Alberti et al., 2011; Jones, 2012; Alberti et al., 2013; Watts, 2013; Normark, 2014 (reprinted in this volume); Witmore, 2021a). This holds for the outward, phenomenal appearance of a vessel, which is similarly tied to a human observer (see Harman, 2014b). Offering a new perspective on an old philosophical paradox, Graham Harman takes up these points in his chapter, entitled ‘The Shipwreck of Theseus’.

To Plutarch (*Theseus* 23.1) we owe credit for a passing reference to the preservation of the thirty-oared galley on which Theseus sailed to Crete and returned. Down to the

---

5 Among other archaeological studies that deal with what has become of ships and their contents, especially in light of reuse in the construction of urban infrastructures, Mats Burström's *Ballast* (2017) deserves mention.

end of the 4th century BCE, the Athenians, from time to time, replaced the old timbers with sound ones, so that the vessel, according to Plutarch, became a ‘model’ (*parádeigma*) for the ‘precarious fallacy of growth’ (*tón afxómenon lógon amfidoxoúmenon*), with some affirming that it remained the same, while others arguing that it was not. Harman not only explores this question as to whether or not the ship with the iteratively replaced timbers is still the ship of Theseus, he also asks a second question first broached by Thomas Hobbes (*De Corpore*, 2.11): what if the old timbers were reassembled into a second ship? If one chooses Ship A, then they will champion the overall shape of the vessel over the materials out of which the vessel is made. If they embrace Ship B, then they champion constituent timbers as the grounds for consistency. Or, they may even embrace a third option where both A and B are both held to be Theseus’s ship. Yet, the underlying assumption with all three options, as Harman effectively argues, is that question of identity is bound up with the preservation of idiosyncratic detail. From here, Harman strikes out in a different direction to offer a novel solution. If, for OOO, a thing remains itself even when it loses detail, then a ship ‘might become even more itself when stripped of detail (pieces rot away), combined with something else (sea life encrusts the hulk of the wreck), or deprived of functionality’. Such an abstraction assumes an aesthetic, rather than a literal or material dimension, for the paucity of detail is revelatory – a ship can take on different qualities at different moments and remain the same ship.

Returning to an ongoing debate with archaeologists, Bjørnar Olsen, Þóra Pétursdóttir, and Tim Flohr Sørensen (see Pétursdóttir and Olsen, 2018; Harman, 2019; Sørensen, 2020; Olsen, this volume), Harman reiterates his McLuhanesque perspective on archaeology as a field that deals, by and large, with forms of media at variance from those of history. In clarifying his perspective, Harman takes up points of disagreement with Sørensen and reminds his readers of the importance of distinguishing ‘between (a) the internal processes utilized by any field and (b) the character of its ultimate object’. Whereas historians often deal with ‘hot media’ that contain high densities of information, archaeological media, as Harman contends, are predominantly of the ‘cold’ variety, which demand different levels or modes of *participation* in order to supply what is perceived as ‘missing information’. Just as fishing crates amidst the driftwood of Eidsbukta do not tell us how they ended up in the sea, the wreckage of a WWII landing ship on the opposite side of the peninsula does not speak in the same way as a page from Mentz’s *Shipwreck Modernity* (2015). Here, it is important to emphasize how cold and hot media, as with archaeology and history, exist less as a hard and fast dichotomy, than along a gradient or spectrum, with different degrees of cold and hot, cool and warm (McLuhan, 1994). For Harman, archaeology deals less with the historical details supplied by hot media, and more with the slow-moving, general patterns suggested by cold. Here, Harman finds common ground for archaeology and philosophy, for if both articulate the general background conditions of human existence, then they also occupy a similar cognitive space where a shipwreck may be left in ruins by resisting the urge to restore it in all its detail (Rich, 2021; also see Pétursdóttir, 2014; Witmore, 2020c, pp. 441-454).

The chapters by Campbell and Rich, Hamdan, and Hampel exemplify this resistance, for rather than emphasizing the anthropogenic life of amphorae or ships, they consider them from the angle of their ‘afterlives’ (Pétursdóttir, 2014), their ‘post-history’ (Olivier, 2011), that is, their primal persistence beyond their desired roles (Olsen 2010; Witmore,

2013, 2020c, pp. 37-57, 149-61, 183-5, 318-21, 442-51, 473-81; Olsen and Pétursdóttir, 2016; Farstadvoll, 2019a, 2019b; Nativ and Lucas, 2020).<sup>6</sup> With Campbell we come to appreciate how a debris field off the coast of Western Sicily both offers and withholds far more than evidence for the ancient battle of the Egadi Islands. Among persistent amphorae, and other underwater objects, Campbell undertakes a fascinating speculative archaeology of an alien other, the octopus. A kind of *zoon apolitikón*, this niche-seeker leads its life, by and large, apart from that of others in mutual isolation, within and among human-made things left to their own. Amphora-abodes offer ideal forms of insulation, enabling an octopodal existence in sandy domains away from reef-caves where they might venture further out to hunt and gather. Around these isolated abodes, Campbell draws our attention to the cross-generational deposition of octomorphized objects, from shell middens outside to miniature Wunderkammern, with curiosities collected from the lagan of their pelagic domains, inside.<sup>7</sup> To protect their ceramic dwellings octopodes hold-think debris into portal cairns, blocking doorways, forming intimate spaces. Still, Campbell reminds us how octopodes experience these human-made vessels can scarcely be grasped from a human perspective.<sup>8</sup> Instead, he challenges readers to boldly cast off from the security of an anthropocentric approach to octopodes and speculatively venture into the inaccessible, but imaginable, strange realm of what it's like to be an octopus. Campbell's reflections open a timely path to a wondrous alien archaeology of the subsurface, where, in another atmosphere, we might imagine what it is like to be other than human.

Drawing a distinction between a boat's topside working-life as nautical architecture and its submerged existence as naufragic architecture Rich, Hamdan, and Hampel question the notion that nautical engineering ends with the sinking of a ship. Like reading pages from Lynn Margulis, we come to appreciate how microbial communities repurpose a sunken ship according to their own designs, for through the formation of biofilms, a host of microbes join in to re-engineer the ship into a habitat for a diversity of macrobiota (indeed, the work of microbial 'engineers' is a constant, whether topside or in the domain of the *naufaged*, with or without the presence of human interlocutors; Margulis, 2008; also see Lucas, 2018). Offering a litany of '*naufagic* architectural' examples, from a 79.5-tonne, steel-hulled tuna long-liner careened upon a reef near Mauritius to the *Costa Concordia*, Rich, Hamdan, and Hampel make explicit the ways these hulks of steel, fiberglass, plastic,

---

6 This persistence serves as ground for a distinction between history and archaeology, which is similar in scope to that articulated by Laurent Olivier – if history deals with what happens to people, then archaeology deals with what happens to things or places (2011; also, 2013). We may also tie these considerations to the ongoing articulation of the present as a polychronic ensemble (Olivier 1999; 2011; González-Ruibal 2006; Witmore 2006; 2013; 2020c; Olsen et al., 2012, pp. 136-56; Nativ and Lucas, 2020; Lucas, 2021, pp. 84-102; Lucas and Olivier, 2022), that is, a composition of multiple times manifest in the coextensive durations of things present (also see Campbell, 'Octopodology', this volume).

7 Rather than delving into the unique qualities of lead weights, fluorescent green rulers, or shiny steel stadia rods to attract their curiosity, Campbell understandably raises questions of intelligence – its resemblance to that of humans in terms of creativity, problem-solving, and play, and its difference – as a counter to instinct. Still, without giving due attention to these things, we are left with a largely asymmetrical picture of octopods as intelligent others, rather than fellow object-oriented creatures.

8 By referring to octopus dwellings as 'dens' with 'doors', Campbell wavers between biological and anthropological vocabularies in his descriptions. In so doing he both treats octopodes as animal others and anthropomorphizes them; after all, choking up a passageway with a cairn pile, is not the same as closing a door.

diesel continue to pollute and defile the waters around them, appropriating aquatic immensities from other species with their filth (see Serres, 2011). They compel readers to consider the ways that ordinary and ostensibly innocuous things such as vinyl seat coverings, polyester bed linens, foam mattresses, plastic drink cups, and legion other plastic items on the wrecked *Costa Concordia* could display their unruliness, over the course of a two-year naufragic sojourn, by unleashing a plague of microplastics into the seawaters surrounding the vessel (for more on the unforeseen agencies of such objects, see Pétursdóttir and Olsen, 2019; Michałowska, 2020; Olsen and Witmore, 2021, pp. 72-73).

With over 50,000 merchant ships, over ten percent of which are of the large container variety, and 4.6 million fishing vessels – of which 64,000 are over 24 meters – currently operating in international waters, one need not look to Paul Virilio to recognize how there will be far more shipwrecks than all archaeological institutions can handle.<sup>9</sup> Not all of these ships will be towed to the breaking yards of Alang, Chittagong, Gadani, or Zhoushan. Yes, some will become naufragic architecture, either by accident or design. A few may even join the dozens of vessels (barges, trawlers, tugboats, cruise ships)–along with 86 decommissioned tanks, 997 retired ‘redbird’ subway cars from New York City, and over 100,000 tons of concrete and ballasted tires – as part of Delaware’s 14 permitted artificial reefs (Delaware, State of, 2016). Many, however, will end their lives as surplus waiting for no one, as in the Bay of Nauadhibou in Mauritania where rusted hulks were abandoned by the hundreds. Or, one by one, as with the ghost ships claimed by the Japanese tsunami of 2011 now floating in the gyres of the Pacific garbage patch or the WWII landing ship washed ashore at the end of the strand at Svaerholt (Fig. 14.2), they will sink, float, or run aground, offering themselves as fodder for microbes, habitats for other species, or scrap-heaps for opportunistic salvagers. Can we expect marine archaeology to truly keep up given what it takes to properly document, much less excavate, a single wreck? And what are archaeologists to make of the lethally radioactive K-27 nuclear submarine off the Kola Peninsula or the radiated and waste-laden USS Independence off San Francisco?

This new situation, where the proportionality of what it is to be human has grown far beyond Leviathan, demands a very different species of archaeology (González-Ruibal, 2008; Olivier, 2019; Witmore, 2019), and with their ‘naufragic heterotopias’ Rich, Hamdan, and Hampel take up the challenge of imagining it. While there is no mastery to be had with the growing artificial reefs, vast boneyards, or filth-laden wrecks, as Rich, Hamdan, and Hampel urge all to accept, to fully associate archaeology with the nautical in the Anthropocene demands our scrutiny of everything from water columns to whale carcasses. In working with what becomes of trillions of anthropotechnically fashioned objects that end up in the oceans, marine archaeology has to expand beyond the wreckage that sinks, to consider something of the unruly heritage that bobs, wafts, hovers, floats, and drifts (Olsen and Pétursdóttir, 2016; Bangstad and Pétursdóttir, 2021), whether materially or metaphorically, in service of the lives that we all now must learn to live in the Anthropocene.

---

9 These numbers are provided by the International Chamber of Shipping: <https://www.ics-shipping.org/shipping-fact/shipping-and-world-trade-global-supply-and-demand-for-seafarers/> and the International Marine Organization: <https://www.imo.org/>.



Fig. 14.2. Wreckage of a WWII landing ship, Svaerholt, Norway. Photograph: Chris Witmore.

Today, when just short of all human routines can be linked to the supermonstrous (Sloterdijk, 2012; also Hodder, 2012, 2014; Latour, 2014), who is to blame? We cannot, to be sure, mistake the Anthropocene for being anthropocentric – as many papers in this anthology warn – humans-in-themselves are not at the helm. But neither is this agency anthropomorphic, as Graham Harman points out in contrast (2016, p. 44), for non-humans, even when rendered in similar terms as humans, do not hold a monopoly on all the power: human beings, though not fully in control, are most definitely responsible. Indeed, one should not lose sight of the fact that today's poor and dispossessed, mostly children, are on the front lines of a catastrophe driven by the greed of a more-than-comfortable minority and a complacent majority in the United States and Europe, China and Russia, Australia and India, Southwest Asia and Japan (Hartley, 2015; Miéville, 2015; Moore, 2016).

Claire Watson charges headlong into thorny issues of ethics, morality, and complicity with the argument that objects are more than participants or actors – they are 'often co-conspirators'. Working through a number of examples including *The Monument to the Soviet Army* in Bulgaria, the Albert Pike Memorial in Washington, D.C., and objects indicative of Roman imperialism, Watson argues how 'things are not blameless, and when they are blamed appropriately for their complicity in structures of power, interventions are possible'. Appropriate blame, for Watson, falls along a spectrum from acknowledgement to outright destruction. As with the statue of Theagenes, an athlete from Thasos, prosecuted by bereaved sons for the murder of their father (Pausanias, 6.11.6-8), objects, according to Watson, are 'directly responsible'. Unlike the ancient statue which, having fallen upon the father as he was flogging it, was found guilty and banished to the bottom of the sea by the Thasians, Watson's objects are complicit in their perpetuation of

repression, racial injustice, and Roman imperialism. For Watson, this complicity does not fade with time. One cannot therefore expect their power to diminish after a long marine exile or change in how they are situated. In the wake of experiencing hardship with land barren of fruit – attributed by oracle-informed Delphic priests to the statue of Theagenes’s displacement – it was fished out of the sea, returned to its place, and received sacrifices as a god by the Thasians. Yet no set-term banishment or apotheosis will cleanse their carved or cast hands. By their perdurance, Watson’s sleeping dragons may irrupt into subsequent situations offering themselves to the perpetuation of the harmful ideologies they retain.

No doubt, as Bruno Latour has argued, [i]t’s the power exerted through entities that don’t sleep and associations that don’t break down that allow power to last longer and expand further – and, to achieve such a feat, many more materials than social compacts have to be devised’ (2005, p. 70). Whether by virtue of names raised in bronze or inscribed in stone, or, as with Stalin or Lenin, recognizable physiognomies, monuments erected in public settings perpetuate the identities of those they memorialize, in the face of All who happen upon these public domains. Watson is justified in recognizing how such potent objects are far from neutral. Watson is right to insist upon appropriate acknowledgement and framing. Watson is also warranted in demanding that, given how some objects perpetuate inequities, they have earned their evictions from places of public display. Where we differ is in how one arrives at this attribution of power.

For Watson to regard OOO as a mode of ‘depoliticization’ is to subscribe to a notion of politics as first philosophy. Despite Rich and Campbell’s endorsement of this thesis, Watson’s insistence on the blameworthiness of particular objects is to smuggle power in through the back door of existence, for to decide the guilty party in advance presupposes precisely what one should strive to explain, which has to begin with the object itself. Here, of course, Watson walks a fine line that sacrifices the autonomous object for the relational one. There is a difference between compound objects in the context of their original exhibitions – *The Monument to the Soviet Army* in Bulgaria or the Albert Pike Memorial in Washington, D.C.–and decontextualized objects like the Riace bronze warriors, which having been fished from the sea and meticulously restored, now stand upon new marble pedestals in the Museo Nazionale della Magna Grecia. By insisting on the complicity of objects vis-a-vis power, Watson naturalizes external relations, which by their compliance these statues cannot exceed. The fact that but a small percentage of Hellenistic bronzes survive today is not a direct attribute of the perdurance of power through the relational object. It is tied to sculptures offering their bronzen attributes to metalsmiths content to transform them into coins, plowshares, or church bells. While in the case of Riace warriors the power of a sculptor or patron may have been tied to these particular bronze sculptures gaining passage on a ship bound for Italy, that power could not save them from their high-density-watery-descents and long sojourns on the seafloor (see Deahner and Lapatin, 2015). What we know today as Warriors A and B did not comply with the aspirations, designs, or expectations of those who commissioned them. We do not know whether they were death-dealing heroes or demigods, or who may have benefited from their pride-infused exhibition. These bronzes do not hold onto their original context. We can only guess at where they were exhibited – Argos or Athens, Delphi or Olympia – much less, ponder what part they may have had in a monument assemblage (compare, for example: Boardman, 1995, p. 45; Brinkmann and Koch-Brinkmann, 2018; Pedley, 1998, p. 225; Di

Vita, 1984). To say anything about their past relations requires the hard work of articulated connection, and no attribution, however substantial or tenuous, is guaranteed. If one regards objects freed from their original settings as blameworthy from the start, how will they ever get a sense of what these things might have shown of themselves had they not been burdened by such expectations? Bronze sculptures, such as the two Warriors from Riace, are complicit within their own existence, their own being, and their nonrelational autonomy insures that they will outlast the aspirations of empires and paupers alike. By their perdurance such old media do not extend any power other than their own; to claim otherwise requires reframing, that is, *politicizing* them.

As Harman shows us in his chapter, one may cool down venomous objects by stripping them of their detail. Strike out their names. Cover them in with graffiti. Lock them in storage vaults. Bury them face down in the earth. Or, cast them into the sea. I agree with Watson that, where one encounters venomous-objects-that-extend-inequities-through-their-exhibition, there is a need to heighten our awareness of their complicity, as with the transformation of Edward Colston from ‘a mediocre piece of late-Victorian public art’ into a graffiti-covered museum piece that catalyzes challenging conversations concerning Britain’s ‘role in the Atlantic slave trade’;<sup>10</sup> or, as with the Fallen Monuments Park in Moscow – the Muzeon – where Yevgeny Chubarov’s installation of 282 stone heads in a cage – representatives of Josef Stalin’s countless victims – now look back upon a defaced statue of the disgraced former dictator (Kim, 2020). I am also inclined to join Watson in taking a more proactive stance when the situation deems it necessary, not by withdrawing into politics as a given, but rather as something to be prudently renegotiated among all parties.

By now readers will have noted how this anthology is not without chapters that breach the hull of OOO. A lot of what one confronts in Watson’s chapter, for example, is a politicized version of actor-network-theory. Cohen takes inspiration from new materialisms and assemblage theory in the genealogical line of Deleuze and Guattari. Some examples in Mentz’s literary litany gain their effective meanings in a modernist world of entities consigned to the taxonomic domains of subjects and objects. If many of the chapters are not necessarily fully object-oriented, then in the least they share common enemies with OOO and all readers will gain through engaging them. Indeed, ‘OOO’s proposed radical decentering of the human from the tangled sphere of existence, and the direct refutation of Cartesian binaries such as subject/object and especially nature/culture’, as Rich and Campbell rightly point out, ‘has sent shockwaves throughout the academy’. One could have said exactly the same thing about Latour’s symmetric anthropology 15 years ago (Witmore, 2007, p. 546). Harman would agree. OOO has been explicit in laying out the effective histories of its thought by repeatedly acknowledging its debt to two very different philosophical traditions: 1) phenomenology, which after Edmund Husserl and Martin Heidegger teaches us that while conscious experience is primarily concerned with things, those things, in withholding something from the encounter, operate only partially in the sensual realm; and 2) process-relational (or what Harman often calls ‘occasionalist’) philosophy after Bruno Latour and Alfred North Whitehead, which holds to the conviction that actors or actual entities are the ultimate stuff of the cosmos (Harman, 2009a, pp. 99-102; 2011; 2018, pp. 76-81; also see Bryant, 2011).

---

10 From an interview with David Olusoga in *The Guardian*: <https://www.theguardian.com/world/2021/jun/04/edward-colston-statue-potent-historical-artefact-david-olusoga>.

Despite an all-too-brief and partial acknowledgement of previous archaeological engagements with object-oriented philosophies, Rich and Campbell claim without further elaboration ‘that neither phenomenology nor the ‘symmetrical’ archaeologies . . . goes quite far enough to avoid the snare of anthropocentrism and the ricochet of its most disastrous consequences’. It is not that the editors are necessarily wrong in this assertion; rather, the problem is that they fail to expand on precisely why this should be the case. We should have learned by now that the harm inflicted by these ‘Modernist’ gestures is injurious to archaeology, for by consigning this research to the past, readers are left with the implication that there is nothing left to learn (see González-Ruibal, 2007; Witmore and Shanks, 2013, pp. 383-87; Olsen and Witmore, 2021). By redlining what are taken as ‘bodies of research’ the authors draw readers attention elsewhere and an opportunity is missed to lay out the longer and ongoing conversation between archaeology and object-oriented philosophy or object-oriented ontology (e.g., Olsen, 2010; Witmore, 2012, 2014, 2020a, 2020b; Harman, 2014a, 2016, 2019; Edgeworth, 2016; Pétursdóttir and Olsen, 2018; Bryant, 2021a, 2021b; Sørensen, 2020). Moreover, the obligation falls to Rich and Campbell to clearly state why OOO is any better at describing the world encountered by archaeologists than phenomenology or symmetrical archaeology. OOO, of course, has specified the shortcomings of these two philosophical traditions, as have some of the originators of symmetrical approaches within archaeology (Harmen, 2005a, 2007, 2009a; Sparrow, 2014; Olsen, 2010; Olsen and Witmore, 2015, 2021; Witmore, 2020b, 2020c). Still, where would OOO be without recognizing the gap between reality and human experience that surfaces through the phenomenology of Heidegger or the revelation that autonomous objects are primordial, which ties object-oriented ontology to the metaphysics of Latour and Whitehead. In closing, I shall elaborate briefly on these two points, and offer some further observations on the theoretical commitment to which this book makes.

Phenomenology and symmetrical archaeology are not without their shortcomings. Given the scope and nature of current and future planetary crises, one can make the following observations. Inviting its adherents to return to the things themselves, phenomenology elevates firsthand observation and experience over caricatures of measured reportage and distilled representation. Phenomenology advocates thick, rich description of objects, centered on the medium of the walking – or, given present company – swimming, diving, sensing body in a particular locale (Tilley, 2010, pp. 25-26; compare Shanks, 1992; Olsen, 2010; Hamilakis, 2013; Aldred, 2020; Erntsen and Shepherd, 2020; Witmore, 2020c). For all its significant gains, phenomenology, as the philosophy of appearances, remains locked in the human-world correlate, for it is concerned foremost with how humans apprehend the world and how the world makes itself apparent to humans. By abandoning relations between nonhuman objects to the natural sciences (cf. Tilley, 2004, p. 1), we turn our back on object-object relations, which are fundamental to understanding what it is to live in the Anthropocene.<sup>11</sup> By ignoring precisely the kinds of objects and relations that many of the chapters in this volume engage, we embrace a rather idealized fiction not only as to what archaeology is, but also the nature of the pasts held within and between our objects (compare Barrett, 2014, 2021; Ion, 2018; Thomas, 2022; with Olivier, 2011; Olsen et al., 2012; Witmore, 2020a). Marine archaeologists, for example, deal as much with what becomes of interactions

---

11 Unless, of course, it is radicalized from within in the way of Ian Bogost’s alien form of phenomenology (2012).

between salt water and bronze statues, polyhaline communities and former WWII vessels, or octopodes and their amphora-abodes as with those patrons, sailors, or merchants who may have come into contact with them at some point in the past (Witmore, 2014).

So long as symmetrical archaeology is treated as synonymous with the symmetric anthropology of Latour, then not unjustly will adherents to object-oriented approaches take aim. From an OOO perspective, symmetric anthropology will always be seen as coming up short, if only because it is seen as holding to a relational definition of things. But what was originally championed under the colors of symmetrical archaeology transformed along parallel tracts to OOP over a decade ago (compare Olsen, 2003, to Olsen, 2010; Witmore, 2007, to Witmore, 2012).<sup>12</sup> Finding inspiration, partly, in the guerrilla metaphysics of Harman (2005a), integrities and rapports began to be held symmetry. By conceding an inexhaustible surplus beyond the reach of relations to abandoned Soviet-era buildings, erstwhile WWII bunkers, or disused agrarian water conduits, room was left for things to show forth aspects of their autonomous character that could carry over into subsequent situations (Olsen, 2010; Harman, 2016; Witmore, 2020b). Here, it is notable how many commentators on the limits of symmetrical archaeology, including Rich and Campbell, largely ignore anything written about it by those considered to be its originators over most of the last decade (compare, for example, Barrett, 2014, 2021; Thomas 2022). This has consequences in terms of what most readers of archaeological theory understand symmetrical archaeology to be, for it advances more as something fixed, as a hollow orthodoxy against which to orchestrate attacks (Olsen and Witmore, 2021). Let it suffice to say that wherever one encounters symmetrical archaeology as a full-blown theoretical platform they will meet a contrivance largely fashioned by its detractors, for *symmetry* is nothing more than a powerful analytical cue (Witmore, 2020b).

In many ways, this handling of ideas reveals more about archaeologists' expectations for theory, as Olsen points out in his response paper. Not without significant justification do Rich and Campbell seek to advance 'an explanation of object-oriented approaches for application to maritime archaeology'. Yet, by beginning with an explanation of OOO as a theory 'for application' do we not risk betraying precisely what it teaches us? By treating shipwrecks as instances of a given theory do we not submit them to that which is extraneous to their very being? If we think about theory a program in advance, what happens when it comes into contact with new objects, frictions, resistances, as Pétursdóttir and Olsen (2018) ask? What happens when one considers OOO less as applicable theory and more as a set of softer cues, prompts, or rules that help keep one agile in working with their objects of concern (see Olsen, this volume; 2018; Olsen and Witmore, 2021, pp. 70-71; Lucas and Witmore, 2022)? Placing OOO out front as a discursive system of concepts separate from that which is encountered in the supposed domain of application comes to variance with most recent object-oriented work in archaeology (see, for example, Pétursdóttir, 2017, 2018b; Farstadvoll, 2019a, 2019b; Witmore, 2020c). Rather than mechanically rendering drift beaches, shipwrecks, or statues as yet another case of what OOO predicts, how do we work with, and positively imperil, what OOO teaches us in theorizing with and alongside such things?

---

12 Olivier Harris and Craig Cipolla have recognized this important difference, which they identify as a first and second wave of symmetrical archaeology (2017, pp. 129-51, 185-88).

One of the original reasons I began to read Harman, whose work I have followed and admired since my days as a graduate student in Palo Alto (1999-2005) – well before the revelation of OOP then OOO – was because of his gift for making understandable even the most cumbersome and obscure philosophical concepts, such as Heidegger's fourfold (Harman, 2005b, 2007, 2009b), in a clear and concise journalist style. I appreciated his careful evaluation of other scholarly work. With vivid prose, Harman routinely offers a fair balance of thoughtful praise and incisive questioning whether discussing Heidegger, Marshal McLuhan, Bruno Latour, Timothy Morton or any of his numerous critics who do not always reciprocate with the same grace. I admired how he was making genuine traction in thinking philosophy without the divides between humans and the world or theory and practice by recognizing the existence of objects of all shapes and creeds (Harman, 2009a, 2011, 2013). At my core, I read his work as a provocation to think and work differently. An expert on phenomenology and Heidegger who forged heretical connections with the work of Latour and Whitehead, I was drawn to Harman the risk-taker. This unorthodox fusion of phenomenology and actor-network-theory is also present in the work of Bjørnar Olsen whose feral thought and bricoleur style led him similar insights with his timely *In Defense of Things* (2010), a book that has drawn the admiration of object-oriented philosophers among others (e.g., Bennett, 2015, p. 84, n. 15; Harman, 2016; Bryant, 2019).

It would be disingenuous to claim that the shift in archaeology's relationship with its objects of study (Olsen et al., 2012; Witmore, 2014) served as a lure for object-oriented philosophers. To be sure, an honest engagement with the object of archaeology here in the present, rather than with the past through its material remains, opened the door to mutual understandings. However, the hard work of forging connections came about by actively opening conversations with these generous and open-minded object-oriented scholars. When I reached out to Harman in 2009 about his book, *Prince of Networks* (2009a), he admitted to knowing very little about archaeology. Likewise, when Olsen and Pétursdóttir invited Levi Bryant in 2017 to give a talk as part of the *After Discourse* project at the Center for Advanced Studies in Oslo, he was by his own admission baffled by the archaeological connection to his own work (Bryant, 2018). Notably, in the case of Harman and Bryant, archaeology, it turned out, was not what they thought it to be. Working with drift beaches, WWII ruins, objects of the contemporary past slammed in the face of their expectations and this – more perhaps than the fact that we were attempting to build some consideration of how archaeology's fundamental entities exist into our scrutiny of them – is what piqued their interest. A combination of curiosity and generosity on both sides has expanded our understandings. Such labor of active engagement has been tremendously fruitful and it is ongoing (see Harman, 2016; Pétursdóttir and Olsen, 2018; Harman, 2019; Sørensen, 2020; Bryant, 2021a, 2021b; Morton, 2021; Harman and Witmore, 2023), and this book deserves to be seen as an important example, for it makes its own valuable contributions. Here at the end we now find ourselves in a different position to reiterate the line of questioning maintained throughout this commentary – how does this engagement between archaeology and OOO work to the mutual benefit of both fields?

This volume offers many valuable answers, and alongside them, we may briefly register the following. Archaeologists find it hard to escape process-first narratives to

which we have become inured (e.g., Conneller, 2011; Jones, 2012; Fowler, 2013; Harris, 2014; Gosden and Malafouris, 2015; Crellin, 2020; Crellin et al., 2021; Govier and Steel, 2021; Malafouris et al., 2021), for in rendering objects as, or often reducing them to, an incessant dynamism, change is assumed rather than explained (Harman, 2005a, p. 191; Witmore, 2021b). By recognizing how things precede the processes to which they give rise, object-oriented approaches challenge archaeologists to posit different explanations for how they change. Archaeologists tend to think of space and time as primordial, object-oriented approaches suggest their inversion, for space and time emerge from within and between things (Witmore, 2020b, 2020c). OOO also opens the possibility of imagining counterfactual angles on the Anthropocene, where, for example, the world might have taken a different direction after 1900 by relying less on fossil fuels and more on electric automobiles and public rail.<sup>13</sup> Shared attributes between OOO and archaeology have been highlighted by Harman, who sees both a common emphasis on the background and a mutual commitment to things. If object-oriented philosophy, as Bryant contends (2020), helps us to ask better questions, then archaeology offers philosophy a terrific throng of concrete ‘examples’, which are integral to the work of theorizing (Pétursdóttir and Olsen, 2018). The scuttled ships reused in the construction of harbors, the shipwreck that alters the aquatic domain in its vicinity, the stratigraphic sequence revealed by tidal surges at Goshams Farm landfill, the Roman and Carthaginian amphorae that provide bubbles of protection to a thousand generations of octopodes; these are precisely the kinds of objects that one might theorize alongside and from (as opposed to something to which one might apply a theory that has been adopted for precisely such an endeavor). OOO reminds us that it is only by working alongside, with and through the object that we will gain some sense of its being, its reasons, its past. Through our object-oriented engagements, are we at last learning how to explain our objects in their own terms?

I wish to conclude by recalling the *Tale of the Shipwrecked Sailor* – written down at some point during the Middle Kingdom – the oldest shipwreck story in existence speaks of how to find salvation in the midst of utter disaster. Upon a ship returning from a failed expedition, a lieutenant seeks to console his downcast and frightened commander by telling him a fantastic tale. It begins with the lieutenant at sea, on a stout ship crewed by 120 of the best sailors in Egypt. ‘Their hearts braver than lions’. ‘They were capable of foretelling a storm before it came, a tempest before it broke’.<sup>14</sup> And yet, none of these confident and capable men survive an abrupt storm that with strong winds and high waves overtakes the ship. All is lost, save for a lone survivor, the lieutenant. Cast onto a mythical island by a wave, he finds himself well sheltered amidst incredible bounty. Wanting for nothing, he stuffed himself with ‘figs’, ‘grapes’, ‘all sorts of fine vegetables’, ‘cucumbers’, ‘fish’, and ‘fowl’. But the lieutenant does not neglect to show his gratitude, for he fashions ‘a fire drill’ and ‘gives burnt offerings to the gods’. These gifts call forth ‘a thundering noise’. ‘Trees splinter’. ‘The ground trembles’. From across the island approaches a giant serpent of astonishing appearance. ‘Who brought you’, the golden serpent repeatedly asks the lieutenant. ‘If you delay telling me who brought

13 Michael Schiffer (2010) has done a superb job plotting the path from 1900 when nearly 30 percent of all automobiles were electric to a world where fossil-fuel metabolizing engines reign supreme.

14 This translation is taken from Lichtheim, 2006, pp. 212-15.

you to this island, I shall', the serpent threatens, 'make you find yourself reduced to ashes, becoming like a thing unseen'. Prostrate, upon his belly, the lieutenant responds: 'Though you speak to me, I do not hear it; I am before you without knowing myself'. With this reply, the serpent places the lieutenant in his mouth and carries him to his home, where he sets him down, unhurt. 'Who brought you', he repeats, 'who brought you to this island?' Though fearful and without self-knowledge, the lieutenant surrenders fully to the situation and recounts the story of how he came to be shipwrecked. Upon hearing his story, the serpent intreats the lieutenant to fear not. He assures him that he shall want for nothing and that his deliverance will come four months hence in the form of another ship with sailors recognizable to him. 'You shall go home with them, you shall die in your own town', the golden serpent foretells.

We may break off at a turn in this marvelous tale to draw some patent lessons. The story, which falls under the rubric of ancient wisdom literature, warns its audience of the dangers of overconfidence in knowledge in relation to sea, storm, ship, and the self; for that which is other and that which is considered human, whether our inner being (or our collective proportionality), exceed mastery by even the most capable among us. When the world offers shelter and abundance, the story reinforces the importance of gratitude for what is provided and humility before that which provides: observe the correct rites; show reverence to the gods of this place. When challenged by the serpent, the lieutenant's very sense of being reveals its fractured nature; the audience is made aware of his role as a participant lacking self-knowledge in the confrontation and his thoughts as an observer of it. Only by fully surrendering to the serpent, to a situation beyond the lieutenant's control, to a situation independent of his knowledge of it (which includes the autonomy of his own being beyond any knowledge of himself; consider in light of Harman, 2020), is he able speak of how he came to the island with the fortunate result of being spared (Manuelian, 1992). Didactic in purpose, the oldest shipwreck story in existence presents a catastrophe at sea as a journey of discovery – of the sea, the self, our autonomous being, and others – and revelation – what can one do in the face of that which is beyond their, beyond any, control? Those who recognize how they can never fully know the depths of sea, storm, or our autonomous self, will find some sense of salvation, but not without venturing to take risks.

The great serpent goes on to share his own story of tragic loss, for even he exists in a world of situations that exceed his ability to command them.<sup>15</sup> The details of the serpent's experience matter not, what is important is that overall it is similar in character to that of the lieutenant. I modestly take this as an indication that sailors and lieutenants (human beings) are not the only beings that are shattered by hubristic confrontations with the storms, ships, and waves, for magical serpents must also bow to a surplus reality beyond their command. The question that remains is whether or not we can selflessly relate our stories of the sea, catastrophe, wreckage, and salvation to the mutual benefit of trillions of other creatures on this Earthship before those overconfident in *their* technologically amplified abilities to master our waterworld manage to rupture the entire vessel.

---

15 In formulating these observations, I have benefited immensely from Peter Der Manuelian's nuanced interpretation of *The Shipwrecked Sailor* (1992, p. 231).

## Works Cited

- Alberti, B., S. Fowles, M. Holbraad, Y. Marshall, and C. Witmore (2011) “‘Worlds Otherwise’”: Archaeology, Anthropology, and Ontological Difference’, *Current Anthropology* 52(6), pp. 896-912.
- Alberti, B., A. Jones, and J. Pollard (2013) *Archaeology After Interpretation: Returning Materials to Archaeological Theory*. Walnut Creek: Left Coast Press.
- Aldred, O. (2020) *The Archaeology of Movement*. London: Routledge.
- Bangstad, T. R and Þ. Pétursdóttir (eds) (2021) *Heritage Ecologies*. London: Routledge.
- Barrett, J.C. (2014) ‘The Material Constitution of Humanness’, *Archaeological Dialogues* 21(1), pp. 65-74.
- Barrett, J.C. (2021) *Archaeology and Its Discontents: Why Archaeology Matters*. London: Routledge.
- Bauer, A.M. and M. Bhan (2018) *Climate Without Nature: A Critical Anthropology of the Anthropocene*. Cambridge: Cambridge University Press.
- Bennett, J. (2010) *Vibrant Matter: A Political Ecology of Things*. Durham: Duke University Press.
- Bennett, J. (2015) ‘Encounters with an Art-Thing’, *Evental Aesthetics* 4(1), pp. 71-87.
- Blaising, J.-M., J. Driessen, J.-P. Legendre, and L. Olivier (eds) (2017) *Clashes of Time: The Contemporary Past as a Challenge for Archaeology*. Louvain: Presses Universitaires de Louvain.
- Boardman, J. (1985) *Greek Sculpture the Classical Period*. London: Thames & Hudson.
- Bogost, I. (2012) *Alien Phenomenology: Or, What It's Like to Be a Thing*. Minneapolis: University of Minnesota Press.
- Brinkmann, V. and U. Koch-Brinkmann, (2018) ‘The Riace Bronzes Experiment. Aesthetics and Narrative’, in M. Fuchs and H. Meyer (eds), *Ahoros: Gedenkschrift für Hugo Meyer von Weggefährten, Kollegen und Freunden*. Wien: Phoibos Verlag, pp. 15-34.
- Bryant, L. (2010) ‘Latour Litanizer’, *Larval Subjects*. Available at: <https://larvalsubjects.wordpress.com/2010/04/26/latour-litanizer/> (Accessed: 13 May 2022).
- Bryant, L.R. (2011) *The Democracy of Objects*. Minneapolis: Open Humanities Press.
- Bryant, L. (2014) *Onto-Cartography: An Ontology of Machines and Media*. Edinburgh: Edinburgh University Press.
- Bryant, L. (2018) ‘Svaerholt – Encounters with The Real’, *Larval Subjects*. Available at: <https://larvalsubjects.wordpress.com/2018/08/09/svaerholt-encounters-with-the-real/> (Accessed: 13 May 2022).
- Bryant, L. (2019) ‘Things’, *Larval Subjects*. Available at: <https://larvalsubjects.wordpress.com/2019/11/18/things/> (Accessed: 13 May 2022).
- Bryant, L. (2020) ‘Flat Ontology, Questions, and Assemblages’, *Larval Subjects*. Available at: <https://larvalsubjects.wordpress.com/2020/02/17/flat-ontology-questions-and-assemblages/> (Accessed: 13 May 2022).
- Burström, M. (2017) *Ballast: Laden with History*, C. Merton (trans.). Lund: Nordic Academic Press.
- Campbell, P.B., (2021) ‘The Anthropocene, Hyperobjects and the Archaeology of the Future Past’, *Antiquity* 95(383), pp. 1315-30.
- Caraher, W.R. and B.A. Weber (2017) *The Bakken: An Archaeology of an Industrial Landscape*. Fargo: North Dakota State University Press.

- Conneller, C. (2011) *An Archaeology of Materials. Substantial Transformations in Early Prehistoric Europe*. London: Routledge.
- Crellin, R.J. (2020) *Change and Archaeology*. London: Routledge.
- Crellin, R.J., C.N. Cipolla, L.M. Montgomery, O.J.T. Harris, and S.V. Moore (2021) *Archaeological Theory in Dialogue: Situating Relationality, Ontology, Posthumanism and Indigenous Paradigms*. London: Routledge.
- Crossland, Z. (2014) 'Anthropocene: Locating Agency, Imagining the Future', *Journal of Contemporary Archaeology* 1(1), pp. 123-28.
- Deahner, J.M. and K. Lapatin (eds) (2015) *Power and Pathos: Bronze Sculpture of the Hellenistic World*. Los Angeles: Getty Publications.
- Delaware, State of (2019) *Delaware Reef Guide 2015-2016*. Dover: Delaware Division of Fish and Wildlife. Available at: <https://dnrec.alpha.delaware.gov/fish-wildlife/fishing/artificial-reefs/> (Accessed: 13 May 2022).
- Edgeworth M. (2014a) 'The Relationship Between Archaeological Stratigraphy and Artificial Ground and Its Significance in the Anthropocene', in C.N. Waters *et al.* (eds.), *A Stratigraphical Basis for the Anthropocene*. Lyell Collection Special Publications 395. London: Geological Society of London, pp. 91-108.
- Edgeworth, M. (2014b) 'Enmeshments of Shifting Landscapes and Embodied Movements of People and Animals', in J. Leary (ed.), *Past Mobilities: Archaeological Approaches to Movement and Mobility*. Farnham: Ashgate, pp. 83-97.
- Edgeworth, M. (2016) 'Grounded Objects. Archaeology and Speculative Realism', *Archaeological Dialogues* 23(1), pp. 93-113.
- Edgeworth, M. (2021) 'Transgressing Time: Archaeological Evidence in/of the Anthropocene', *Annual Review of Anthropology* 50(1), pp. 93-108.
- Edgeworth, M., J. Benjamin, B. Clarke, Z. Crossland, E. Domanska, A.C. Gorman, P. Graves-Brown, E.C. Harris, M.J. Hudson, J.M. Kelly, V.J. Paz, M.A. Salerno, C. Witmore, and A. Zarankin (2014) 'Archaeology of the Anthropocene', *Journal of Contemporary Archaeology*, 1(1), pp. 73-132.
- Edgeworth M, D. Richter, C. Waters, P. Haff, C. Neal, and S.J. Price (2015) 'Diachronous Beginnings of the Anthropocene: The Lower Bounding Surface of Anthropogenic Deposits', *Anthropocene Review* 2(1), pp. 33-58.
- Ernsten, C., and N. Shepherd (2020) 'A Decolonial Diary: Traversing the Colonial Pasts and Presents of the Cape of Good Hope', *Journal of Contemporary Archaeology* 7(2), pp. 258-275.
- Farstadvoll, S. (2019a) *A Speculative Archaeology of Excess: Exploring the Afterlife of a Derelict Landscape Garden*. Doctoral Dissertation, UiT: The Arctic University of Norway.
- Farstadvoll, S. (2019b) 'Growing Concerns: Plants and Their Roots in the Past', *Journal of Contemporary Archaeology* 5(2), pp. 174-193.
- Foley, B. (2009) 'Interview with AIA Lecturer Brendan Foley', Archaeological Institute of America. Available at: <https://www.archaeological.org/interview-with-aia-lecturer-brendan-foley/> (Accessed: 13 May 2022).
- La Follette, C., D. Deur, D. Griffin, and S.S. Williams (2018) 'Oregon's Manila Galleon', *Oregon Historical Quarterly* 119(2), pp. 150-159.

- Fowler, C. (2013) *The Emergent Past. A Relational Realist Archaeology of Early Bronze Age Mortuary Practices*. Oxford: Oxford University Press.
- Gan, E., A. Tsing, H. Swanson, and N. Bubant (2017) 'Introduction: Haunted Landscapes of the Anthropocene', in A. Tsing, H. Swanson, E. Gan, and N. Bubandt (eds), *Arts of Living on a Damaged Planet*. Minneapolis: University of Minnesota Press, pp. G1-G14.
- González-Ruibal, A. (2006) 'The Past is Tomorrow: Towards an Archaeology of the Vanishing Present', *Norwegian Archaeological Review* 39(2), pp. 110-125.
- González-Ruibal, A. (2007) 'Arqueología Simétrica. Un Giro Teórico sin Revolución Paradigmática', *Complutum* 18, pp. 283-285.
- González-Ruibal, A. (2008) 'Time to Destroy: An Archaeology of Supermodernity', *Current Anthropology* 49(2), pp. 247-279.
- González-Ruibal, A. (2018) 'Beyond the Anthropocene: Defining the Age of Destruction', *Norwegian Archaeology Review* 51(2), pp. 1-12.
- González-Ruibal, A. (2019) *An Archaeology of the Contemporary Era*. London: Routledge.
- Gosden, C. and L. Malafouris (2015) 'Process Archaeology (P-Arch)', *World Archaeology* 47(5), pp. 701-717.
- Govier, E. and L. Steel (2021) 'Beyond the "Thingification" of Worlds: Archaeology and the New Materialisms', *Journal of Material Culture* 26(3), pp. 298-317.
- Hacıgüzeller, P. (2021) 'On Critical Hope and the Anthropos of Non-Anthropocentric Discourses: Some Thoughts on Archaeology in the Anthropocene', *Archaeological Dialogues* 28(2), pp. 163-170.
- Hamilakis, Y. (2013) *Archaeology and the Senses: Human Experience, Memory, and Affect*. Cambridge: Cambridge University Press.
- Harman, G. (2005a) *Guerrilla Metaphysics: Phenomenology and the Carpentry of Things*. Chicago: Open Court.
- Harman, G. (2005b) 'Heidegger on Objects and Things', in B. Latour and P. Weibel (eds), *Making Things Public. Atmospheres of Democracy*. Cambridge: MIT Press, pp. 268-271.
- Harman, G. (2007) *Heidegger Explained: From Phenomenon to Thing*. New York: Open Court.
- Harman, G. (2009a) *Prince of Networks: Bruno Latour and Metaphysics*. Melbourne: re.press.
- Harman, G. (2009b) 'Dwelling with the Fourfold', *Space and Culture* 12(3), pp. 292-302.
- Harman, G. (2011) *The Quadruple Object*. Winchester: Zero Books.
- Harman, G. (2013) *Bells and Whistles. More Speculative Realism*. Winchester: Zero Books.
- Harman, G. (2014a) 'Entanglement and Relation: A Response to Bruno Latour and Ian Hodder', *New Literary History* 45(1), pp. 37-49.
- Harman, G. (2014b) 'Materialism is Not the Solution. On Matter, Form, and Mimesis', *Nordic Journal of Aesthetics* 47, pp. 94-110.
- Harman, G. (2016) 'On Behalf of Form: The View from Archaeology and Architecture', in M. Bille and T. F. Sorensen (eds), *Elements of Architecture*. London: Routledge, pp. 48-64.
- Harman, G. (2018) *Object-Oriented Ontology: A New Theory of Everything*. London: Pelican.
- Harman, G. (2019) 'The Coldness of Forgetting: OOO in Philosophy, Archaeology, and History', *Open Philosophy* 2, pp. 270-279.

- Harman, G. (2020) 'The Only Exit from Modern Philosophy', *Open Philosophy* 3, pp. 132-146.
- Harman, G. and C. Witmore (2023) *Objects Untimely: Object-Oriented Philosophy and Archaeology*, in *Conversation*. Cambridge: Polity Press.
- Harris, O.J.T. (2014) '(Re)assembling Communities', *Journal of Archaeological Method and Theory* 21, pp. 76-97.
- Harris, O.J.T. and C.N. Cipolla (2017) *Archaeological Theory in the New Millennium: Introducing Current Perspectives*. London: Routledge.
- Harrison, R. and C. Sterling (2020) *Deterritorializing the Future: Heritage in, of and After the Anthropocene*. Ann Arbor: Open Humanities Press.
- Hartley, D. (2015) 'Against the Anthropocene', *Salvage* 1(1). Available at: <http://salvage.zone/in-print/against-the-anthropocene/> (Accessed on 13 May 2022).
- Heidegger, M. (2002) 'The Age of the World Picture', in J. Young and K. Hayne (eds), *Off the Beaten Track*. Cambridge: Cambridge University Press, pp. 57-72.
- Hodder, I. (2012) *Entangled: An Archaeology of the Relationships Between Humans and Things*. Oxford: Wiley-Blackwell.
- Hodder, I. (2014) 'The Entanglements of Humans and Things: A Long-Term View', *New Literary History* 45(1), pp. 19-36.
- Husserl, E. (1970 [1936]) *The Crisis of European Sciences and Transcendental Phenomenology*, D. Carr (trans.). Evanston: Northwestern University Press.
- Ingold, T. (2007) 'Materials Against Materiality', *Archaeological Dialogues* 14(1), pp. 1-16.
- Ion, A. (2018) 'A Taphonomy of a Dark Anthropocene. A Response to Þóra Pétursdóttir's OOO Inspired "Archaeology and Anthropocene"', *Archaeological Dialogues* 25(2), pp. 191-203.
- Jones, A.M. (2012) *Prehistoric Materialities. Becoming Material in Prehistoric Britain and Ireland*. Oxford: Oxford University Press.
- Kennedy, C.A. (1975) 'Early Christians and the Anchor', *The Biblical Archaeology* 38(3/4), pp. 115-124.
- Kim, L. (2020) 'What to Do with Toppled Statues? Russia Has a Fallen Monument Park', *National Public Radio*. Available at: <https://www.npr.org/2020/07/21/892914684/what-to-do-with-toppled-statues-russia-has-a-fallen-monument-park> (Accessed: 13 May 2022).
- Latour, B. (2005) *Reassembling the Social: An Introduction to Actor-Network Theory*. Oxford: Oxford University Press.
- Latour, B. (2014) 'Agency at the Time of the Anthropocene', *New Literary History* 45(1), pp. 1-18.
- Lichtheim, M. (2006) *Ancient Egyptian Literature: Volume I: The Old and Middle Kingdoms* (Vol. 1). Berkeley: University of California Press.
- Love, J. and M. Meng (2016) 'Histories of the Dead?' *Time and Mind* 9(3), pp. 223-244.
- Lucas, G. (2018) 'Symbiotic Architectures', in S.E. Pilaar Birch (ed.), *Multispecies Archaeology*. London: Routledge, pp. 105-117.
- Lucas, G. (2021) *Making Time: The Archaeology of Time Revisited*. London: Routledge.
- Lucas, G. and L. Olivier (2022) *Conversations about Time*. London: Routledge.

- Lucas, G. and C. Witmore (2021) 'Paradigm Lost: What Is a Commitment to Theory in Contemporary Archaeology?' *Norwegian Archaeological Review*, DOI: 10.1080/00293652.2021.1986127.
- Macfarlane, R. (2016) 'Generation Anthropocene: How Humans Have Altered the Planet Forever', *The Guardian*. Available at: <http://www.theguardian.com/books/2016/apr/01/generation-anthropocene-altered-planet-for-ever> (Accessed: 13 May 2022).
- Macfarlane, R. (2019) *Underland. A Deep Time Journey*. New York: W.W. Norton and Company.
- Malafouris, L., C. Gosden, and A. Bogaard (2021) 'Process Archaeology', *World Archaeology*, 53(1), pp. 1-14.
- Manuelian, P.D. (1992) 'Interpreting "The Shipwrecked Sailor"', in W. Helck and I. Gamer-Wallert (eds), *Gegengabe: Festschrift Emma Brunner-Traut*. Tübingen: Attempto Verlag, pp. 223-233.
- Margulis, L. (2008) *Symbiotic Planet: A New Look at Evolution*. New York: Basic Books.
- McLuhan, M. (1994) *Understanding Media: The Extensions of Man*. Cambridge: MIT Press.
- Mentz, S. (2015) *Shipwreck Modernity: Ecologies of Globalization, 1550-1719*. Minneapolis: University of Minnesota Press.
- Michałowska, M. (2020) 'Artists in the Face of Threats of Climate Change', *Oceanologia* 62(4, Part B), pp. 565-575.
- Miéville, C. (2015) 'The Limits of Utopia', *Salvage* 1(1). Available at: <http://salvage.zone/in-print/the-limits-of-utopia/> (Accessed: 13 May 2022).
- Moore, J.W. (ed.) (2016) *Anthropocene or Capitalocene? Nature, History, and the Crisis of Capitalism*. Oakland: PM Press.
- Morton, T. (2021) 'Inheritance', in T.R. Bangstad and Þ. Pétursdóttir (eds), *Heritage Ecologies*. London: Routledge, pp. 383-390.
- Morton, T. and D. Boyer (2021) *Hyposubjects: On Becoming Human*. Ann Arbor: Open Humanities Press.
- Nativ, A. (2018) 'On the Object of Archaeology', *Archaeological Dialogues* 25(1), pp. 1-47.
- Nativ, A. and G. Lucas (2020) 'Archaeology Without Antiquity', *Antiquity* 94(376), pp. 852-863.
- Normark, J. (2014) 'Water as a Hyperfact', *Current Swedish Archaeology* 22(1), pp. 193-206.
- Olivier, L. (1999) 'The Hochdorf "Princely" Grave and the Question of the Nature of Archaeological Funerary Assemblages', in T. Murray (ed.), *Time and Archaeology*. London: Routledge, pp. 109-138.
- Olivier, L. (2011) *The Dark Abyss of Time: Archaeology and Memory*, A. Greenspan (trans.). Lanham: AltaMira Press.
- Olivier, L. (2013) 'The Business of Archaeology is the Present', in A. González-Ruibal (ed.), *Reclaiming Archaeology: Beyond the Tropes of Modernity*. London: Routledge, pp. 117-129.
- Olivier, L. (2019) 'The Future of Archaeology in the Age of Presentism', *Journal of Contemporary Archaeology* 6(1), pp. 16-31.
- Olivier, L. (2020) 'Interpreting Archaeological Evidence in the Anthropocene. Incidentalality and Meaning', *Cambridge Archaeological Journal* 30(1), pp. 160-163.

- Olivier, L. (2021) 'Cultural Heritage and Memory of the Ecumene in the Age of the Anthropocene', in T.R. Bangstad and Þ. Pétursdóttir (eds), *Heritage Ecologies*. London: Routledge, pp. 81-91.
- Olsen, B. (2003) 'Material culture After Text. Re-membering Things', *Norwegian Archaeological Review* 36, pp. 87-104.
- Olsen, B. (2010) *In Defense of Things: Archaeology and the Ontology of Objects*. Lanham: AltaMira Press.
- Olsen, B. and Þ. Pétursdóttir (2016) 'Unruly Heritage: Tracing Legacies in the Anthropocene', *Arkæologisk Forum* 35, pp. 38-46.
- Olsen, B., M. Shanks, T. Webmoor, and C. Witmore (2012) *Archaeology: The Discipline of Things*. Berkeley: University of California Press.
- Olsen, B. and C. Witmore (2015) 'Archaeology, Symmetry and the Ontology of Things. A Response to Critics', *Archaeological Dialogues* 22(2), 187-197.
- Olsen, B. and C. Witmore (2021) 'When Defense is Not Enough: On Things, Archaeological Theory, and the Politics of Misrepresentation', *Forum Kritische Archäologie* 10, pp. 67-88.
- Olsen, B., M. Burström, C. DeSilvey, and Þ. Pétursdóttir (eds) (2021) *After Discourse: Things, Affects, Ethics*. London: Routledge.
- Pedley, J.G. (1998) *Greek Art and Archaeology*, 2<sup>nd</sup> ed. New Jersey: Prentice Hall.
- Pétursdóttir, Þ. (2014) 'Things Out-of-Hand: The Aesthetics of Abandonment', in B. Olsen and Þ. Pétursdóttir (eds), *Ruin Memories: Materiality, Aesthetics and the Archaeology of the Recent Past*. New York: Routledge, pp. 335-364.
- Pétursdóttir, Þ. (2017) 'Climate Change? Archaeology and Anthropocene', *Archaeological Dialogues* 24(2), pp. 175-205.
- Pétursdóttir, Þ. (2018a) 'Drift', in S.E. Pilaar Birch (ed.), *Multispecies Archaeology*. London: Routledge, pp. 85-101.
- Pétursdóttir, Þ. (2018b) 'Lyrics for a Duskier Enlightenment. In Response to Alexandra Ion', *Archaeological Dialogues* 25(2), pp. 205-213.
- Pétursdóttir, Þ. (2019) 'Anticipated Futures? Knowing the Heritage of Drift Matter', *International Journal of Heritage Studies* 26 (1), pp. 87-103.
- Pétursdóttir, Þ. and B. Olsen (2014) 'Imaging Modern Decay: The Aesthetics of Ruin Photography', *Journal of Contemporary Archaeology* 1(1), pp. 7-56.
- Pétursdóttir, Þ. and B. Olsen (2018) 'Theory Adrift: The Matter of Archaeological Theorizing', *Journal of Social Archaeology* 18(1), pp. 97-117.
- Pétursdóttir, Þ. and B. Olsen (2019) 'Tingenes Verdi – Museets Arv', *Ottar* 65(2), pp. 31-40.
- Rich, S. (2021) *Shipwreck Hauntography: Underwater Ruins and the Uncanny*. Amsterdam: Amsterdam University Press.
- Rose, D.B. (2017) 'Shimmer: When All You Love is Being Trashed', in A.L. Tsing, N. Bubandt, E. Gan, and H.A. Swanson (eds), *Arts of Living on a Damaged Planet: Ghosts and Monsters of the Anthropocene*. Minnesota: University of Minnesota Press, pp. G51-G63.
- Rosenzweig, M.S. (2020) 'Confronting the Present: Archaeology in 2019', *American Anthropologist* 122(2), pp. 284-305.
- Serres, M. (2011) *Malfeasance: Appropriation Through Pollution?* Stanford: Stanford University Press.

- Shanks, M. (1992) *Experiencing the Past: On the Character of Archaeology*. London: Routledge.
- Shanks, M. (2012) *The Archaeological Imagination*. Walnut Creek: Left Coast Press.
- Schiffer, M.B. (2010) *Taking Charge. The Electric Automobile in America*. Washington DC: Smithsonian Books.
- Sloterdijk, P. (2013) *In the World Interior of Capital: For a Philosophical Theory of Globalization*, W. Hoban (trans.). Cambridge: Polity Press.
- Sloterdijk, P. (2014) *Globes: Spheres II*. South Pasadena: Semiotext(e).
- Sloterdijk, P. (2016) *Foams: Spheres III*. South Pasadena: Semiotext(e).
- Solli, B., M. Burström, E. Domanska, M. Edgeworth, A. Gonzalez-Ruibal, C. Holtorf, G. Lucas, T. Oestigaard, L. Smith, and C. Witmore (2011) 'Some Reflections on Heritage and Archaeology in the Anthropocene', *Norwegian Archaeological Review* 44(1), pp. 40-88.
- Sørensen, T.F. (2021) 'That Raw and Ancient Cold: On Graham Harman's Recasting of Archaeology', *Open Philosophy* 4, pp. 1-19.
- Sparrow, T. (2014) *The End of Phenomenology: Metaphysics and the New Realism*. Edinburgh: Edinburgh University Press.
- Steimle, F. (1995) 'Hard Bottom Polyhaline Community', in L.E. Dove and R.M. Nyman (eds), *Living Resources of the Delaware Estuary*. Wilmington: Delaware Estuary Program, pp. 113-117.
- Stroumsa, G.G. (1992) 'The Early Christian Fish Symbol Reconsidered', in I. Gruenewald, S. Shaked, and G.G. Stroumsa (eds), *Messiah and Christos: Studies in the Jewish Origins of Christianity. Presented to David Flusser on the Occasion of His Seventy-Fifth Birthday*. Tübingen: Mohr Siebeck, pp. 199-205.
- Thomas, J. (2022) 'Steps Toward an Archaeology of Life', *Trabalhos de Antropologia e Etnologia* 62, pp. 197-211.
- Tilley, C. (2004) *The Materiality of Landscapes: Explorations in Landscape Phenomenology*. Oxford: Berg.
- Tilley, C. (2010) *Interpreting Landscapes: Geologies, Topographies, Identities*. Walnut Creek: Left Coast Press.
- Di Vita, A. (1984) 'Due Capolavori Attici: Gli Oplitodromi – "Eroi" di Riace', in G.B. Triches (ed.), *Due Bronzi da Riace. Rinvenimento, Restauro, Analisi ed Ipotesi di Interpretazione* (Bollettino d'Arte, Serie Speciale 3). Rome: Istituto Poligrafico e Zecca dello Stato, pp. 251-76.
- Viveiros de Castro, E. (2019) 'On Models and Examples: Engineers and Bricoleurs in the Anthropocene', *Current Anthropology* 60(S20), pp. S296-S308.
- Watts, C. (ed.) (2013) *Relational Archaeologies. Humans | Animals | Things*. London: Routledge.
- Witmore, C. (2006) 'Vision, Media, Noise and the Percolation of Time: Symmetrical Approaches to the Mediation of the Material World', *Journal of Material Culture* 11(3), pp. 267-292.
- Witmore, C. (2007) 'Symmetrical Archaeology: Excerpts of a Manifesto', *World Archaeology* 39(4), pp. 546-562.
- Witmore, C. (2012) 'The Realities of the Past: Archaeology, Object-Orientations, Pragmatology', in B.R. Fortenberry and L. McAtackney (eds), *Modern Materials:*

- Proceedings from the Contemporary and Historical Archaeology in Theory Conference 2009*. Oxford: Archaeopress, pp. 25-36.
- Witmore, C. (2013) 'Which Archaeology? A Question of Chronopolitics', in A. González-Ruibal (ed.), *Reclaiming Archaeology*. London: Routledge, pp. 146-160.
- Witmore, C. (2014) 'Archaeology and the New Materialisms', *Journal of Contemporary Archaeology* 1(2), pp. 203-224.
- Witmore, C. (2015) 'Bovine Urbanism: The Ecological Corpulence of Bos Urbanus', in B. Clarke (ed.), *Earth, Life & System: Evolution and Ecology on a Gaian Planet*. New York: Fordham University Press, pp. 225-249.
- Witmore, C. (2019) 'Hypanthropos: On Apprehending and Approaching That Which is in Excess of Monstrosity, with Special Consideration Given to the Photography of Edward Burtynsky', *Journal of Contemporary Archaeology* 6(1), pp. 136-153.
- Witmore, C. (2020a) 'Objecthood', in L. Wilkie and J. Chenoweth (eds), *A Cultural History of Objects in the Modern Age*. London: Bloomsbury, pp.37-64.
- Witmore, C. (2020b) 'Symmetrical Archaeology', in C. Smith (ed.), *The Encyclopedia of Global Archaeology*. New York: Springer, pp. 10444-10457.
- Witmore, C. (2020c) *Old Lands: A Chorography of the Eastern Peloponnese*. London: Routledge.
- Witmore, C. (2021a) 'Matter', in H. Callan (ed.), *The International Encyclopedia of Anthropology*. Oxford: Wiley Blackwell, DOI: 10.1002/9781118924396.wbiea2434.
- Witmore, C. (2021b) 'Will the Real Materialisms Please Step Forward?' *Journal of Material Culture* 26(3), pp. 318-321.
- Witmore, C. and M. Shanks (2013) 'Archaeology: An Ecology of Practices', in W.L. Rathje, M. Shanks, and C. Witmore (eds), *Archaeology in the Making: Conversations Through a Discipline*. London: Routledge, pp. 389-407.
- Woodfill, B.K.S. (2019) 'An Archaeologist Writes Against the Anthropocene', *Open Rivers* 2019(14). Available at: <https://editions.lib.umn.edu/openrivers/article/against-the-anthropocene/> (Accessed: 13 May 2022).

# Compelled by Things

## A Response to *Contemporary Philosophy for Maritime Archaeology*

Matthew Harpster

### In Response

What I find particularly exciting about this collection of essays is how, to me, they are part of an intellectual maturation of the discipline of maritime archaeology. This is not a dismissive commentary on our predecessors or their significant accomplishments, but a contemplation on the growth of the practice. Within this volume's works, as well as corollary publications by Adams, Van de Noort, Ransley, Flatman, and others, I see resemblances to the growth of processual and post-processual ideas between 1960 and 1980, and to David Clarke's commentary on archaeology's loss of innocence (Adams, 2013; Van de Noort, 2011; Ransley, 2005; Flatman, 2003; Clarke, 1973). These essays are not only conscious of maritime archaeology's development, but also conscious of the need for this development and their place within it – a self-reflexive perspective that I feel is necessary and refreshing. We are maturing and asking uncomfortable questions about our past practices and future efforts, and building a body of theory and research agendas unique to our disciplinary sphere.

All of the authors within this collection offer insightful and engaging proposals that incorporate maritime archaeology and flat ontologies in post-modern philosophical perspectives. The paradox of Theseus' boat discussed by Harman, and earlier by Rich, is beautifully echoed in management assessments of HMS *Victory*. Captained by Admiral Nelson at the Battle of Trafalgar in 1805, *Victory* has been a focal point of the National Museum of the Royal Navy at Portsmouth, England, since 1922. Yet, the gradual replacement of *Victory*'s original timbers by modern components is an obvious parallel – as the authors of the assessment wrote, the *form* of the vessel survives while its *authenticity* is impacted (Wessex Archaeology, 2014, pp. 15, 34, 43, 46, 65). At what point, then, is this no longer the potent *Victory* and only an idea representing a 18th-century Ship of the Line? At what moment does *Victory* become a social abstraction with a tangible simulacrum, and will its social and cultural utility be expended? *Victory* has power within society, even as each repair mitigates its monumental status piece by piece, and it is not the only example. In parallel to Watson's investigations of national memorials' abilities to envenomate their

surroundings (see Watson, this volume), *Victory* and other warships are enveloped by a similar haze of meanings that are re-formulated under different gazes. Along with *Mary Rose* and *USS Constitution*, these warships are expressions of military might, and were tangible extensions of their country's sovereign territory. Their past mobility through an inhospitable environment merely enhanced their radiated power, and served as reminders of the influence and history of the country they represented. Now celebrated objects within museums, they are nevertheless not inert. As symbols on stamps and posters their mobility remains unimpeded, and still represents the conquest, colonization, and loss that they enabled.<sup>1</sup> These examples, as well as others, also inform Han's discussion of object-based epistemology, uneven power dynamics, and the normalization of state histories through the 'reality' of objects (see Han, this volume). Mussolini's grandiose recovery and veneration of Caligula's 1st-century AD barges from Lake Nemi, Italy, is another example, as Mussolini captured and channeled the pan-Mediterranean Roman Empire through his control of their creations to foster dominance in the modern era (Ucelli, 1996). Further removed, yet more self-aware, is the replica of the late 16th-century Dutch East Indiaman *Duyfken*, created in 1999 to celebrate the first European ship to reach Australia. Conscious of the original ship's bloody narrative of colonization and conquest, part of the replica's role in recreating the past was a re-imagining of the ship's arrival. At the end of the replica's first voyage the ship and crew held a reconciliation ceremony with the Aboriginal people of Cape York, asking permission to land and declaring their peaceful intentions.<sup>2</sup>

There are many other applications of a post-modern and flat ontological perspective to maritime heritage: the use of the 4th-century BC ship from Kyrenia – and its replicas – in the reinforcement of nationalist narratives on Cyprus, or how the material data in the Slave Wrecks Project at the National Museum of African American History and Culture reinforces Gilroy's narrative of a 'Black Atlantic'.<sup>3</sup> What I want to explore more, however, are the concepts of *appropriation* and *human-thing entanglements* in the context of wreck sites under water.

Briefly, appropriation is the adoption and utilization of things relatively alien to their adopters – they could be oil lamps or philosophical concepts (Stockhammer, 2012a, 2012b, 2012c, 2013). This is not a straightforward process, however, and may be divided into four steps that occur almost simultaneously. First is the acquisition of the object when a thing becomes a possession, and second is objectivization, when the possession acquires a personalized classification. Often, this classification is packed with the valorization of the object as well. Third is the incorporation of the object, and fourth is transformation – applying a new meaning to the acquired thing (Stockhammer, 2012a, pp. 48-49). Stockhammer argues that acquisition and incorporation may be deciphered within well-defined archaeological contexts, so understanding a thing's spatial and functional relationship to other things is straightforward. Difficult is interpreting the objectivization and transformation of the same object, as these two aspects may be entirely perceptual and have no tangible element (Stockhammer, 2012a, pp. 48-49).

1 King Gustavus Adolphus' monstrous warship *Vasa* may be another example, embodying the power of the nascent country of Sweden in 17<sup>th</sup> century, although its loss in the Stockholm harbour during its first voyage meant it never expressed that power beyond the country's borders.

2 <https://www.duyfken.com/voyages/duyfken-maiden-journey-2000-2001/>; accessed July 10, 2021.

3 Gilroy 1993; <https://nmaahc.si.edu/explore/initiatives/slave-wrecks-project>; accessed July 18, 2021.

I argue, however, that all four parts of the appropriation process are readily understood within a wreck site under water because of the fundamentally transformative process of going to sea. For people, a sea voyage is a journey into a liminal space where social constructs common on land are temporarily subverted, we occupy a space between socio-political borders, and the sea's surface is a meniscus between emptiness above and death below (Beaulieu, 2016, pp. 22-27). Things undergo similarly temporary transformations as they pass into the confines of a ship. Both luxuries and raw materials on land become *weight* that needs to be distributed properly, and *volumes* that occupy very limited space. Rice may be a resource, but also a *threat* on board when waterlogged.<sup>4</sup> Grinding stones can be *ballast* (Katzev, 2007).

Even temporarily, these redefinitions inform all four aspects of the appropriation process. The wine-carrying amphorae found in the 9th-century AD assemblage at Bozburun, Turkey, are a good place to begin. They were *acquired* from their multiple owners as they passed into the possession of the ship's crew, *objectified* as they became 'cargo' to be transported, *incorporated* into a new context as they were arranged and stored within a hull, and *transformed* into a potential profit.<sup>5</sup> If the ship had not been lost and the amphorae had been transferred to a new social context upon arrival, they would have been appropriated again.

The 'alien-ness' of the amphorae to the Byzantine-era captain or crew can question how thorough this appropriation may have been. Perhaps their installation onboard is a socio-economic and functional appropriation, but not a cultural one. Similarly, their temporary possession by the captain and crew suggests an appropriative process that may be convenient and iterative, but perhaps not deeply felt. Nevertheless, even if *appropriation* is not ontologically level, it is still important within a shipboard context because it can be the first step in the entanglement of people and the coercive things that surround them on board a ship. This coercion may emanate from other examples of cargo that compel the adoption of an alternative route or port or, as examples I favor, administrative tools like weighing implements.

Relevant examples of these weight sets are found on two wreck sites in Turkey, the 14th-century BC site at Uluburun, and the 7th-century AD wreck at Yassiada. The excavation of the wreck site at Uluburun occurred between 1983 and 1994 along the southern coastline of Turkey, and encompassed the recovery of an extraordinary collection of fine wares, luxurious items, and raw materials; within the collection under study are approximately 10 tons of copper ingots and one ton of tin ingots, amphorae from Syro-Palestine, a stone mace head likely from the Black Sea region, containers made of ivory, and ceremonial weapons (Pulak, 1989, 2008, pp. 289-310, 372-373). Excavated off the western coast of the country between 1961 and 1964, the 7th-century AD wreck at Yassiada was more prosaic: in addition to coarse wares, galley wares, and some coinage, the site was dominated by a collection of amphorae likely produced in southern Anatolia and the Aegean (Bass and van Doorninck, 1982; Demesticha and Michaelides, 2001).

---

4 *The Examiner*, December 19, 1947, page 1, <https://trove.nla.gov.au/newspaper/article/52618046>, accessed July 18, 2021.

5 See Hocker (1998, pp. 5-6), who proposes at least four owners of the amphorae based upon their graffiti and arrangement in the ship's hold, as well as the recovery of red wine from the amphorae themselves.

Preserved in each site were also collections of weighing implements, such as balance pan weights or a steelyard, for the exchange or sale of items.

As a diachronic group of administrative tools, these implements already embody multiple facets of their coercive power on the people they are entangled with. They are manifestations of various social constructs such as the communal standards of weight accepted within exchange systems, the systems and processes of transaction, and the personal contracts between people engaged in the exchange. In a way, their physicality and perceived immutability impose and reinforce the communal trust and activities inherent to these systems. As *actants*, or elements of Actor-Network Theory (ANT) promoted by Michel Callon, Bruno Latour, and John Law, these items and their associated systems impel human actions as much as other people do (Callon, 1986; Latour, 1988; Law, 1986; Latour, 2012, pp. 10, 70).<sup>6</sup> The presence of certain items compels certain decisions on land when in use, but also decisions while at sea – which port should be visited, which could be visited, and which might be avoided. Moreover, individual metrological systems circumscribe answers to these questions. For the people on board the 7th-century AD vessel, their weight set was affixed to a provincial pound of 284 grams, not the Imperial standard of 327 grams imposed by Constantinople (Sams, 1982, p. 207). Therefore, we may not know precisely which minor ports this vessel commonly visited, but we can surmise – through the entanglement of this metrological system – that the crew may not have been compelled to dock at the Theodosian Harbour in the capital city. A different dynamic is evident in the Uluburun assemblage. The majority of the weighing implements conform to a unit of 9.3 to 9.4 grams, representing a Syrian *shekel*. However, multiples of a 7.4-gram standard, or the Syro-Canaanite *peyem*, are present, as are another Syro-Canaanite unit of 10.5 grams, and a Mesopotamian standard of 8.3 grams (Pulak, 2008, pp. 369-370). Entangled within a more diverse collection of Late Bronze Age metrological systems onboard their vessel, the crew and captain were compelled to interact with a wider variety of ports and people. They not only had the tools necessary for these engagements, but the material representations of the social constructs that govern and shape the engagements as well.

It is unclear if the captain and crew of the Uluburun vessel heeded that coercion, however. Although the weighing implements were on board, the rich collection of luxury items and the tons of copper and tin ingots suggest that a substantial portion of the contents of this ship were instead an exchange between rulers (Pulak, 2008, pp. 298-299; Bachhuber, 2006, p. 359). In addition to the figurines, inlaid rings, and ivory cosmetic containers were also exotica such as an elephant tusk and at least three ostrich eggshells, one of which was found nearly complete (Pulak, 2008, pp. 324-330). Like many other examples, the people on board the Late Bronze Age ship experienced multiple entanglements between themselves and the things that surrounded them. Unlike other examples, however, this was not a harmonic relationship. The many metrological systems of the weighing implements suggest the crew's ability to engage in regional trade and exchange between multiple ports and communities, possibly

---

6 Law's (1986) application of ANT to the Portuguese exploration of the Indian subcontinent suggested that human-thing entanglements in a maritime context are almost inevitable and necessary to the success of the voyage.

the coastal tramping described by Pulak (Pulak, 2008, p. 297). The rich exotica and luxury items, however, propose that the vessel – unfortunately for this fateful voyage – operated within a more directed and singular exchange system between rulers (Pulak, 2008, p. 297). This is an equally complex and imposing social actant that likely obliged the captain and crew to take certain actions and decisions, such as their preparations for the voyage, and the careful lading and stowage of the contents. In particular, it apparently also compelled the captain and crew to upend the ontologically flat relationships around them and prioritize one actant over another. Rather than slipping into the communal activities and expectations inherent to coastal cabotage, a social construct partially represented by the plethora of weighing implements, the crew instead immersed themselves in a system of directed exchange with a different set of rituals and expectations. This immersion contains ontologically flat relationships between people and other actants such as the luxury items and a royal system of exchange, but it results from the agential or, as Watson (this volume) argues, the complicity of things in actions.

This, however, leaves me with a question. Or perhaps a need for clarification. If a flat ontological perspective involves a strict smoothing of human-thing relationships, generating an even distribution of agency, then how do actions occur? What element in a human-thing network has agency over another to generate priorities, decisions, and results? As Watson discusses, such an idealized system is a dissemination of agency and dissolution of responsibility – no single element has power over another. Yet, just as her national monuments are complicit in the various human reactions to them, they also embody a greater responsibility for those outcomes than other things. Similar are the luxury items in the Uluburun assemblage; they too are complicit in the decision to participate in a system of directed exchange between rulers. Perhaps it was their prevalence within the ship, or their manifestation of the broader royal exchange system, that catalyzed this expression of their power. Nevertheless, what I see are human-thing entanglements that are level schematically but not flat – things have the same coercive power as people yet, like people, that power is neither distributed nor expressed equally. My question, then, is likely very simple but perhaps necessary for further engagement of OOO and related approaches within maritime archaeology: Is there space for a hierarchy of coercive agency or power within these post-modern perspectives? I hope so, even as this may not be the orthodox plane of relationships favored by some. Such a hierarchy, while retaining an even relationship between people and things, still prompts a variety of important new perspectives on the past and present. To return to the Uluburun wreck site for the last time, accommodating an agential hierarchy among the things in the assemblage eases and reinforces interpretations of the site. It also generates new perspectives on the present by demonstrating how the coercive power of things can transcend cultural and temporal boundaries. The luxury items in the Uluburun assemblage were complicit in their system of exchange, but equally compelling upon discovery on the seafloor. Their rarity encouraged their carriage in the Late Bronze Age, but prompted their excavation and analysis too, as modern actants like research agendas and national narratives replaced past exchange systems. Their value may have changed, from one kind of exotica to another, but they still entangle with people and compel actions today.

## Works Cited

- Adams, J. (2013) *A Maritime Archaeology of Ships: Innovation and Social Change in Late Medieval and Early Modern Europe*. Oxford: Oxford University Press.
- Bachhuber, C. (2006) 'Aegean Interest on the Uluburun Ship', *American Journal of Archaeology* 110, pp. 345-63.
- Bass, G. and F. van Doorninck Jr. (1982) *Yassi Ada: A Seventh-Century Byzantine Shipwreck*. College Station: Texas A&M University Press.
- Beaulieu, C. (2016) *The Sea in the Greek Imagination*. Philadelphia: University of Pennsylvania Press.
- Callon, M. (1986) 'Some Elements of a Sociology of Translation: Domestication of the Scallops and the Fishermen of St Brieux Bay', in J. Law (ed.), *Power, Action and Belief. A New Sociology of Knowledge?* Special issue of *The Sociological Review* 32, pp. 196-229.
- Clarke, D. (1973) 'Archaeology: The Loss of Innocence', *Antiquity* 47, pp. 6-18.
- Delgado, J. (1997) *Encyclopedia of Underwater and Maritime Archaeology*. New Haven: Yale University Press.
- Demesticha, S. and D. Michaelides (2001) 'The Excavation of a Late Roman 1 Amphora Kiln in Paphos', *La Céramique Byzantine et Proto-Islamique en Syrie-Jordaine (IVe-VIIIe Siècles apr. H.-C.)*. Actes du Colloque Tenu à Amman, Institut Français d'Archéologie du Proche-Orient, Bibliothèque Archéologique et Historique 159, pp. 289-296.
- Flatman, J. (2003) 'Cultural Biographies, Cognitive Landscapes and Dirty Old Bits of Boat: Theory in Maritime Archaeology', *International Journal of Nautical Archaeology* 32, 143-157.
- Ford, B., D. Hamilton, and A. Catsambis (eds) (2013) *The Oxford Handbook of Maritime Archaeology*. Oxford: Oxford University Press.
- Gilroy, P. (1993) *The Black Atlantic: Modernity and Double-Consciousness*. Cambridge: Harvard University Press.
- Hocker, F. (1998) 'Bozburun Byzantine Shipwreck Excavation: The Final Campaign 1998', *The INA Quarterly* 25, 3-13.
- Katzev, S. (2007) 'The Ancient Ship of Kyrenia. Beneath the Cyprus Seas', in P. Valvanis, C. Petrakos, and A. Delivorrias (eds), *Great Moments in Greek Archaeology*. Los Angeles: J. Paul Getty Museum, pp. 286-299.
- Latour, B. (1988) *The Pasteurization of France*. Cambridge: Harvard University Press.
- Latour, B. (2012) *Reassembling the Social. An Introduction to Actor-Network Theory*. Oxford: Oxford University Press.
- Law, J. (1986) 'On the Methods of Long-Distance Control: Vessels, Navigation and the Portuguese Route to India', in J. Law (ed.), *Power, Action and Belief. A New Sociology of Knowledge?* Special issue of *The Sociological Review* 32, pp. 234-263.
- Pulak, C. (1989) 'The Bronze Age Shipwreck at Ulu Burun: 1986 Campaign', *American Journal of Archaeology* 93, pp. 1-29.
- Pulak, C. (2008) 'The Uluburun Shipwreck and Late Bronze Age Trade', in J. Aruz, K. Benzel, and J. Evans (eds), *Beyond Babylon. Art, Trade, and Diplomacy in the Second Millennium B.C.* New York: The Metropolitan Museum of Art, pp. 289-310.
- Ransley, J. (2005) 'Boats Are for Boys: Queering Maritime Archaeology', *World Archaeology* 37, 621-629.

- Sams, K. (1982) 'The Weighing Implements', in G. Bass and F. van Doorninck Jr. (eds), *Yassı Ada, Volume I. A Seventh-Century Byzantine Shipwreck*. College Station: Texas A&M University Press, pp. 202-230.
- Stockhammer, P.W. (2012a) 'Conceptualizing Cultural Hybridization in Archaeology', in P.W. Stockhammer (ed.), *Conceptualizing Cultural Hybridization, A Transdisciplinary Approach*. Cham: Springer, pp. 43-58.
- Stockhammer, P.W. (2012b) 'Questioning Hybridity', in P.W. Stockhammer (ed.), *Conceptualizing Cultural Hybridization, A Transdisciplinary Approach*. Cham: Springer, pp. 1-3.
- Stockhammer, P. (2012c) 'Performing the Practice Turn in Archaeology', *Transcultural Studies* 1, 7-43.
- Stockhammer, P. (2013) 'From Hybridity to Entanglement, from Essentialism to Practice', in W.P. van Pelt (ed.), *Archaeology and Cultural Mixture*. Special issue of *Archaeological Review from Cambridge* 28(1), pp. 11-28.
- Ucelli, G. (1996) *Le Navi di Nemi*. 3<sup>rd</sup> ed. Rome: Istituto Poligrafico e Zecca dello Stato.
- Van de Noort, R. (2011) *North Sea Archaeologies: A Maritime Biography, 10,000 BC – AD 1500*. Oxford: Oxford University Press.
- Wessex Archaeology (2014) *HMS Victory Conservation Management Plan*. Volume 1. Salisbury: Wessex Archaeology.



# Theory at Sea

## Some Reflections from the Gunwale

Bjørnar J. Olsen

### Introduction

Fishing was the main source of livelihood in the area where I grew up. In my village, as at other places along the Arctic coast of northern Norway, it had been for centuries carried out from a boat called *nordlandsbåt* (literally, ‘northland boat’). Though the oar and sail powered boat varied in size, from 4.5 to 14 m, the construction was essentially the same: an open and clinker-built keeled vessel characterized by a long slender hull and high raised stems. A very important quality of the northland boat was lightness. The boat had to be light enough to be easily beached and pulled onshore when not in use. Sheltered harbors were thus not a necessity and this flexibility in terms of landing made it possible to live at exposed coastal places close to the fishing grounds. A tiny stretch of decent beach was all that was needed (Fig. 16.1).

During the first half of the 20th century, however, the Norwegian fishing fleet became motorized and by 1950 the northland boat was mostly replaced. Its successors were in average somewhat larger but above all much heavier due to being equipped with the (internal) combustion engine itself and, of course, the necessary axle and propeller, but also by taking on other heavy equipment afforded by the motor, such as an anchor and net winches. Additional weight also came with the new additions of decks, cabins and wheel houses, along with more developed keels.

One consequence of this weight gain was that it became difficult or even impossible to beach the boats and to pull them onshore above the tideline. Thus, while not in use they had to be anchored offshore, which along this rough coast again required sheltered harbors. There were, of course, places blessed with decent natural anchorage but most lacked them. To compensate some communities managed to obtain resources to develop artificial harbors with piers and huge stone breakwaters, but for many small villages this was economically out of reach or even impossible due to natural conditions. For continued life at these places the combustion engine was not a blessing.

The motorization of the fishing fleet undoubtedly eased and secured coastal life in the far north. However, an unforeseen and less desired outcome was depopulation and



Fig. 16.1. Beached northland boats at now abandoned fishing village of Makkaur, Arctic Norway. The photo is taken between 1910 and 1920 (photo: Johan Granmo/Finnmark County Library/Digital Museum).

abandonment affecting a large number of small fishing villages along the outer coast. At the same time, places in more sheltered coastal locations started to swell despite many of them being less optimal in term of distance to the fishing grounds. This, however, was overcome by the motorized boat's capacity to move faster, farther, and safer. Though undoubtedly affected also by economic constraints, devastating WW2 destruction, and state programs of centralization, the combustion engine and the weight gain it initiated took on an unforeseen significance in shaping 20th century demography and living conditions along this Arctic coast of Europe.

As alluded to above, the boat's story is partly autobiographically informed, since the northland boat and the consequences of its replacement is part of my own background. The northland boat was common to everyone living along this northern coast prior to my generation. Even in my childhood, in the early and mid 1960s, some of them were still in active use, while other redundant and permanently beached ones served as playgrounds for coming sailors and fishers. This was also the kind of boat that my father used for decades after he started fishing in 1919 at the age of thirteen. It likewise was used by uncles, grandparents and generations of ancestors on both my mother's and father's side of the family, all of whom were dependent on fishing and the sea. While our village had an excellent natural harbor and survived the motorizing shift well, the situation was very different where my mother grew up. And when her family finally decided to abandoned their ancestral homestead, it was primarily because a place ideal for the

northland boat had proved intolerable for the needs of its motorized successor. Despite this change, also in the coming years and far into my youth, ocean, fishing and boats continued to be an existential *a priori* for us living here. Until a road was completed in the late 1980s, boats were the only way of getting to and from our village – a six hours' journey over rough seas to get to a place big enough to accommodate a road or regular ship route connection to the world outside.

This case came to my mind when struggling to come up with something to write after been asked to contribute to this volume, and was likely triggered by the book's maritime profile. Autobiographical reflections create some personal unease and initially this was just thought as a way to help with the always tricky part of getting started, by finding 'a way in', so to say. However, the case may do more than that. As I shall return to below, while cases and examples may be used to test and concretize a theory, or work as a heuristic device, they may also play a crucial role in informing and influencing our theorizing (Lucas and Olsen, 2021).

### **A Note on Symmetry and Trust**

A main objective of the volume is to bring together perspectives from maritime archaeology and contemporary philosophy, in particular what has become known as object-oriented ontology. It reflects a wish to make maritime archaeology engage more with theory and the pressing environmental issues facing us, but also to push theories deeper into the maritime realm. The latter, and more generally to make theories encounter the concreteness and complexities of things, I find of utmost importance. This also in order to balance a persistent hierarchy, which explicitly or implicitly often has grounded the common plea for 'more theory' in archaeology, that is, of theory (and theorists) hovering above and informing the real. This hierarchy was evident in the processual and post-processual claims that all data, all empirical observation, is theory-laden (but never the other way around); in other words, the idea that things, the real, cannot speak without the benefit of intervening theory.

I think we should be skeptical of this thesis and spend far more efforts on inquiring into how things, and in particular the specific material we deal with, affect theory and our theorizing. Or for that matter, inquiring into how theory can speak at all without the benefit of intervening things. Maritime archaeology, as with the rest of the field, may gain a lot from interacting with object-oriented and other thing-friendly philosophies, but it is equally important to say, that if these philosophies plunges deep into the field of maritime archaeology they will not be unmoved by this encounter. The maritime archaeological material should not just be informed and enriched by these philosophies but they themselves be affected, perhaps even shattered, by the richness and uniqueness of this material. As stated by Peter Campbell (this volume) in his reflections on pelagic being and thinking, 'It is an alien archaeology beneath the sea, requiring one to think differently'.

Symmetry, thus, is a principle that applies to the relationship between theory and data, but also to interdisciplinary exchange, and as a way to balance between those who talks and those who listen. While there are exceptions, philosophers, writ large, have not found archaeologists very attractive discussion partners. In this respect, the material turn represents a change, which in many ways is remarkable. Scholars who have played a

crucial role in this change, such as Graham Harman, Jane Bennett and Levi Bryant, have approached archaeology with curiosity and interest for what is happening in our field (e.g., Bennett, 2013, 2015; Harman, 2016, 2019a, 2019b; Bryant, 2021, 2022; Harman and Witmore, forthcoming). In some sense this may be said to be expected; who would be more likely discussion partners if one wanted to turn to things and know about them? Still, there is an effective history of disciplinary distancing that does not exactly talk to the advantage of archaeology and which was strangely upheld among the forerunners of this turn, despite their sometimes very close disciplinary links (see Appadurai, 1986; Miller, 1987, pp. 110-111; 2002, p. 240; cf. also Latour and Weibel, 2005). When this has become a kind of ‘normality’ during the last decade, I will argue, it is also because archaeologists have had an impact on this turn, and perhaps more than any time after the 19th century have had a significant impact on theoretical discourses beyond the limits of our own discipline.

Still, a more symmetrical relationship requires that we shrug off an effective history of inferiority and latent dependency that still affects the interaction (–who invites whom to participate in an exchange, for example?). Moreover, disregarding rewarding outcomes, it is a profound irony in philosophers and theorists lecturing archaeologists about things, and, perhaps even more so, that we have been for so long such a susceptible audience. While often productive and enlightening in its own terms, philosophical discourse tends to deal with absolute or ideal instances. Such may be readily-available in texts, literature, and thought, but as we know all too well not so much in our ruined records. Most theorists do not have to engage directly with waste, wrecks, sea currents, glaciers, soils, trowels, underwater suction excavators, or with annoying finds that say nothing or contradict your interpretations; their dealings with things are primarily chosen, discursive, and second-hand. Archaeology, however, has constantly dealt with things, with things broken, soiled and sunken, and as a disciplinary practice it reflects a commitment to the real, with *what there is*. This commitment should also be manifested in the way we theorize, and for how we engage and interact with philosophers and theorists, also because the archaeological encounter may provide other glimpses, other understandings, of things’ being than those featuring in their current embracement in the social sciences and humanities. There is of course also a disciplinary division of labor that applies, and perhaps we become even more interesting collaborators for those who have reached out a hand if we stay tuned with our own commitments.

To do so requires trust and confidence, trust in our trade as well as in our objects, and also, when appropriate, to have the confidence *not* to theorize. I think Matt Edgeworth makes this point well in relation to the East Tilbury ‘archaeosphere’ objects that he deals with. These are powerful and sometimes dangerous entities that affect humans and non-humans alike, and, thus, are ‘strong and vibrant enough to stand up for themselves... Far from being inert objects that require a framing ideology to enliven or activate them, they can be taken to constitute a basis on which new theory might be generated or established theory transformed’ (Edgeworth, this volume).

### **It Matters What Theories Matter For**

And this brings me back to the role of the example, and the value we assign to things, cases, and experiences in our reasonings. In one of this blog posts, Levi Bryant addresses precisely this point, where he starts out expressing a distrust in theories that do not employ

examples, because this, as he writes, may cut off their connection to the world as well as release them from the responsibility of really explaining anything of it. However, he also goes into the formative role of cases or examples in theorizing, asking how a theory is informed by the example used and, thus, whether it would have been different if other examples or experiences were made relevant:

'An example is not a simple ornament, but is that to which the theorist bears responsibility in their theorizing. In this regard, I think that it's noteworthy that prior to the twentieth century, so many philosophers were not first and foremost philosophers. Descartes, for example, was a mathematician, scientist, and soldier. Leibniz was a mathematician, diplomat, engineer, and many other things besides. Spinoza was a lens grinder. Locke was a physician. For all of these thinkers there was something else, a sort of "matter", that introduced a little bit of the real, a little bit of alterity, and which constrained their speculation' (Bryant, 2016).

For Bryant the example is more than a pedagogical or heuristic device; it rather affords and informs a certain theorizing that otherwise would have been difficult or different, and thus places the example 'at the core of theoretical work' (Bryant, 2016).

Importantly, however, this should not merely be a matter of 'reference', of cases or examples to be applied, but rather of how theory is part of the world, is itself 'thrown' into it, and thereby may have semblance to other objects of this world, whether northland boats, funnel beaker pottery, or the Dutch East India Company. In other words, we should try out the option of not seeing theory as something to be applied or imposed on the material but as operating *amongst things* and, thus, as something that may be challenged, transmuted and shattered by its encounters with them. In order to achieve this, and to keep and restore the fidelity to things, our theorizing has to be situated and partial, and much like the objects it seeks to frame, steer clear of the cleansed and allow for reasonings that are fragmentary, soiled, and eclectic. Allowing for such theoretical elasticity may also help turning the much-condemned task of theory borrowing into a creative art of archaeological theorizing (Pétursdóttir and Olsen, 2018).

With reference to what is said above, what I will do in this paper is to explore how the case of the Northland boat, though moving in and out of my account, allows for some nuances in relation to how we think of things, of things in the Anthropocene and why we have gotten here, and also to how we think of theory and the practice of theorizing. Though the relations may appear to be more implicit than explicit, these arguments are also developed in dialogue with, and as responses to, the stimulating contributions making up this volume.

## **Made in Our Image, after Our Likeness**

One of the most emblematic but also least scrutinized features of what has become known as the 'material turn', is anthropomorphism or the transfer of human qualities to things. Given the effort put into abandoning modern negative dualities between inert things and creative, thoughtful humans, and to adopt a more inclusive or flat ontology (a 'democracy extended to things'), such anthropomorphizing may be an expected outcome. In order to enhance their status, bestowing things with qualities one normally associates with humans (e.g., agency, biography, vitality) clearly proved helpful.

There are, at the least, two issues at stake here. One is the very anthropomorphism itself, the other is the bias towards positive or desired human qualities in facilitating it. I shall address them in that order. As one among the rather few, Jane Bennett has explicitly theorized and provided thoughtful argument in defense of this anthropomorphizing of things (see also Killian and Rich, this volume). According to her it works to enhance our sensibility to the similarities that exist among humans and non-humans across categorical divides. Thus, it represents a levelled approach that enables us to reveal and acknowledge ‘a whole world of resonances and resemblances’, that from a more hierarchical viewpoint likely would be ignored (Bennett, 2010, p. 99). In such levelling, anthropomorphic metaphors play an important role, Ian Bogost further argues, that if not fully helping us to reach the alien other itself, then in the least open a way of nearing it (2012, pp. 64-67).

There are a number of concepts in circulation here, and where links to animism (Ingold, 2006) and panpsychism (Shapland, 2021) also may be made. However, if we conceive of it methodologically (and epistemologically), what is proposed is basically a classical hermeneutical approach whereby one in order to understand the other puts oneself in the other’s place (e.g., Schleiermacher, 1819/1986, p. 83; Johnson and Olsen, 1992). Though contrary to the efforts of Schleiermacher, Humboldt and the like, of course, it involves a more-than-human (and perhaps more-than-tricky) twist. As well summarized by Killian and Rich (this volume), in Bogost’s and Bennett’s account, ‘the human anthropomorphizier steps into the place of the anthropomorphized, gradually relating to its way of being’. Morton and Boyer take this extended hermeneutics even further when describing how we as ‘hyposubjects’ subscend into objecthood, craving nothing else than being a piece of flotsam on the beach (2021, pp. 64-65).

As already alluded to, there are some epistemological and ontological issues involved here, e.g., regarding whom has the privilege to ‘isomorphize’, and, not the least, to qualify its success (see Witmore, this volume)? This also may be raised as an issue when Killian and Rich (this volume), in response to Bogost’s claim to the anthropomorphic metaphors as way of nearing the alien other, write that ‘And as we do, we are (re)learning that so many extrahuman kin experience sentience, sensations, and sorrows far beyond our wildest personifying fantasies: speaking plants, negotiating fungi, mourning crows, pranking octopi’. But how do we, actually, learn and know that, beyond recourse to our own adjectives and naming? How can a fungus, a bat, or a piece of Styrofoam express their view about our attempts of becoming identical to them? Likewise, is it the case that ‘just as we *anthropomorphize*’, a dinosaur ‘*dinosaurmorphizes*’, ships *nauticomorphize* or gods *theomorphize* (Killian and Rich, this volume)? Is it probable or even imaginable that things and animals *just as we* extend their being and qualities to other beings? And if so, what happened to their difference and integrity? As noted by Heidegger, ‘Every valuing, even where it values positively, is a subjectivising. It does not let beings: be. Rather, valuing lets beings: be valid – solely as the objects of its doing’ (1977, pp. 228).

Another problem I see with this is that despite the emphasis on things and matters we are largely left with discourse, more words. Narratives, literature, fiction, metaphors, far too often become the only measures for theoretically addressing things and qualifying their inclusion (as exemplified well, I think, by Mentz’s paper in this volume). Rather than bringing us closer to things, may it be, as Walter Benjamin argued (1928), that this excess of words contributes to subjugate things and nature further to human domination?

Though equally anthropomorphic in his critique, Benjamin argued that this domination ('overnaming') had deprived things and nature of their own ability to speak. It was precisely this, and their fate of being 'known by the unknowable', Benjamin argued, that was the cause of thing's lamenting and 'deep sadness' (Benjamin, 2004, pp. 72-73). 'There is, in the relation of human languages to that of things, something that can be approximately described as "overnaming"—the deepest linguistic reason for all melancholy and (from the point of view of the thing) for all deliberate muteness' (Benjamin, 2004, p. 73).

If we return to the northland boat, we may ask how the skipper (*høvedsmann*) and the crew related to the boat, to each other, and to their tasks and the sea? Language was of course important, not just for the crew's internal exchange; boats were named, of course, and there was also a detailed and intricate vocabulary for its different parts, for the way it handled, for actions carried out in and with the boat, for the conditions of the sea, and so on. However, in order to name and metaphorize you have to possess some knowledge of the matter you are dealing with. These words, concepts, were closely tied to experiences and things, and semantically formed part of larger tactile and lived 'field'.

This field, thus, contained a lot that was never named or linguistically expressed but which nevertheless was articulated and known through a bodily felt awareness for how the boat behaved and worked. This also included a sensibility for disturbances and interruptions that was crucial for amendments and the 'tuning in' of boat, particularly with a new boat, but also as constant aspect with its later handling. The sea is never the same, it changes, offer new challenges, which along this mountainous and uneven coast often involve dangerous fall winds and cross currents. Previous experiences helped, of course, but there was a constant aspect of learning, adjustment and managing risk, which only partially was discursively executed.

Relating to the boat and the sea in a concrete, ready-to-hand engagement that at times also were interrupted by 'bringing-to-mind' disturbances, was for these northern fishers, a way of nearing. And perhaps the sensibility emerging from the lived experience with the northland boat, with sea and cod, actually made those manning it more perceptive to the 'world of resonances and resemblances' and the similarities that exist across categorical divides than those performing intellectual anthropomorphism? Maurice Merleau-Ponty in my opinion captures this particular point of *material* nearing well. Living in a tactile world of shared 'physiognomy', being flesh among flesh, our body brings us in direct contact with things, 'which are themselves not flat beings but beings in depth, inaccessible to a subject that would survey them from above, open to him alone that . . . would coexist with them in the same world' (Merleau-Ponty, 1968, p. 136). Merleau-Ponty also sees this relation to things as committing, a 'pact between them and me according to which I lend them my body in order that they inscribe upon it and lend me their resemblance' (1968, p. 146). If nothing else, this may remind us that the mind is not the only medium through which humans relate to the world, and that there are other ways of and to knowing. Even for our relation with a rose (Harman, this volume), there is more to the relation than the rose itself and our thinking of it.

As I shall return to below, in their own and humble ways, these very northern fishers knew well the OOO wisdom that the boat (as well as the sea) is more than what it is doing at any moment and, and their use did not at any time fully exhaust

its reserve of potentials. For them, however, this wisdom was not so much arrived at through theoretical mediations, though in some sense they were also highly educated scholars of oceanic thought. Through daily and intimate interaction with the boat, including in gut-wrenching situations, they had been taught about these potentials and what they might imply. While clearly building trust in the capabilities of their craft and themselves, they had also learnt the lesson to acknowledge and be prepared for the unforeseen potential of the precarious (Bojer, 1921).

## Things for Good and for Bad

An expected outcome of the anthropomorphizing of things would be the nuanced impression that, as among us, there are good ones and bad ones – and many in between. Yet, the intriguing fact is that what has been disclosed through this ‘touch of anthropocentrism’, are primarily good or sympathetic qualities (‘a swarm of “talented” and vibrant materialities’) (Bennett, 2010, p. 99). Though not a particularly conspicuous feature in this book, reading through the chapters one will find that the adjectives applied to count for things’ impact (–or agency) often are of the kind that trigger positive associations. Things and other non-humans are referred to as shimmering, vibrant, independent, resistant, energetic, resilient, mysterious, talented, dynamic, enabling, and even when they take on the role as colonizers, this seems not to come with the associated negative or condemning aspects that cling to their human conceptual models. For some reasons, but perhaps as a compensatory measure for things’ previous neglect (do I dare to use the word subalternity?), less desired qualities such as preventing, damaging, foreclosing, boring, passive, violent, despotic, stubborn, and so on, are far less frequently to be encountered. Writ large, the rehabilitation and repatriation of things as significant entities of the world largely seem to have made them captive to our human norms – and often made them perform as our desired alter ego (Olsen, 2013).

This bias has, of course, been *Gefundenes fressen* for those arguing that the new ‘celebration of things’ has gone too far and led to a turn away from people. Actually, one argument here is that such a neglect is facilitated precisely by avoiding things’ problematic and monstrous qualities in favor of their more pleasing attributes:

‘Thus, few or any of the objects mentioned in some of the main texts of symmetrical or neomaterialist archaeology (e.g., Olsen, 2010; Witmore, 2007, 2014; Pétursdóttir, 2012, 2013) can be labelled monsters. They can be more or less difficult to handle for humans, but they are scarcely monstrous from a physical, ontological, or moral point of view. We do not see cluster bombs, methamphetamine, or asbestos mentioned....’ (González-Ruibal, 2019, p. 177; c.f. Ribeiro, 2019; VanDyke, 2015, 2021; McGuire, 2021).

Disregarding that González-Ruibal’s description is wrong, this critical corrective, of course, comes with more than a *touch* of anthropocentrism. For these critics, a monstrous thing is primarily an outcome of bad intent, a corrupted human morality inscribed and, thus, predefined in that thing, whether napalm, the atomic bomb, mustard or nerve gas (González-Ruibal, 2019, pp. 171–178; see also Watson, this volume). Though this is true for some weapons of terror, it also true that other ‘killing machines’ (machine guns, grenades, flamethrowers) have been indispensable in fights for democracy, in anticolonial fights for

freedom and liberation, and other just wars against fascism and Nazism. Moreover, from this perspective, little can be said of the monstrous in nature, and the pain and suffering created by erupting volcanoes, earthquakes, landslides, bolide (meteorite) impactors, or the range of natural toxic chemicals deadly for us and others. Asbestos, for sure, features on González-Ruibal's list of monsters, though as if it was an agent similar to cluster bombs (and with little regard for the trivial fact that this monster for more than five millennia was the preferred means for ceramic tempering among hunter-gatherers in northern Fennoscandia) (Carpelan, 1979; Jørgensen and Olsen, 1988).

However, and more relevant here, is that this position makes it difficult to understand how ordinary and intentionally innocent things and practices, including synthetic garments, plastic toys, solar panels, wind turbines, internet gaming or livestock farming are radically transformed into hyper-monstrous beings such as marine and terrestrial debris, environmental degeneration, greenhouse gasses, and toxic pollutants that today provide the greatest threat to humanity. And if we look back at my own mundane case, such a position offers little help with understanding why the internal-combustion engine, despite its many good and life enhancing effects, also proved to have unforeseen and fatal consequences. Whatever one may think of the motives and ambitions of Herbert Akroyd-Stuart and Rudolf Diesel, they hardly included any desire to desert northern coastal villages – or, for that matter, contribute to global warming and rising seas.

Ian Hodder has rightly argued that there is a darker side to our relationship with things that is often missed out: that things build dependencies and restrict our choices. As seen with the motorization of the fishing fleet, they often leave us in a sticky entrapment:

‘A key aspect of our relationships with stuff is that they involve more than networks of humans and things, more than a symmetry of relations. Rather, our relations with things are often asymmetrical, leading to entrapments in particular pathways from which it is difficult to escape’ (2014, p. 19).

Hodder, however, seems little concerned with the actual capacities of things themselves. These capacities, I believe define degrees of dependencies; and these also include things in their afterlife, when they become redundant and out of hand, but yet stubbornly continue to haunt us with new and unforeseen potentials. Such is the case with waste, sea-born debris, as touched upon by many of the papers in this anthology. What is needed, however, is not an asymmetrical but rather a more and truly symmetrical perspective, one which allows to account for how things affects us and other beings immensely various ways and, thus, helps us see both gains and losses.

And this brings me to some thoughts about things in the Anthropocene and what has brought us here, thoughts that for some years now have emerged and matured through conversations Christopher Witmore and I have had about this issue. Put simply, as seen with the case of the motorization of the fishing fleet, this is basically about the consequences of weight, about heaviness, a heaviness produced from all our stuff gathering around us, stuff that builds up, and accumulates. Stuff that clearly enables but which also creates dependencies and restrict choices and changes.

## Weight

The coming of the Anthropocene has made us increasingly aware of climatic and environmental changes, and how our societies and economies have contributed to them. Less attention, however, is brought to the fact that we are increasingly unable to cope with change. At a time when environmental changes require flexibility we are increasingly entrapped in constant constructions of more tenacious ways of living. Ways of living characterized by weight, corpulence, and, thus, increasing immobility. Despite the pleasing post-modern image created of humans as the new nomads, constantly on the move in an ever more shifting and fleeting reality<sup>1</sup> --- our lives are actually characterized by an extreme and constantly developing material corpulence that differs from anything humanity knew in the past. A sedentariness created by massive investments in increasingly heavier stationary infrastructures and dwelling machines, by increasing masses of people that increasingly cluster in cities and urban areas, and by the masses of redundant things and garbage produced at an ever-escalating rate.

This, what seems to have become the new normality, is a way of living that actually depends on environmental stability; a standstill that never has existed before. Notwithstanding what sometimes seems to be believed, climate and the environment have undergone changes, also dramatic changes. And if there is one lesson from this, it is that there undoubtedly will be more serious changes, whether as now humanly induced or by nature's own forces. Consider sea-level changes. Archaeological and geological knowledge tell us that extreme changes in sea-level have been experienced by past human societies. Especially during and after the last deglaciation dramatic they were dramatic. As the ice melted the rise in sea-level flooded entire regions of lowland Europe, including Doggerland, the large continent between Denmark and the British Isles. Studies from areas set wide apart, such as the west Atlantic area and South East Asia, shows a sea-level rise of four to five meters per century during the final stage of the Pleistocene (Bard et al. 1990; Hanebuth et al. 2000). In some northern areas, such as Norway and Sweden, isostatic rebound dominated. Free of the burden of the enormous ice cap, the land rose much faster than the sea-level. In some areas, the sea level thus dropped dramatically, such as in the Gulf of Bothnia where the first post-glacial hunter-gatherers had to cope with shoreline displacement of one meter *per decade* (Påsse og Daniels, 2015, p. 24). Needless to say, such changes were of course experienced within the frame of human lifetime. New lands opened or closed as coastlines and islands of one generation became terrestrial or maritime for their children and grandchildren. What if our current coastal metropolises had to face such conditions?

When these early societies could cope it was due to their lightness and mobility. And this is nothing exceptional for the very distant past. Even during the last centuries, such lightness was characteristic of the poor majority, those who lived outside cities, and those who fished from the northland boats. They were tuned to season, to the land, and to the movements of herds or fish. With far fewer possessions, past societies lived in a world of tolerant lightness and this enabled them a capacity to cope. As did their knowledge based

---

1 'Today's internet generation no longer needs a home. It is mobile. It works six months in a shared office in Berlin, spends the summer in a caravan in Chile, and shows up just in time for the next project at a temporary desk for a client in New York' (Klanten et al. 2015, *The New Nomads*).

on a life and a nature that was anything but stable. It should call for reflections that the indigenous tribes of the Andaman and Nicobar Islands in the Indian Ocean, as well as coastal tribes in Thailand, sensed and survived the Tsunami in December 2004. As reports tell us, they did it due to their mobility, lightness and ability to read the signs that living with an unstable nature had learned them.

The pace of the coming environmental change may come to match what our forebears faced in the early Mesolithic, yet it does so at a time when we are more immobile than ever. The spiral of material entanglement has constantly made us more rigid, more fragile in the face of change. While we would search in vain for any architect or human intent to blame for this dystopic trajectory, the past has rendered a wealth of material clues to how and why we got here. Interestingly, though, the trust that once came from looking to the past in order to understand the present is now rendered irrelevant. As the story goes, our situation is unique; we have never experienced such environmental challenges. From this vantage point the experiences of early Mesolithic hunters and fishers become redundant or irrelevant, as do the ones of those recently settled the deserted villages of the Arctic coast of Europe. In the discourses of the present and future, such people become too distant, too primitive and ‘other’, to be recognized in the ‘we’ that ‘never before’ has experienced such challenges. The current crisis may cause alertness but it is also likely to turn us into temporal narcissists so absorbed by our own situation that we completely forget how it was to be human for what was by far the longest part of humanity. And, thus, also made us forget that what is truly unique by our situation is our weight and inability to change.

## **Onshore Afterlives and Speculations**

Let’s once again return to the northland boat. The construction and lightness of this boat afforded other and non-maritime uses. If surprised by bad weather long way from home, and a suitable spot of beach was within reach, the boats could be pulled ashore, demasted, and turned bottom-up to work as a temporary shelter until weather conditions allowed safe return. The small boat crew could stay for days and even weeks in such a boat shelter waiting for calmer weather. This onshore experience may have initiated the quite common habit of giving retired northland boats extended lives as more permanent abodes for animals, things and humans. To serve this new role, amendments were needed; the inverted boats were firmed by being lined with stones and turf, the gunwale might be extended with planks to get a proper wall, and sometimes the bow or stern part was cut off to provide place for a straight short wall with a doorway. Their use as human shelter peaked following the catastrophic impact of the scorch-earth tactic applied by Wehrmacht troops during their retreat from northernmost Norway in 1944 (cf. Olsen and Witmore, 2014, pp. 165-166), when local families as a substitute for their burnt down houses lived for years in these inverted vessels turned homes (Fig. 16.2).

Boats have a primary purpose of carrying people and things on and across water, a quality that also affords innumerable other tasks. When an accident happens and they sink, this in many ways make manifest ‘the discontinuity between the ship’s ‘working life’ at the surface and its ‘afterlife’ at the seafloor’ (Rich et al., this volume). The northland boat, however, reminds us that there are diverse destinies for a boat



Fig. 16.2 Northland boat turned dwelling for homeless natives in the village of Gamvik, Arctic Norway, after the German retreat in November 1944 (photo: The museums for coastal heritage and reconstruction in Finnmark).

and that this discontinuity may be negotiated and overcome in many different ways, as also thoughtfully addressed by Chelsea Cohen (this volume). Old boats were commonly dragged onshore and left there; initially, perhaps, in a kind of waiting mode (for unlikely repairs, new owners), but in most cases for an undecided onshore destiny as playgrounds, nesting places for eider ducks, or as source of fuel during cold winters. It happened, of course, that the northland boat got lost at sea. The boat was rigged with a square sail and especially during rough weather tacking it could capsize if mistakes were made or something unexpected cropped up. Due to its light wooded construction, however, it was not prone to sink and would commonly continue to float upside down. There are numerous stories about 'keel riding', boat crews being saved after clinging to the shallow keel of the northland boat (Bojer, 1921). The actual wreckage of the boat, if not saved, would normally happen when it drifted to the shore and was smashed against rocks, ending up as smaller and larger pieces of driftwood.

This range of possible afterlives, and other uses, is not just a reflection of happenings but constitute repeated and knowable experiences. These other destinies were thus part of a reservoir of possible and even expected outcomes, that add to the corpus of knowledge associated with their active use at sea. This I find important, and if we allow theory to enter these waters and operate amongst the northland boats this may cause some reflections, and possibly insights, with regard to knowing objects and what an object is. We may for a start ask whether some or any of these described destinies represent instances where the boat enters into 'a loose relationship with its own qualities' (Harman, this volume)? For instance, when turned upside down and

used as human dwelling did the northland boat lose its 'boatness'? Did it become a 'weird crack' in reality, something 'beyond concepts' (after Morton, 2013, 2016)? Or is it rather likely, as I would suggest, that experiencing these many transitions had allowed for some elasticity with respect to this relationship, as well as with the concept of the boat itself? In other words, regardless of whether it ended up as terrestrial dwelling, wreck, driftwood, or playground, the boat connection was never really lost. Even when used as fuel for fire you knew well it was a boat burning. Experiences modifies absolutes, also conceptions of 'weirdness' (Harman, this volume), which likely depends on who judges and from what perspective. In other words, that what may seem weird to American philosophers might not necessarily be strange or 'beyond concepts' for northern fishers, a north Atlantic cod, or an eider duck.

### Modes of Nearing

This is not to rank these experiences, just to acknowledge their difference and the elementary phenomenological insight that we are situated beings. More basically, these remarks relate to the question of knowing and the possibility of knowing and nearing the object. Following Harman (2016), we cannot know the essence of objects; what they really are will always remain hidden to us, and released potentials of their unknown reserves will thus be a source of frequent surprises. Everything, including the northland boat, has such an autonomous essence that cannot be known, and what I specifically want to bring attention to here, is Harman's conviction that 'our practices grasp it no better than our theories do' (Harman, 2016, p. 16). Following Harman, the best we can hope for is to be provided glimpses 'through indirect, allusive, or vicarious means' (2016, p. 17).

It is interesting to note whom he thinks are able to provide such glimpses and by which means. Based on the examples used, artist, critics, and writers, seem to be the ones gifted with the needed means, and thus able to catch some oblique sights of things being. For example, the art critic who writes allusively and vividly about Picasso's *Les demoiselles d'Avignon*, 'brings its subject to life rather than replacing it with bundles of explicit and verifiable qualities. Sometimes we can only reveal things obliquely, looking for paradox rather than literally accurate predicates as our entryway to a thing' (Harman, 2016, p. 32). It is through creative writing, thus, and possibly other allusive artistic means, that we can reveal a thing's essence (though only obliquely).

It is difficult to speculate what kind of status Harman assign the skills held by those who fished from the northland boat and the knowledge they had about their vessel. Or, moreover, what would have happened if this boat rather than *Les demoiselles d'Avignon* (or the Pizza Hut chain) was used as his go to example? Perhaps not so much, given his position on 'practices', and since the unknowability of things is known in advance? Nevertheless, the examples used by Harman are hardly accidental and perhaps they reflect his field of experiences and thereby somehow color the position arrived at? Though I am sure that the crew of the northland boat would be more than ready to share Harman's position that the boat is always more than what it is doing right now, and that what it holds 'in reserve' cannot in any way be exhausted, what they likely may also may have argued is that partial knowledge, and richer knowledge, of this reserve is possible to arrive at through tactile engagements. And probably also, that it matters to our knowing which kind of object we are dealing with (Fig. 16.3).

While being critical of this particular aspect of Harman's object-oriented philosophy, there are other important features of it that I share, and which have been decisive for my own reasonings about things. There is also a specific aspect of his contribution to this volume that I find very interesting, and if I understand him right, also may contribute to a somewhat different, and in my mind more material, means to account for what an object hides or holds in reserve. This relates to what is addressed above in relation an object's deviations from intended purposes, but with a somewhat different outcome.

Harman makes the point that the shipwreck in some sense becomes 'more' than the operating, fully functional ship; that an object often becomes most itself when stripped of its usual context, and exists in tension with that context and its own qualities (Harman, this volume). Without making this link himself, this resonates well with Walter Benjamin's thoughts on the ruin as somehow speaking 'truer' or being more articulate than the complete building. Being 'scattered and preserved', the ruin exists in a kind of revelatory tension (a 'petrified unrest'), between its own pre-history (of uses, success, and hopes) and its after-history as wrecked and redundant (Benjamin, 1999, pp. 473-476; see also Buck-Morss, 1999, pp. 110f, 219-21). From this perspective, the shipwreck might be seen as an archetypical case of the ruin and the abandoned thing. Released from its chains of relations,



Fig. 16.3. Resting Northland boats in the harbor of now abandoned fishing village of Finnkongkeila, Arctic Norway, ca. 1910 (photo: Johannes Øwre/Finnmark County Library/Digital Museum).

and ‘freed from the drudgery of being useful’, as Walter Benjamin phrased it (2002, p. 39), the ruin, the wrecked ship, more fully presences itself outside its habitual domain.

And maybe it is in this state as thing ‘out-of-hand’ (Pétursdóttir, 2014), when no longer being a thing-for-us, that we most easily catch sights of its difference, those aspects that neither are released nor exhausted by its use. However, rather to be seen as something disclosed beyond or even in opposition to the field of experience, a kind of secret affordance reserved for the attentive modern intellectual, such disclosures are common. Actually, I would claim they were more common in previous times when the useful were allowed to encounter the stranded and redundant in more generous portions, but also because habitual living – such as with the northland boat – far more frequently were put at risk by intervening presences of the not habitually known.

### **Postscript: Weirdly Cracked?**

Today the northland boat has taken on new lives among enthusiasts and boat societies all over Norway and even abroad. It frequently features in the touristic depiction of northern Norway, and is the subject of its own regattas and various boat and fishing events. As old boats are repaired and new ones built at an increasing pace, the future seems reasonable bright for the legendary boat. Less so, however, for the northland boat that was left in the timbered boathouse when my mother’s family finally vacated their homestead sixty years ago. The reason for this, if any specific, remains unclear, since the boat was well kept and in good shape. It was one of the smaller types, though, a *kjeks* built for two pairs of oars, and may have been regarded as of little value. However, and with the liberty that comes with narration, its destiny may of course be retrofitted as a pertinent material commentary made by those who left on their and their homestead’s fate.



Fig. 16.4. The collapsed boathouse at my mother’s homestead in 2019 (photo: Bjørnar Olsen).



Fig. 16.5. The trapped *kjeiks* in the boathouse ruin (photo: Bjørnar Olsen).

Despite going back each summer in the years after the move, the boat was never launched again. Nevertheless, the airy boathouse cared well for the boat, which remained in its unused position for decades. As the years passed the homestead received new and distant owners and visits became less frequent. When going back a decade ago the boathouse was in a critical state of tilting, with slanting poles raised as a provisional measure to prevent its collapse. Still, the northland boat was surviving seemingly unaffected with its green-painted gunwale, as if enjoying, in its anthropomorphized gestalt, its autonomy and ‘releasement’ (pace Heidegger, 1966).

Upon our last visit, in 2019, the boathouse had finally surrendered to the weight of its heavy sod-covered roofing and laid collapsed in a mess of timber and turf with the northland boat trapped inside. Peeking up through the heap of rubble was the pointed bow of a red fiberglass speedboat that later had been stored here (Fig. 16.4). The situation indeed looked weird. The *kjeiks*, though, despite being irretrievably trapped in the rubble, seemed to have survived even this, stubbornly keeping its upright position (Fig. 16.5). For me, there was indeed some ‘dialectical imaging’ in all this, an instance of critical interruption, so to say, as if the past and the present had joined in a tension-filled constellation (Benjamin, 1999, pp. 474-476). Being an object ‘blasted’ out of continuous history, has the trapped boat perhaps settled in a ‘weird crack’ of reality after all, and for which it becomes both a victim and a witness? It remains to be seen, however, whether that brings us any closer to its essence than having built it, sailed it, and left it here for our speculations.

## Works Cited

- Appadurai, A. (ed.) (1986) *The Social Life of Things: Commodities in Cultural Perspectives*. Cambridge: Cambridge University Press.
- Bard, E., B. Hamelin, and R. Fairbanks (1990) 'U-Th ages Obtained by Mass Spectrometry in Corals from Barbados: Sea Level During the Past 130,000 Years', *Nature* 346, pp. 456-458.
- Benjamin, W. (2006) 'Paris, the Capital of the Nineteenth Century', in H. Eiland and M.W. Jennings (eds), *Walter Benjamin: Select Writings*, vol. 3, 1935-1938. Cambridge: Harvard University Press, pp. 77-88.
- Benjamin W. (1999) *The Arcades Project*. Cambridge: Belknap Press.
- Benjamin, W. (2004) 'On Language as Such and the Language of Man', in M. Bullock and M.W. Jennings (eds), *Walter Benjamin: Select Writings*, vol. 1, 1913-1926. Cambridge: Harvard University Press, pp. 62-74.
- Bennett, J. (2010) *Vibrant Matter: A Political Ecology of Things*. Durham: Duke University Press.
- Bennet, J. (2015) 'Encounters with the Art-Thing', *Evental Aesthetics* 3(3), pp. 71-87.
- Bennet, J. (2013) 'The Elements', *Postmedieval* 4(1), pp. 105-111.
- Bogost, I. (2012) *Alien Phenomenology: Or, What It's Like to Be a Thing*. Minneapolis: University of Minnesota Press.
- Bojer, J. (1921) *Den Siste Viking*. Oslo: Gyld.
- Bojer, J. (1964) *The Last of the Vikings*. New York: New American Library.
- Bryant, L. (2016) 'Examples', *Larval Subjects*. Available at: <https://larvalsubjects.wordpress.com/2016/07/27/examples/> (Accessed: 13 May 2022).
- Bryant, L. (2021) 'Wild Things', in B. Olsen, M. Burström, C. DeSilvey and Þ. Pétursdóttir (eds), *After Discourse: Things, Affects, Ethics*. London: Routledge, pp. 42-58.
- Bryant, L. (2022) 'Wilderness Heritage: For an Ontology of the Anthropocene', in T. Bangstad and Þ. Pétursdóttir (eds), *Heritage Ecologies*. London: Routledge, pp. 66-80.
- Buck-Morss, S. (1991) *The Dialectics of Seeing: Walter Benjamin and the Arcades Project*. Cambridge: MIT Press.
- Carpelan, C. (1979) Om Asbestkeramikens Historia i Fennoskandien. *Finskt Museum* 85(1978), pp. 5-25.
- González-Ruibal, A. (2019) *An Archaeology of the Contemporary Era: The Age of Destruction*. New York: Routledge.
- Hanebuth, T.J.J., K. Stattegger, and P.M. Grootes (2000) 'Rapid Flooding of the Sunda Shelf: A Late-Glacial Sea-Level Record', *Science* 288(5468), pp. 1033-1035.
- Harman, G. (2016) *Immaterialism: Objects and Social Theory*. Cambridge: Polity Press.
- Harman, G. (2019) 'The Coldness of Forgetting: OOO in Philosophy, Archaeology, and History', *Open Philosophy* 2, pp. 270-279.
- Harman, G. (2019b). 'Hyperobjects and Prehistory', in S. Souvatzi, A. Baysal, and E. Baysal (eds), *Time and History in Prehistory*. London: Routledge, pp. 195-209.
- Harman, G. and C. Witmore (2023) *Objects Untimely: Object-Oriented Philosophy and Archaeology, in Conversation*. Cambridge: Polity Press.
- Heidegger M. (1966) *Discourse on Thinking*. New York: Harper & Row.
- Heidegger, M. (1977) *Martin Heidegger: Basic Writings*, D.F. Krell (ed. and trans.). San Francisco: Harper Collins.

- Hodder, I. (2014) 'The Entanglements of Humans and Things: A Long-Term View', *New Literary History* 45 (1), pp. 19-36.
- Johnsen, H. and B. Olsen (1992) 'Hermeneutics and Archaeology: On the Philosophy of Contextual Archaeology', *American Antiquity* 57(3), pp. 419-436.
- Jørgensen, R. and B. Olsen (1988) *Asbestkeramiske Grupper i Nord Norge, 2100 f.Kr. – 100 e.Kr.* Tromsø 13. Tromsø: Tromsø Museum.
- Latour, B. and P. Weibel (eds) (2005) *Making Things Public: Atmospheres of Democracy*. Cambridge: MIT Press.
- Lucas, G. and B. Olsen (2021) 'The Case Study in Archaeological Theory', *American Antiquity* 87(2), pp. 352-367.
- McGuire R. H. (2021) 'Writing the Deep History of Human Economy' in S. Gimatzidis and R. Jung (eds), *The Critique of Archaeological Economy*. Cham: Springer, pp. 19-33.
- Merleau-Ponty, M. (1968) *The Visible and the Invisible*. Evanston: Northwestern University Press.
- Miller, D. (1987) *Material Culture and Mass Consumption*. Oxford: Blackwell.
- Miller, D. (2002) 'Consumption', in V. Buchli (ed.), *The Material Culture Reader*. Oxford: Berg.
- Morton, T. (2013) *Realist Magic: Objects, Ontology & Causality*. Ann Arbor: Open Humanities Press.
- Morton, T. (2016) 'Weird Embodiment', in L. Hunter, E. Krimmer, and P. Lichtenfels (eds), *Sentient Performativities of Embodiment: Thinking Alongside the Human*. Lanham: Lexington Books, pp. 19-34.
- Morton, T. and D. Boyer (2021) *Hyposubjects: On Becoming Human*. Ann Arbor: Open Humanities Press.
- Olsen, B. (2013) 'Reclaiming Things: An Archaeology of Matter', in P.I. Carlile, D. Nicolini, A. Langley, and H. Tsoukas (eds), *How Matter Matters. Objects, Artifacts and Materiality in Organization Studies*. Oxford: Oxford University Press, pp 171-196.
- Olsen, B. and C. Witmore (2014) 'Sværholt: Recovered Memories from a POW camp in the Far North', in B. Olsen and Þ. Pétursdóttir (eds), *Ruin Memories: Materialities, Aesthetics and the Archaeology of the Recent Past*. London: Routledge, pp. 162-190.
- Pétursdóttir, Þ. and B. Olsen (2018) 'Theory Adrift. The Matter of Archaeological Theorizing', *Journal of Social Archaeology* 18, pp. 97-117.
- Påsse, T. and J. Daniels (2015) *Past Shore-Level and Sea-Level Displacements*. SGU Rapporter och Meddelanden 137. Stockholm: Geological Survey of Sweden.
- Ribeiro, A. (2019) 'Archaeology and the New Metaphysical Dogmas: Comments on Ontologies and Reality', *Forum Kritische Archäologie* 8, pp. 25-38.
- Schleiermacher, F.D.E. (1986) 'General Hermeneutics', in K. Mueller-Vollmer (ed.), *The Hermeneutics Reader*. Oxford: Blackwell, pp. 73-86.
- Van Dyke, R. (2015) 'Materiality in Practice: An Introduction', in R. Van Dyke (ed.), *Practicing Materiality*. Tucson: University of Arizona Press, pp. 3-32.
- Van Dyke, R. (2021) 'Ethics, Not Objects', *Cambridge Archaeological Journal* 31(3), pp. 487-493.

# Conclusion

---

## If on a Winter's Night a Ship Wrecks

Peter B. Campbell

*Contemporary Philosophy for Maritime Archaeology* has sought to address two aims, as outlined in the introduction. First, 'to help usher the alienated subdiscipline of maritime archaeology into the broader discourse of the humanities' and, second, 'to issue a call to action for fellow maritime archaeologists to respond to ecocide more urgently, more cross-disciplinarily, and more responsibly with new interventions into old research questions' (Rich and Campbell, this volume). The extent to which these aims are successful – measured by engagement of the field with the ideas proposed in this volume – remains to be seen, but this concluding chapter reviews the contributions and responses to tease out the recurrent themes within the chapters that further these lofty aims.

The great 20th century novelist Italo Calvino wrote *If on a Winter's Night a Traveler*, from which the title of this chapter is derived. Calvino taps into human nature to tell a story about the search for knowledge in unlikely places. Calvino also creatively sought to re-engage readers with the medium of a book, making *you*, the reader, the protagonist of the novel to sweep you along with the narrative.

*If on a Winter's Night a Traveler* starts by addressing you and has you go to your local bookstore to buy Calvino's new book by the same title (Calvino, 1981, p. 3). You grab a copy from a freshly printed stack and pay for it. The story is enjoyable but as you read you start to notice pages are misprinted and misaligned. Returning the book, the shop owner explains that the publisher made an error, both in the page order and the cover. In fact, the text was from a book titled *Outside the Town of Malbork*. Unfortunately, the shop does not have the corrected version of *If On a Winter's Night a Traveler*, but offers you a copy of *Outside the Town of Malbork* since you were enjoying it. However, as you return to reading you discover something frustrating – it is clearly not the same story. And so Calvino skilfully weaves a narrative, explaining this new novel is in fact *Leaning from the Steep Slope* and, yet again, due to circumstances beyond your control, you are unable to finish it. Calvino takes you through a series of story beginnings – each more gripping and exciting than the last – and an anxious search for endings. The protagonist travels the world with a growing list of titles in an attempt to reach an end to any one of the stories.

One might consider *Contemporary Philosophy for Maritime Archaeology* a book of beginnings and the search for knowledge. And like Calvino's novel, it is an experiment in the application of new methods of thought. Furthermore, an archaeological discovery is a



Fig. 17.1. Unfinished *Ship in a Storm* from J.W.M. Turner's sketchbook (Sequels to the Liber Studiorum ('Little Liber') Watercolours, *Ship in a Storm*, c.1823-6, Joseph Mallord William Turner, Accepted by the nation as part of the Turner Bequest 1856. © Joseph Mallord William Turner. Photo: Tate).

story beginning which can lead to any number of conclusions; in fact, the application of new theory or methods can re-interpret an old story. Archaeology is a mix of perspectives and identities: I, you, us, Other, reader, author, community, ancestor, stakeholder, etc. Material culture is, therefore, less concrete than its materiality may imply. Much like the weaving of Calvino's narrative, archaeology is constantly being re-examined, reinterpreted, and reframed without a definite conclusion. This chapter reflects upon the ideas the authors have presented in this book, as we search for a path forward within maritime archaeology.

### Broken and Displaced Objects

As a fragmentary source, the archaeological record primarily addresses incomplete contexts. Wrecking breaks apart ships with certain types of objects dispersing during the initial event, while others degrade or disappear over weeks, years, or centuries (Muckelroy, 1978; Ward et al., 1999). Material culture degrades preferentially based on the material and environment, with warm saltwater environments often leaving behind little organic material while wetlands preserve organics at a higher rate (Coles, 1988). Maritime archaeologists therefore begin investigations with broken or displaced artifacts, or objects to use the terminology of Object-Oriented Ontology (OOO), and seek to understand culture through this fragmentary and disrupted dataset.

With Claire Watson's complicit objects we see how even broken and displaced objects are agents. 'Objects help construct subjects, and things help power not only function, but exist in the first place' (Watson, this volume). According to Watson, shipwrecks retain their complicity to power structures even when they've been submerged for hundreds, or thousands, or years. The Church Wreck at Marzamemi is a powerful example of the persistence of complicity, as even in its current state – degraded and partially consumed by the sea's forces and endolithic organisms – the cargo conveys the power of emperors. In fact, the emotional impact is perhaps all the more powerful in its fragmentary, corrupted state than if it was intact in a church.

Bjørnar Olsen argues that a shipwreck is 'released from its chains of relations' and is perhaps a 'truer' representation than a complete vessel (Olsen, this volume), building on Graham Harman's shipwreck of Theseus chapter. Or as Steve Mentz poetically writes, 'Shipwreck becomes beauty-maker, transformer of life into aesthetic objects' (Mentz, this volume). Matthew Harpster addresses Harman and Olsen as well, discussing the generations of upkeep to HMS *Victory*, making its timbers a palimpsest of repairs and conservation decisions rather than an 18<sup>th</sup> century ship of the line. These chapters raise questions about authenticity in cultural heritage: is a broken object more authentic than a conserved one? Further insight is provided by Sara Rich, who argues against scholar-saviours in *Shipwreck Hauntography* (2021), shining a light on the discipline's unspoken preference for 'saved' and whole ships on the surface rather than the seafloor.

## Drift, Flow, and Cast Upon Shore

Following shipwreck, broken and displaced objects spread across the sea's surface and floor, carried in currents, and wash up on shore in unexpected places. Þóra Pétursdóttir's drift, Matt Edgeworth's flow, and Mentz's beach capture the depositional and spatial confusion of maritime archaeology.

Pétursdóttir's provocative chapter on drift addresses Anthropocene deposits on a beach, but also contends with the nature of theory (Pétursdóttir, this volume; see also Pétursdóttir and Olsen, 2018). Within the often overlooked detritus that washes upon beaches, she finds deep meaning about the nature of our current epoch. Norway has become a formidable bastion of archaeological theory through the work of Olsen, Pétursdóttir, and their students. Significantly, Norway's landscapes and maritime culture bestow theories with a distinctly nautical tone. This is seen in the chapters by Pétursdóttir and Olsen, but also the origins of nautical archaeology (Hasslöf, 1963) and maritime cultural landscapes (Westerdahl, 1992). Maritime archaeology would be well served to keep up to date on Norwegian theoretical developments. While maritime archaeology has focused on shipwrecks and submerged cities, assemblages such as the flotsam are powerful tools for thinking through archaeology, one that Olsen, Mentz, and Christopher Witmore join Pétursdóttir in discussing in this volume. Indeed, if a line could be traced between hyperobjects – the ocean and atmosphere – it is along the narrow strip of drift that accumulates between their inexhaustible forces.

Edgeworth, highly regarded by maritime archaeologists for his book *Fluid Pasts: Archaeology of Flow* (2011), finds a window into the 'archaeosphere' and 'hydrosphere' where a landfill deposit is eroded by a river. Neither entity is static, as the 'archaeosphere overflows, seeps, teems or cascades into the hydrosphere' (Edgeworth, this volume). As archaeologists learn to address the Anthropocene, it is this type of amorphous deposits

that will become commonplace. Wearing protective gear, he records waste erupting from the bank and entering the river's flow. Little by little the river carries these Anthropocene objects – plastics to be sure, but also pesticides? Asbestos? Toxins? – away from the landfill deposit and out to sea. Edgeworth's scholarship on rivers, as well as the Anthropocene (Waters et al., 2016), is critical for maritime archaeologists rethinking theory and methods for this new epoch.

Mentz contends with meaning for objects that are cast upon shore, finding among them a true 'democracy of objects', to use the phrase coined by philosopher Levi Bryant (2011). Further, shipwreck detritus allows one to defamiliarize the objects and give a new perspective of structures. His list of shipwrecked objects shows there are worlds of meaning – trauma, politics, art, change, and inequality to name a few – in single artifacts cast into the beach context (Mentz, this volume). As Jon Adams' theory of shipbuilding see infinite fluidity between environment, materials, ideology, technology, tradition, economics, and purpose influencing ship design (Adams, 2013, p. 23), Mentz finds infinite meanings within the objects washed up upon shore.

### **With a Sea Change Rich and Strange**

The corrupting nature of the sea was evident to Shakespeare who wrote of the 'sea change' that underwent the shipwrecked in *The Tempest*. Termed 'site formation processes', these changes reveal important information about the processes impacting a site after deposition. Rich, Leila Hamdan, Justyna Hampel explore 'naufragic architecture' and the microorganisms that colonize and thrive on shipwrecks. This process begins immediately, even during the ship's use-life as biofilms appear within the first 24 hours of submergence and later shipworm, and other species, inhabit the vessel as it sails. Following sinking, the ship experiences a dynamic transition into an ecosystem for diverse species. Is 'resurrection' of the anthropogenic 'cultural resource' more important than the multispecies ecosystem? Rich et al. draw on Stacy Alaimo who writes, 'it is possible for the agency, the activities, the becomings of the nonhuman to recreate a seemingly static site into a place of energy and transformation' (2016, p. 38). The anthropocentric nature of the scholar-savior resurrection model (Rich, 2021; Rich et al., this volume) is a mirror for the Anthropocene's over-exploitation of resources that is driving the planet toward mass extinction. Rich et al. instead see shipwrecks as sources 'of community, of biodiversity, of nutrients, of toxicity, of hazardous waste, of contemplation, of knowledge' (Rich et al., this volume). This view adds complexity to 'site formation processes' as they are no longer passive, but entities-unto-themselves either creating ecosystems (e.g., colonizing invertebrates) or bringing death (e.g., hazardous waste).

In my chapter I likewise examine the changes that undergo human objects in the sea, but through the lens of dark *amphorae* and octopus archaeology. Drawing on Mark Hudson's concept of dark artifacts, it explores the non-human afterlives of 3rd century BC warships sunk during a naval battle (Campbell, 'Octopodology', this volume). The distribution of crashed objects led to new ecosystems for sponges, corals, fish, and octopuses, among other species. *Amphorae* spread over dozens of kilometres formed micro-habitats for these species while marine consciousness in the form of the octopus reformed the spatial distribution of these objects. At the same time, a variety of endolithic marine organisms bored into the *amphorae* changing their form and colonizing species such as coral grew strange, alien shapes on their surfaces. Nevertheless, the objects persist, interacting with

these entities in different ways. As Witmore writes, ‘a shipwreck withholds its reality from barracudas, barnacles, and scuba divers alike’ (Witmore, this volume).

## The Efforts of Maritime Archaeology

Archaeological excavation of shipwrecks and sunken cities has been a mechanism for thinking about our existence and dynamic planet since at least the 11th century AD (Campbell, ‘History’, this volume). Human interaction with the hyperobject ocean through watercraft is found in the great religious texts, works of literature, and art, while the submergence of cities and landmasses occupied great thinkers like Plato, Hooke, Linnaeus, Celsius, and more.

The development of modern maritime archaeology in the period after 1960 has experienced many stops and starts with regard to theory. The field has struggled for legitimacy within archaeology, an academic life-or-death tension that occupied much of archaeologists’ efforts until recently. The first theorist in the field, Keith Muckelroy, unfortunately passed away in a diving accident shortly after his landmark book *Maritime Archaeology* was published (1978). Advocacy for theory in the field by Richard Gould (1983), Suzanne Spencer-Wood (1990), and David Gibbins and Jon Adams (2001), among others, has met a muted response. Nevertheless, the field has made significant advances in many areas, blossoming from 1960 to present into a diverse field of research areas.

Despite this trajectory, many contributions to this book use a reflexive approach to maritime archaeology that challenge long-standing notions in the field, while simultaneously demonstrating the importance of maritime archaeology to wider discourses in the Humanities. Many existing approaches have conscious and unconscious biases which affect interpretation, such as the Great Man and technological fetishism (Killian and Rich, this volume; Rich et al., this volume; Han, this volume). A critical and reflexive approach is often necessary for growth. Intellectual progress can be accretive or disruptive, but both honour the scholars that came before by continuing the centuries-long discourse on our underwater pasts.

Contributions seek to further the efforts of maritime archaeology, but the book arrives within a specific context. Harpster sets the work in an historical context, noting that ‘this collection of essays is... part of an intellectual maturation of the discipline of maritime archaeology’ (Harpster, this volume). It is not, however, a continuation of level trajectory, as the global disruptions of 2020-22 affected the authors; the three C’s that Joe Flatman identifies - COVID19, culture wars, and climate change. Flatman writes that this is ‘one of the first “pandemic” archaeological works’ which is ‘emotive... politically-aware and self-conscious’ (Flatman, this volume). This is echoed by Harpster who writes, ‘We are maturing and asking uncomfortable questions about our past practices and future efforts, and building a body of theory and research agendas unique to our disciplinary sphere’ (Harpster, this volume). If we ascribe to the idea that all observations are theory-laden (Salmon, 1976, p. 376), then theory imbues all archaeology whether the archaeologist wishes to acknowledge an explicit theory or not. Theory originates from perspective and it provides perspective, making new theories necessary to better understand a changing world. Do past theory-laden observations of 1960 have the same understanding of archaeological pandemics, culture wars, and climate change that our theory-laden observations have today? New approaches refresh and reinvigorate interpretation. The

current wave offers interpretation fitting our circumstances of climate and social change. The field should heed Flatman's call that 'Archaeologists ought to care, emote, be alive to the lives of others and wider social contexts' (Flatman, this volume).

## Pull Back the Curtain

Maritime metaphors and case studies have long served philosophy and the Humanities. Maritime archaeology has the opportunity to provide information that is unavailable elsewhere, providing rich datasets for interdisciplinary studies. This is evident in chapters by philosopher Harman and archaeological theorist Olsen. Harman, as Olsen notes, 'makes the point that the shipwreck in some sense becomes "more" than the operating, fully functional ship' (Olsen, this volume; Harman, this volume). Olsen argues that there is profitable thought to be found here and I found myself considering parallels to Pliny the Elder's writings on art. He states that the Romans most desired art that was unfinished due to the artist's death, as one can see the mind of the artist within them. 'It is also a very unusual and memorable fact that the last works of artists and their unfinished panel-paintings... are more admired than those they finished, because in them are seen the artists' remaining lines and very thoughts, and amidst the niceties of praise, there is sorrow that the artist's hand was extinguished whilst bringing forth the work' (*Natural History* 35.145). What is the goal of nautical archaeology if not finding the 'very thoughts' of the shipbuilder in a ship 'extinguished' by wrecking? A ship's fragmentary timbers reveal the scaffolding underlying the shipbuilder's intent, just as the sketched lines on the unfinished painting reveal the same for the artist (Fig. 17.1).<sup>1</sup> As Harman conceives, archaeologists are true to Pliny's model, though the medium is timber rather than paint. The practice of nautical archaeology makes the ship 'more' than its former fully functional nature through mapping 'afterlives' (e.g., site formation processes), 'non-human interactions' through wood sourcing and material characterization, and the social life of the vessel (e.g., ship construction and shipboard life). Maritime archaeology therefore pulls back the curtain on the mind of the shipbuilder-artist, but also can address larger questions being asked by the Humanities.

The ship is the favoured example of both philosophers and social theorists to describe an emergent phenomenon, a whole that is different than the parts. The elements function in association to become a *gestalt* entity, one which displays *emergent properties* that are not evident in the constituent parts (Law, 2012). The *gestalt* ship can float, sail, and carry cargo, which are different attributes to individual planks, sailcloth, or rope. In the book *Immaterialism*, Harman argues that the Dutch East India Company was an 'object' possessing agency that exhibited emergent properties different from those of its constituent parts of people, ships, stocks, treaties, etc. (Harman, 2016). The entity existed for 190 years and outlasted the individual ships and people, an entity of vast temporal and geographical scale that lasted nearly two centuries and transcended languages, religions, political systems, and individual lifetimes.

Harpster inverts the gross anatomy of the ship inward, exploring the changes that overtake objects entering the context of the ship. It is a significant insight, as he argues

---

1 Indeed, I have gained a better conception of the construction of the Egadi warships (Tusa et al., 2021), as limited and degraded as the few surviving timbers may be, than the complete *Olympias* trireme reconstruction, whose completeness obscures its internal structure to probing eyes.

that objects are transformed on ships, or rather through their interaction with the ship, whereby goods become weight and volume that are carefully distributed within the ship, and even the mundane, such as rice, become threatening (Harpster, this volume). More than a few ships have been fatally sunk by their cargo, such as expanding rice bursting the ship's seams. A Greek sponge boat captain I worked with tells the story of a prolific season of sponge fishing that filled his hold with a profitable cargo. However, a leak began expanding the sponges and increasing the weight in the boat until its structure burst and it sank to the seafloor in a poignant revenge of the sponges. In re-thinking the role of objects as they enter new contexts – or rather encounter new objects – Harpster indicates how potential agency shifts between objects as new interactions occur.

Ships in art and graffiti are one of the most common interpretive exercises of maritime archaeology, attempting to marry timber ruins with artistic rendering in order to recapture a sense of the whole (e.g., Tzalas, 1990; Lambrou-Phillipson, 1996; Murray, 2001). Jeremy Killian and Sara Rich use metaphor and art to reframe this practice, combining OOO, Renaissance art, religion, and maritime archaeology.

If looking forward into the Anthropocene, we see that maritime archaeology has a role to play thanks to the insights of Witmore. He writes, 'All researchers become archaeologists in the Anthropocene (Shanks, 2012, pp. 21-42), with a sizable portion of them being of the marine variety. When sperm whales are found with abandoned fishing nets, plastic cups, and tubing in their stomachs; when deep-water explorers reach uncharted areas of the ocean bottom only to be confronted with plastic bags; when the carcasses of Laysan albatross chicks are filled with cigarette lighters, bottle caps, plastic straws, and toothbrushes; then marine biologists, oceanographers, and photographic artists all must observe and measure what has become of human-generated malfeasance' (Witmore, this volume). If maritime archaeologists are one day able to pull back the curtain on big questions through the use of contemporary philosophy then it is due to decades of pioneering work of Witmore and Olsen. They have tied contemporary philosophy close to archaeology, allowing for engagement with philosophers such as Harman, Bryant, and Timothy Morton (Witmore, 2007, 2019; Olsen, 2010; Olsen et al., 2012; Olsen and Witmore, 2015). Without their foundation for archaeological engagement with contemporary philosophy, this volume for maritime archaeology would not have been possible.

## Peering into the Depths

By nature, maritime archaeology peers into the depths. While shipwrecks and sunken cities have been accessed for centuries – the first shipwreck excavation as an intellectual pursuit was in Lake Nemi in 1446 (Campbell, 'History', this volume) - the depths were an obstacle not easily overcome. The widespread availability of the Siebe diving suit in the mid-19<sup>th</sup> century and then the SCUBA system in the post-WWII period increased human exploration (and exploitation) of the seafloor. Depth flattened, becoming accessible to a larger population. However, the digital turn in archaeology has revolutionized access to the maritime cultural heritage, removing shipwrecks from the depths through digital simulacra and bringing them into people's devices.

Lisa Yin Han's chapter explores the eradication of the sea's remoteness. She describes the high-tech methods that are the 'key' to unlocking the seafloor, as it is now possible to host online museums of underwater heritage and livestream shipwrecks. The benefits of

these technologies have been lauded and gone largely unquestioned as, 'The challenge of any shipwreck museum is to make present things that are absent' (Han, this volume). However, Han notes the male-oriented technological fetishism inherent in these digital methods. Indeed, looking back to the machismo of the Siebe and early SCUBA practitioners one sees that technology has long been the centre of diving cultural identity as well as a crutch for archaeological interpretation. Where once the ocean's depths were abyssal, are they now game-ified, commodified, anthropocentrically gentrified?

Han's chapter, including the male and Western gaze, recalls Christopher Begley's criticism of the digital gaze, such as LiDAR that maps and 'discovers' indigenous sites in Central and South America without engaging with the communities living at those very sites (Begley, 2017, p. 1). The digital gaze, based on Laura Mulvey's concept of the male gaze, renders the natural world and indigenous culture into passive spectacle and exposes a power imbalance. This is evident in that 'Local Indigenous peoples maintain that they always knew about this place... Its "discovery" [by LiDAR] and naming by outsiders was offensive to them on many levels' (Begley, 2017, p. 1). Parallels to the digital mapping of the ocean are evident, especially with coastal communities who maintain a relationship with underwater natural and cultural resources. Han raises questions about the digital turn and the ocean's depths, but offers a roadmap for a less anthropocentric approach.

## Peering into Time

The study of archaeology is about peering into the past; however, contemporary philosophy is reframing our conception of objects and time. Archaeologists examining contemporary material culture have questioned our entrenched paradigm of time within archaeology, notably in recent work by Assaf Nativ and Gavin Lucas (2020). It may have served 20<sup>th</sup> century archaeology to look backward at pots and hand axes from the comfortable distance of time, believing artifacts to be passive or inert. However, we now dwell in the Anthropocene, or more accurately the 'hypanthropos' as coined by Witmore (2014), where 'a metabolic assemblage in excess of monstrosity' composed of radiation, chemicals, plastics, and more permeate Earth's soil, water and air (Witmore, 2014, 2019, pp. 140-41). All of a sudden archaeology is confronted by 'artifacts' that extend into the past but also long into the future, some with deadly agency.

It is with this new conception of objects and time that authors engaged. When considering non-human archaeologies I write, 'archaeology is less about the gap between the lived (human) past and ruined present', drawing on Shanks (1995, p. 17), 'and more about objects of varying finitudes bumping into each other in a frame of reference that we call the present' (Campbell, 'Octopodology', this volume). Much like the octopus' amphora, Olsen's afterlives of Norwegian fishing boats display multiple lives that exist outside the narrow frame of reference of their use-life, extending beyond uses (perhaps) considered by the boatbuilder. Olsen asks, 'when turned upside down and used as human dwelling did the northland boat lose its "boatness"?' Artifacts are hardly as passive or inert as archaeology once conceived.

Chelsea Cohen addresses this through examining ship abandonments as time transcendent objects, despite their short use-lives. Cohen explores the reuse or deposition of hulks to find vibrancy in the many lives of the hulls as 'ships, infrastructure, archaeological objects, ecological artifacts, and much more' (Cohen, this volume). She argues that the ships are not only shaped by the ports they sailed to, but, in their re-use or abandonment, the vessels shaped

those very harbours. Her approach advocates for the study of ships not just focusing on their use-life, but in the *longue durée*, as they experience many lives over time.

Perhaps the most compelling discussion of time is raised by Flatman; understandably, as he is a heritage manager tasked with conceiving of the role of culture into the distant future. He outlines how social activism is not simply important, but necessary. ‘Things – places and communities alike – will be different in the future as much as they were in the past’, (Flatman, this volume). This bookends well with Nativ and Lucas, introduced at the start of this section, who write, ‘archaeology can and should be much more than the pursuit of the past. As a field of study that empirically engages with humanity’s material signature on the world, archaeology is not exhausted by the search for origins’ (2020, p. 861). Flatman has long been the conscience of the field (2003, 2007a, 2007b, 2008) and we would do well to follow his lead on management and activism. If archaeologists looked to the future as much as the past, we might better situate the present.

## **Toward an Entanglement of Human and Non-Human**

A recurrent theme is the entanglement of the human and non-human, which nearly every chapter touches on. This is, I believe, due to the centrality of the non-human in OOO and Symmetrical Archaeology, but also due to global warming and the growing *zeitgeist* that this human-made disaster increasingly places us at the whims of the non-human. Study of the entanglements between the human and non-human is critical to maritime archaeology, as ships exist within the tension between the atmosphere and ocean hyperobjects (Normark, 2014; Campbell, 2020). As Witmore and Mentz note, drawing on Carl Schmitt, the planet would be better called Oceanus than Earth, as this is a water world (Witmore, this volume; Mentz, this volume).

Johan Normark’s chapter on water as a hyperfact is a critical reading for maritime archaeologists. While most of the objects that archaeologists study are bounded, ‘limited spatiotemporal units’, Normark identifies a new type of object, ‘The *hyperfact*... is vastly distributed, it can dissolve into most of its parts without affecting its ‘essence’, and it can be in several physical states at the same time’ (Normark, this volume). Water is used by humans in countless ways (consuming, freezing, evaporating, hydraulics, etc.), but none of these exhaust water or affects its essence. Water remains water. Normark applies this model to the Maya region, but also provides important commentary on rivers, advocating they are ‘entanglements of many objects that are neither natural nor cultural’ (Normark, this volume). His contribution provides fresh perspective on water, whether the ocean, rivers, lakes, or use within settlements.

Several chapters examined the non-human entanglement of shipwrecks. Rich, Hamdan, and Hampel explore shipwreck ecology as microorganisms and then macroorganisms colonize and inhabit the wreck. It is clear that shipwrecks are not passive in their posthuman form, but agents that forme non-human entanglements with other species and objects. This is likewise explored in my chapter on octopus archaeology, where artifacts from a 3<sup>rd</sup> century BC naval battle experience non-human afterlives as settlement tiles for invertebrate species like coral and sponges, and dens for octopuses.

Non-human aspects of archaeological sites raise questions about the potential of archaeology. My colleague Derek Smith, a coastal ecologist who studies shipwrecks as ecosystem catalysts (2010), often says that archaeologists and ecologists are asking the

same questions but from different perspectives. Other fields researching the oceans or the non-human could likewise benefit from collaborations with archaeologists. With thousands of documented shipwrecks, hundreds of sunken cities, and large-scale projects mapping submerged paleolandscapes, who is better suited to address these questions than archaeologists?

### **Ask the Archaeologist**

If we look toward the future of the field, one possible route is engagement with fields that have been leading the movement of maritime-based theory. For the last decade there has been growing calls for oceanic thinking as a lens for understanding the Humanities and social sciences. Geography, architecture, literature, and other social sciences have advocated for a maritime perspective, though archaeology has rarely engaged with the movement. Mentz called for a Blue Cultural Studies offering new analytical frameworks addressing globalization, postcolonialism, ecocriticism, and more (2009), and his book *Ocean is necessary reading* (2020). Kimberley Peters (2010) and Philip Steinberg (2013) advocated for new approaches to maritime materialities, jointing calling for Wet Ontologies through ‘oceanic thinking’ (Steinberg and Peters, 2015). This approach breaks down the static, linear framing of geography in favour of a more complex oceanic thought that draws on ‘the ocean [as] an ideal spatial foundation for addressing these challenges since it is indisputably voluminous, stubbornly material, and unmistakably undergoing continual reformation’ (Steinberg and Peters, 2015, p. 247). Rachel Armstrong advocates for liquid materiality as means to break away from machine-based worldviews in favour of more dynamic conceptions of the world (2019). These approaches use maritime culture, historical sources, and other related material to examine broad social questions. At the same time, in contemporary philosophy Harman and Ian Bogost use maritime sources to explore OOO (Bogost, 2012; Harman, 2016). For the first time philosophy and the broader Humanities come seeking maritime archaeology, rather than the other way around.

Maritime archaeological datasets have a lot to offer these movements, as Olsen writes. ‘Maritime archaeology, as with the rest of the field, may gain a lot from interacting with object-oriented and other thing-friendly philosophies, but it is equally important to say, that if these philosophies plunges deep into the field of maritime archaeology they will not be unmoved by this encounter. The maritime archaeological material should not just be informed and enriched by these philosophies but they themselves be affected, perhaps even shattered, by the richness and uniqueness of this material’ (Olsen, this volume). Wet Ontologies and Blue Humanities would be all the richer by interacting with the shipwrecks, sunken cities, and coastal communities that archaeologists research. We should hope that the broader Humanities will ask the archaeologist.

### **‘What Story Down There Awaits Its End?’**

The conclusion of Calvino’s novel states, ‘Reader, it is time for your tempest-tossed vessel to come to port. What harbour can receive you more securely than a great library?’ Unfortunately, the librarian cannot find *If On a Winter’s Night A Traveler* on the shelves, much less other books from your journey such as *Without Fear of Wind or Vertigo*. Perhaps another reader has taken *Looks Down in the Gathering Shadow* from the shelves?

What you have sought is not in the library, but instead you start a discourse with the other readers (Calvino, 1981, pp. 254-257). One states that they dart from book to book, never completing any, for they find universes of possibilities in only a few pages. Another reader says they read for the word choices, syntax, and metaphors, while another rereads for the new discoveries made in books they already know. One advocates for reading to learn how a new book is formed through relationships and dialogues with books across time. Still a different reader seeks old books that evoke primeval or childhood ideas within their mind, and another reads for the search itself and the feelings that a title evokes. Each reads, but for themselves. The diversity of approaches does not diminish the others, but expands and enriches the books. Each book can be read in as many ways as there are readers. If Harman were in the library he might comment that a book is withdrawn, inexhaustible in however many which ways a reader engages with it.

‘What Story Down There Awaits Its End?’ asks the novel’s protagonist (Calvino, 1981, p. 243), contemplating books, libraries, and indeed knowledge itself.

There are many ways to interpret the past, as we all know. Archaeology today draws on a wide range of philosophies, which are reframing our understanding of past cultures. We would do well to do so in maritime archaeology. Past interpretations can say more about the archaeologist than the artifact, such as a bronze object that was interpreted for many years as a crown, but was in reality the remains of a bucket (Landsberg, 2018, p. 1). Edgeworth writes of well-known sites like Stonehenge which still provide new discoveries, such as 28 carvings recently found on Stone 53, positing ‘how much do we really know about the objects we think we are familiar with? What further, as yet unknown, aspects will one day reveal themselves, or recede, or remain forever untapped and buried in the object’s withdrawn inner core?’ (Edgeworth, 2016, p. 97). Feminist theory has re-interpreted archaeology that was the product of the male gaze, such as Palaeolithic female figurines that male archaeologists had interpreted as fertility votives while feminist archaeologists demonstrated the figurines depict elder women past child-bearing age (McCoid and McDermott, 1996; McDermott, 1996). Decolonization action in archaeology is countering dominant colonial narratives or dogma that lie unconscious or consciously within Global North archaeology to advocate for indigenous perspectives and non-Western systems of knowledge (McGhee, 1997; Bruchac, 2014; Sinamai, 2020). In culture there are endless ways of being, and as a result there are endless ways of interpreting. When theory becomes codified it enters a stasis that allows it to go unchallenged, perhaps for decades, which reflects the outmoded *clientela* of academic thought more than the reality and diversity of culture. What a richer field it would be if everyone read a site for themselves and created space for these ideas. It is for this reason that this volume is a mix of original contributions and response chapters; the flow of ideas are remixed and interpreted by everyone, engaging with different educational backgrounds, cultural perspectives, and life experiences.

The past is composed of foreign cultures that speak through material culture. It is a *strange stranger*, to use the philosophical device of Morton, which describes the unexpected and unknowable, a ‘stranger whose strangeness is forever strange’ (2013, p. 115). The past is seemingly familiar but simultaneously distant and unknowable. ‘Our understanding of the past is imperfect’, writes Christopher Begley, but archaeology is a process in which archaeologists add knowledge that ‘build[s] a stairway. We add steps to allow the next in line to climb higher, and see further. The particular step we build

is not the accomplishment; the stairway is' (2021, p. 13).<sup>2</sup> New theoretical perspectives shore-up older steps and contribute to seeing further by thinking differently about the past, and ourselves.

## Searching for a Conclusion But Finding More Questions

Calvino famously ends *If On a Winter's Night A Traveler* with the protagonist – you – wandering the great library with a scribbled list of book titles in hand. Don't you deserve at least one conclusion? Haven't you earned closure? You hand the paper to another reader for help, who reads the text aloud, misunderstanding that it is a list.

*If on a winter's night a traveler,  
Outside the town of Malbork,  
Leaning from the steep slope  
Without fear of wind or vertigo,  
Looks down in the gathering shadow  
In a network of lines that enlase,  
In a network of lines that intersect,  
On the carpet of leaves illuminated by the moon  
Around an empty grave  
What story down there awaits its end?  
He asks, anxious to hear the story* (Calvino, 1981, p. 258).

In searching for conclusions, your own story inadvertently emerged. Or perhaps Calvino meant that the stories' conclusions do not matter, or there is but one universal story. Maybe the search is as important as the narrative, or the sum is more than the parts. Take your pick, they are all true, or none. What matters is that there are many ways of being, and learning.

For maritime archaeology, there are similarly many starts. The field is small and new; we are living in the second generation since its inception. The foundational intellectual insights and paradigms have been valuable for its development. However, the intellectual richness of the archaeological record offers today's maritime archaeologists the opportunity to cast off into the seas of contemporary philosophy, Wet Ontologies, and the Anthropocene. It is time to unshackle from existing paradigms, question the dogma accreted over the last sixty years, and try new intellectual toolkits. It is time to confront the field's conscious and unconscious colonial mindsets, gender bias, technological fetishism, and anthropocentrism. It is a journey without a clear endpoint, promising only an intellectual adventure and unintended discoveries along the way. Great steps forward are not found in conclusions, but on the trails blazed by intellectual curiosity.

This volume has engaged with diverse ideas and fields, publishing some of the first examples of maritime archaeology thinking through OOO, Blue Humanities, and

---

2 Calvino ends *If on a Winter's Night a Traveler* with a library reader dismissing the traveler in the story (i.e., the protagonist: you) as a literary mechanism irrelevant to the broader story. Perhaps we should all de-center ourselves from scholarship, heeding both Calvino and Begley.

non-human agency, while raising important questions about theory in the field. The most important paradigms, such as nautical archaeology, site formation processes, and maritime cultural landscapes, came through scholars like George Bass, Keith Muckelroy, and Christer Westerdahl challenging orthodoxy and, in the case of Bass and his contemporary colleagues, creating an entirely new field of study to accommodate their ideas. This volume pays them the greatest respect; it attempts to grow the field beyond their ideas and into fresh intellectual pastures.<sup>3</sup> Like all new approaches, and Calvino's narrative, these offer – for the moment – only beginnings while the conclusions lie in the distant future. However, shining light through the cracks of an aged foundation is often the first step toward building a more robust one. This book is meant to be a doorway which opens to new, untrod paths – only beginnings, no endings in sight.

And with this we conclude both chapter and book:

*If on a winter's night a ship wrecks  
Broken and displaced objects  
Drift, flow, and cast upon shore  
With a sea change rich and strange.*

*The efforts of maritime archaeology  
Pull back the curtain  
Peering into the depths  
Peering into time  
Toward an entanglement of human and non-human.*

*Ask the archaeologist  
'What story down there awaits its end?'  
Searching for a conclusion but finding more questions.*

---

3 The pioneering maritime archaeologist Peter Throckmorton, while reflecting on the state of the field at the end of the 1960s, wrote, 'I believe it is more unkind to a dead or retired colleague's memory to gloss over his failings than to discuss his place in history of what the Italians call "our mystery." Everyone who gets involved in marine archaeology today soon discovers that he is struggling to learn more things than he ever imagined existed. None of us knows enough' (Throckmorton, 1969, p. xii).

## Works Cited

- Alaimo, S. (2016) *Exposed: Environmental Politics & Pleasures in Posthuman Times*. Minneapolis: University of Minnesota Press.
- Armstrong, R. (2019) *Liquid Life: On Non-Linear Materiality*. Santa Barbara: Punctum.
- Begley, C. (2017) 'The Lost City That's Not Lost, Not a City, and Doesn't Need to Be Discovered', *Sapiens*, April 13.
- Begley, C. (2021) *The Next Apocalypse: The Art and Science of Survival*. New York: Basic Books.
- Bogost, I. (2012) *Alien Phenomenology, or What It's Like to Be a Thing*. Minneapolis: University of Minnesota Press.
- Bruchac, M. (2014) 'Decolonization in Archaeological Theory', in C. Smith (ed.), *Encyclopedia of Global Archaeology*. New York: Springer, pp. 2069-2077.
- Bryant, L.R. (2011) *Democracy of Objects*. London: Open Humanities Press.
- Calvino, I. (1981) *If on a Winter's Night a Traveler*, W. Weaver (trans). San Diego: Harcourt.
- Campbell, P.B. (2020) 'The Sea as a Hyperobject: Moving Beyond Maritime Cultural Landscapes', *Journal of Eastern Mediterranean Archaeology Heritage Studies* 8(3), pp. 1-22.
- Coles, J. M. (1988) 'A Wetland Perspective', in B.A. Purdy (ed.), *Wet Site Archaeology*. New Jersey: Telford Press, pp. 1-14.
- Edgeworth, M. (2011) *Fluid Pasts: Archaeology of Flow*. Bristol: Bristol Classical Press.
- Edgeworth, M. (2016) 'Grounded Objects. Archaeology and Speculative Realism', *Archaeological Dialogues* 23(1), pp. 93-113.
- Flatman, J. (2003) 'Cultural Biographies, Cognitive Landscapes and Dirty Old Bits Of Boat: "Theory" in Maritime Archaeology', *International Journal of Nautical Archaeology* 32(2), pp. 143-157.
- Flatman, J. (2007a) 'The Origins and Ethics of Maritime Archaeology – Part I', *Public Archaeology* 6(2), pp. 77-97.
- Flatman, J. (2007b) 'The Origins and Ethics of Maritime Archaeology – Part II', *Public Archaeology* 6(3), pp. 141-154.
- Flatman, J. (2008) 'Maritime Archaeology' Are We Teaching? A Comment on 'Context' and 'Setting', *Journal of Maritime Archaeology* 3, pp. 121-122.
- Gibbins, D. and J. Adams (2001) 'Shipwrecks and Maritime Archaeology', *World Archaeology* 32(3), pp. 279-291.
- Gould, R.A. (1983) *Shipwreck Anthropology*. Albuquerque: University of New Mexico Press.
- Harman, G. (2016) *Immaterialism*. Cambridge: Polity Press.
- Hasslöf, O. (1963) 'Wrecks, Archives, and Living Tradition: Topical Problems in Marine-Historical Research', *Mariner's Mirror* 49(3), pp. 163-177.
- Lambrou-Phillipson, C. (1996) 'The Reliability of Ships' Iconography: The Theran Miniature Marine Fresco as an Example', in H. Tzalas (ed.), *Tropis IV*. Athens: Hellenic Institute for the Preservation of Nautical Tradition, pp. 351-365.
- Law, J. (2012) 'Technology and Heterogeneous Engineering: The Case of Portuguese Expansion', in W.E. Bijker, T.P. Hughes, and T. Pinch (eds), *The Social Construction of*

- Technological Systems: New Directions in the Sociology and History of Technology*. 2nd ed. Cambridge: MIT Press, pp. 105-128.
- McCoid, C.H. and L.D. McDermott (1996) 'Toward Decolonizing Gender: Female Vision in the Upper Paleolithic', *American Anthropologist* 98(2), pp. 319-326.
- McDermott, L. (1996) 'Self-Representation in Upper Paleolithic Female Figurines', *Current Anthropology* 37(2), pp. 227-275.
- McGhee, F.L. (1997) 'Toward a Postcolonial Nautical Archaeology', *Assemblage* 3(1).
- Mentz, S. (2009) 'Toward a Blue Cultural Studies: The Sea, Maritime Culture, and Early Modern English Literature', *Literature Compass* 6(5), pp. 997-1013.
- Mentz, S. (2020) *Ocean*. London: Bloomsbury.
- Morton, T. (2013) *Hyperobjects: Philosophy and Ecology After the End of the World*. Minneapolis: University of Minnesota Press.
- Muckelroy, K. (1978) *Maritime Archaeology*. Cambridge: Cambridge University Press.
- Murray, W.M. (2001) 'A Trireme Named Isis: The Sgraffito from Nymphaion', *International Journal of Nautical Archaeology* 30(2), pp. 250-256.
- Nativ, A. and G. Lucas (2020) 'Archaeology Without Antiquity', *Antiquity* 94(376), pp. 852-863.
- Normark, J. (2014) 'Water as a Hyperfact', *Current Swedish Archaeology* 22(1), pp. 183-206.
- Olsen, B. (2010) *In Defense of Things: Archaeology and the Ontology of Objects*. Lanham: AltaMira.
- Olsen, B., M. Shanks, T. Webmoor, and C. Witmore (2012) *Archaeology: The Discipline of Things*. Berkeley: University of California Press.
- Olsen, B. and C. Witmore (2015) 'Archaeology, Symmetry and the Ontology of Things. A Response to Critics', *Archaeological Dialogues* 22(2), pp. 187-197.
- Peters, K. (2010) 'Future Promises for Contemporary Social and Cultural Geographies of the Sea', *Geography Compass* 4(9), pp. 1260-1272.
- Pétursdóttir, Þ. and B. Olsen (2018) 'Theory Adrift: The Matter of Archaeological Theorizing', *Journal of Social Archaeology* 18(1), pp. 97-117.
- Rich, S. A. (2021) *Shipwreck Hauntography: Underwater Ruins and the Uncanny*. Amsterdam: Amsterdam University Press.
- Salmon, M. H. (1976) "'Deductive" Versus "Inductive" Archaeology', *American Antiquity* 41(3), pp. 376-381.
- Shanks, M. (1995) 'Archaeological Realities: Embodiment and a Critical Romanticism', in M. Tusa and T. Kirkinen (eds), *The Archaeologist and Their Reality: Proceedings of the 4th Nordic TAG Conference*. Helsinki: University of Helsinki, pp. 1-30.
- Shanks, M. (2012) *The Archaeological Imagination*. Walnut Creek: Left Coast Press.
- Sinamai, A. (2020) "'We Are Still Here": African Heritage, Diversity and the Global Heritage Knowledge Templates', *Archaeologies* 16(1), pp. 57-71.
- Smith, D.M. (2010) *The Ecology of Shipwrecks: An Assessment of Biodiversity*. MA Thesis, University of Hawaii at Manoa.
- Spencer-Wood, S. (1990) 'Stretching the Envelope in Theory and Method', in T.L. Carrell (ed.), *Underwater Archaeology Proceedings from the Society for Historical Archaeology Conference*. Rockville: Society for Historical Archaeology, pp. 21-44.
- Steinberg, P. E. (2013) 'Of Other Seas: Metaphors and Materialities in Maritime Regions', *Atlantic Studies* 10(2), pp. 156-169.

- Steinberg, P. and K. Peters (2015) 'Wet Ontologies, Fluid Spaces: Giving Depth to Volume Through Oceanic Thinking', *Environment and Planning D: Society and Space*, 33(2), pp. 247-264.
- Throckmorton, P. (1969) *Shipwrecks and Archaeology: The Unharvested Sea*. Boston: Little, Brown, and Company.
- Tusa, S., P. Campbell, M. Polakowski, W. Murray, F. Oliveri, C. Buccellato, A. Fresina, and V. Li Vigni (2021) 'The Battle of the Aegates Islands, 241 BC: Mapping a Naval Encounter, 2005-2019', in C. Prescott, A. Karivieri, P. Campbell, K. Göransson, and S. Tusa (eds), *Trinacria, 'An Island Outside Time': International Archaeology in Sicily*. Oxford: Oxbow, pp. 167-179.
- Tzalas, H. (1990) 'Kyrenia II in the Fresco of Pedoula Church, Cyprus: A Comparison with Ancient Ship Iconography', in H. Tzalas (ed.), *Tropis II*. Athens: Hellenic Institute for the Preservation of Nautical Tradition, pp. 323-328.
- Ward, I.A.K., P. Larcombe, and P. Veth (1999) 'A New Process-Based Model for Wreck Site Formation', *Journal of Archaeological Science* 26(5), pp. 561-570.
- Waters, C. N. et al. (2016) 'The Anthropocene is functionally and stratigraphically distinct from the Holocene', *Science* 351(6269), 10.1126.
- Westerdahl, C. (1992) 'The Maritime Cultural Landscape', *International Journal of Nautical Archaeology* 21(1), pp. 5-14.
- Witmore, C. (2007) 'Symmetrical Archaeology: Excerpts of a Manifesto', *World Archaeology* 39(4), pp. 546-562.
- Witmore, C. (2019) 'Hypanthropos: On Apprehending and Approaching That Which is in Excess of Monstrosity, with Special Consideration Given to the Photography of Edward Burtynsky', *Journal of Contemporary Archaeology* 6(1), pp. 136-153.

# Author Biographies

**Peter B. Campbell** is Lecturer in Cultural Heritage Under Threat at Cranfield University. He received his PhD in Archaeology from the Centre for Maritime Studies at the University of Southampton and an MA in Maritime Studies from East Carolina University. He previously served as a research fellow at the British School at Rome from 2017-2018 and as Assistant Director for Archaeology and Archaeological Science from 2018-2020. His research broadly examines maritime connectivity, and he has directed archaeological projects in seven countries, primarily in the Mediterranean, including co-directing the Egadi Islands Survey Project (Italy) and Fournoi Underwater Survey (Greece), but also research in the Atlantic and Indian oceans. Beyond maritime connectivity, Peter studies the illicit antiquities trade, research which has been used in policy papers and presented to the OSCE, INTERPOL, and UN/UNESCO.

**Chelsea M. Cohen** is a Ph.D. candidate in the Department of Anthropology at the University of Pennsylvania and a graduate of the Nautical Archaeology Program at Texas A&M University. Her dissertation focuses on relationships between early-contact-period land management and later British-colonial maritime cultural landscapes. Trained in maritime archaeology and paleoethnobotany, she works terrestrially and underwater to connect land and sea, using survey, excavation, paleoenvironmental analysis, coastal modeling, and computer-based spatial analysis..

**Matt Edgeworth** is a British field archaeologist and author of *Fluid Pasts: Archaeology of Flow*. He is Honorary Visiting Research Fellow at the University of Leicester. As member of the Anthropocene Working Group, he has written numerous papers on the crucial role to be played by archaeological evidence in reconfiguring the Anthropocene concept.

**Joe Flatman** is an environmental consultancy manager for the UK conservation charity the National Trust. He trained as an archaeologist at the University of Southampton, and since that time has worked in universities, local and central government, and most recently in the charity sector across the UK as well as internationally. He has published widely on a range of topics associated with the management of the historic environment, most recently with the second edition of his book *Becoming an Archaeologist: A Guide to Professional Pathways* (Cambridge University Press, 2022). Joe is also a columnist for the magazine *Current Archaeology*.

**Leila Hamdan** is a Professor of Marine Microbial Ecology in the School of Ocean Science and Engineering at the University of Southern Mississippi. Her research on the impact of changing environmental conditions on the structure, function and biodiversity of marine and estuarine microbiomes. Her recent studies center on microbial biogeography and geomicrobiology on continental margins, the features that shape microbiomes in benthic and pelagic habitats, and the impacts of human activities in the Gulf of Mexico.

**Justyna Hampel** is currently a postdoctoral researcher at Stockholm University and SciLifeLab. Formerly, she was a postdoctoral researcher at the University of Southern Mississippi in the School of Ocean Science and Engineering. There, her research focused on the exploration of shipwrecks as built environments influencing deep ocean sediment microbiomes in the Gulf of Mexico. This project was funded by NOAA's Ocean Exploration and Research Program.

**Lisa Yin Han** is an Assistant Professor of Film and Media Studies in the Department of English at Arizona State University. Her research is situated at the intersections of environmental media studies, media infrastructure studies, and science and technology studies. She has published her work in journals such as *Configurations*, *Media + Environment*, *Communication, Culture & Critique*, and *Contraception*. Lisa is currently working on a book entitled, *Deepwater Alchemy: Extractive Mediation and the Taming of the Seafloor*.

**Graham Harman** is Distinguished Professor of Philosophy at the Southern California Institute of Architecture. He is the author of numerous books, most recently *Art and Objects* (2020), *Architecture and Objects* (2022), and *The Graham Harman Reader* (2023). He is Editor in Chief of the journal *Open Philosophy*, and editor of the Speculative Realism series at Edinburgh University Press, and the New Metaphysics series at Open Humanities Press.

**Matthew Harpster** is the Director of the Koç University Mustafa V. Koç Maritime Archaeology Research Center at Koç University, in Istanbul, Turkey. He received his Ph.D. from Texas A&M University, and has held teaching and research posts at the Massachusetts Institute of Technology, Eastern Mediterranean University, and the University of Birmingham. He has research interests in maritime cultural landscapes and the history of maritime archaeological thought, and has conducted field research in Iran, Cyprus, Turkey, Italy, and Morocco.

**Jeremy Killian** is Assistant Professor of Teaching in the Doctor of Liberal Studies program at the University of Memphis. He is a philosopher of aesthetics whose research focus includes theatre studies and cognitive psychology of emotion. His most recent book is entitled *Eugene O'Neill's Philosophy of Difficult Theatre: Pity, Fear, and Forgiveness*, released in 2022 from Routledge Press. He is currently working on a monograph on the aesthetics of conspiracy theory.

**Steve Mentz** is Professor of English at St. John's University in New York City. His most recent book, *Ocean*, appeared in March 2020 in Bloomsbury's Object Lessons series. He is the author of four other books, *Break Up the Anthropocene* (2019), *Shipwreck Modernity: Ecologies of Globalization, 1550-1719* (2015), *At the Bottom of Shakespeare's Ocean* (2009) and *Romance for Sale in Early Modern England* (2006). He is also editor or co-editor of six collections: *The Cultural History of the Sea in the Early Modern Age* (2021), *The Routledge Companion to Marine and Maritime Worlds, 1400-1800* (2020), *The Sea in Nineteenth-Century Anglophone Literary Culture* (2017), *Oceanic New York* (2015), *The Age of Thomas Nashe* (2013), and *Rogues and Early Modern English Culture* (2004). He has written numerous articles and chapters on ecocriticism, Shakespeare, early modern literature, and the blue humanities. He curated an exhibition at the Folger Shakespeare Library, "Lost at Sea: The Ocean in the English Imagination, 1550 – 1750" (2010). He blogs at The Bookfish, [www.stevementz.com](http://www.stevementz.com) and tweets @steверmentz.

**Bjørnar Julius Olsen** is a professor at UiT: The Arctic University of Norway and an archaeologist who specializes in archaeological theory, Sámi and northern archaeology, and contemporary archaeology. Bjørnar is the author of *In Defense of Things. Archaeology and the Ontology of Objects* (2010), co-author of *Archaeology: The Discipline of Things* (2012), and *Hunters in Transition: An Outline of Early Sámi History* (2014), he is co-editor of *Ruin Memories: Materiality, Aesthetics and the Archaeology of the Recent Past* (2014) and *After Discourse: Things, Affects, Ethics* (2021). He has directed the projects *Ruin Memories* and *Object Matters*, and he is currently directing the *Unruly Heritage* project.

**Sara Rich** is Assistant Professor of Honors at Coastal Carolina University. She is an archaeologist, art historian, artist, and author of speculative fiction. She has directed underwater archaeological campaigns on shipwrecks and submerged settlements in the Mediterranean, English Channel, and on both sides of the Atlantic. Her recent books include *Mushroom* (in the series Object Lessons, Bloomsbury, 2023), *Shipwreck Hauntography: Underwater Ruins and the Uncanny* (Amsterdam University Press, 2021), *Closer to Dust* (Punctum, 2021), *Shipwrecks and Provenance* (Archaeopress, 2018) and *Cedar Forests, Cedar Ships* (Archaeopress, 2017). She also serves as the Publications Manager for the Honor Frost Foundation.

**Claire Watson** is a PhD candidate at the University of Chicago and a graduate of Texas A&M's Nautical Archaeology Program. Their research is concerned with trade and connectivity in the Late Roman Eastern Balkans as well as the operation of informal economies among Late Roman shippers.

**Christopher Witmore** is the President's Research Professor of Archaeology and Classics in the Department of Classics & Modern Languages & Literatures at Texas Tech University. He is author of *Old Lands. A Chorography of the Eastern Morea, Greece* (2020) and co-author of *Objects Untimely* (2023, with G. Harman) and *Archaeology: The Discipline of Things* (2012, with B. Olsen, M. Shanks and T. Webmoor). He is also co-editor of *Archaeology in the Making* (2013, paperback 2017, with W. Rathje and M. Shanks) and the Routledge *Archaeological Orientations* series (with G. Lucas).

## CONTEMPORARY PHILOSOPHY FOR MARITIME ARCHAEOLOGY

While terrestrial archaeology has engaged with contemporary philosophy, maritime archaeology has remained in comparative disciplinary – or subdisciplinary – isolation. However, the issues that humans face in the Anthropocene – from global warming to global pandemics – call for transdisciplinary cooperation, and for thinking together beyond the confines of the human-centered philosophical tradition. Growing areas such as the “blue humanities” and “oceanic thinking” draw directly on our maritime past, even as they ponder the future. Theoretically engaged maritime archaeologists could contribute significantly to these areas of thought, as this volume demonstrates. The essays collected here serve as a jumping off point, which opens new ways for maritime archaeologists to engage with the most important problems of our time and to benefit from the new insights offered by object-oriented and flat ontologies. The book gathers the analytical thinking of archaeologists, philosophers, marine biologists, and media theorists, and pushes those observations deep into the maritime realm.

The contributions then branch out, like tentacles or corals, reaching into the lessons of oil spills, cephalopod hideouts, shipwreck literature, ruined monuments, and beached plastics. The volume concludes with a series of critical responses to these papers, which pushes the dialogue into new areas of inquiry. Taken as a whole, the volume emphasizes that the study of the past is more relevant than ever because serious consideration of our transtemporal watery world and all its inhabitants is increasingly necessary for our collective survival. This volume takes the first steps toward this reckoning and, as such, it promises to be an important new contribution to lecture and conference halls around the world where oceans and the Anthropocene are under study.

**sidestone**press

ISBN: 978-94-6427-039-6



9 789464 270396 >