



1 TWO ORIGINS: ALIEN OR CORE?

Two stories herald Ocean's arrival. In what used to be the most common explanation of the blueness of our planet, Alien water streaked through space on an icy comet that splashed down onto barren rock. In a newer, alternative explanation, Ocean was here all along, its waters stored inside the planetary core of rocky material gathered together billions of years ago when the planet formed. Water, the element that fills up the ocean and makes life possible, either dropped from the sky or oozed out from a solid center. It is Alien, or it is Core. These rival possibilities establish Ocean as an ambiguous thing from its prehistoric origins. It is an object with two meanings, two origins, two stories.

The Alien story describes the radical intrusion of external forces imposing themselves onto a stable, if lifeless, planetary system. Think of that dry rock in the void, four-and-a-half billion years ago, newly created and circling the sun. Onto its jagged surface splashes the ice comet with its Alien cargo. The newly arrived ice melts, spilling across our planet's

surface and re-forming our earth as moist and ready for life. So much depends upon this chance encounter in the void, this Alien moisture from above. Space water, while not itself living, creates the conditions without which life cannot begin.

In the Core story no sky-borne messenger appears from on high. Water instead arrives with the rocks that accrete into the planet on which we walk today. In this version of events, the massive impacts and forces that facilitate planetary creation conceal water inside the planet's rocky core, from which depths it seeps up to fill surface basins over geologic time. Ocean need not descend from the sky, but instead the great waters emerge, hidden, from the oldest rocks in our planet's history.

I don't have the expertise to judge the scientific controversy between these opposed stories, but I know why the split matters. These are stories about the origin of Ocean and the blueness of our planet. Without water, and without a planetary temperature range that includes all three of its physical phases—solid ice, liquid water, and gaseous water vapor—life as we recognize it could not have developed on earth. Ocean origins are birth stories. Did we come from the sky or from under the ground? What does it mean that we seem not to be able to choose? Are we Alien or Core?

The story of Ocean's fall from the stars reinforces our terrestrial alienation from the soup of life. We fear the ocean, especially in its stormy moods. Sailors and swimmers know that human bodies can't go there to stay. Ocean surrounds our dry homes as a place of risk, vulnerability, and weakness.

We live near the waters, we employ them, and we love them. But they are not our home.

Unless they are. The Core story, championed by astrophysicist Lindy Elkins-Tanton among others, locates water inside our earth from the start. A leader in space exploration and primary investigator for the planned NASA mission to the metal asteroid Psyche in 2022, Elkins-Tanton has studied the chemical composition of water in asteroids and on earth, and has demonstrated through computer simulations that water can endure the process of planet formation. She describes herself as having become an “evangelist” for “planets getting their water through their common formation processes, and not by later chance.” Perhaps, she speculates, more interstellar planets than just ours have formed with watery cores that could support life.

Is our ocean Alien or part of our essential Core? The interlaced stories of how humans have imagined and interacted with the ocean over time show that both contrasting narratives speak lasting truths. Ocean defines our inhospitable home, but even that oxymoron doesn't quite capture the tension and urgency, dependence and fear, in the human-sea relationship. Humans share some evolutionary characteristics with aquatic mammals, including a layer of subcutaneous fat and relative hairlessness. The controversial “aquatic ape hypothesis,” in which a crucial phase in the evolution of *homo sapiens* may have occurred in an oceanic or terraqueous environment, remains unverifiable, but it

speaks to an “oceanic feeling” that many of us recognize, even if we don’t know where it comes from. Herman Melville wasn’t an evolutionary biologist or NASA scientist, but the opening chapter of *Moby-Dick* knows what people love: “They must get just as nigh the water as they possibly can without falling in.” Poised on the sea’s edge, we balance between kinship with and alienation from the watery part of the world. Ocean insinuates its salty fingers into that division and wedges meaning out of both the longing that draws us to the great waters and the fear that drives us away.

I feel both feelings. Every day I walk down the street to a crescent-moon of gritty sand that bears the unoriginal name of “Short Beach.” I look out past a pair of rocky headlands onto Long Island Sound. On clear days I glimpse the North Shore of Long Island, about twenty-five miles distant. Sheltered from northeast-churning hurricanes by the massive glacial moraine of the island, my bay in Connecticut is a relatively calm body of water. But like all saltwater inlets it flows into the encircling currents of the World Ocean. Every day in summer and fall, I throw myself into the water’s gray-green embrace and think about what it means to put my singular body into the biggest object in the world. It’s disorienting and pleasurable and helps me think. According to Diana Nyad, the only person to have swum the hundred miles between Cuba and the United States without a shark cage, swimming creates sensory deprivation and a particular form of physical meditation. Every day I churn sentences through my mind to the rhythm of crawl-stroke arms.

Many of the phrases in the *Ocean* that is this book found me in those salty waters. The meanings of Alien environment and the waters of our Core never strike me more palpably than when I'm swimming, head down, ears and nose clogged, minimally aware. I'm a mismatched terrestrial creature partly at ease in the water, relying on repeated movements of arms and legs to keep me moving and on the surface. I'm also a fleshy bag of water, matching my fluid center to my aquatic surroundings. Both things, always.

What follows elaborates the two stories of the object Ocean. Duality in fact becomes this book's organizing principle; almost everything appears twice. Two accounts describe the planetary origins of seawater. Two myths explain the place of Ocean in Western cultural history. Two poetic voyages engage maritime verse. Two phases of oceanic globalization structure the last half-millennium of human history. Two images of laboring bodies, sailors and swimmers, opposingly define human intimacy with Oceanic forces. Two individual swimmers splash through the final chapter on two different sides of the Atlantic. Throughout, this *Ocean* splashes between the two ways I encounter the great waters, through writing and thinking on the one hand and direct immersion on the other. It's an intellectual project and also a physical practice.

There will be recognizable currents underflowing these pairs of objects and ideas. A tension between solitary swimmers and collectivizing ships will surface throughout. Multiple developments in ocean history will shape this telling,

from the dependence of prehistorical communities on the ocean's bounty for sustenance, to sudden bursts of maritime expansion in antiquity and early modernity, to the ambivalent industrial turning-away from the ocean that framed late-twentieth-century Western culture. Oceanic feelings in religious rituals, myths, and psychoanalytic accounts will guide the narrative. Awareness of the controlling force of the "blue ecology" of the ocean, home to roughly 90 percent of our planet's biosphere, will organize my speculations about global warming, ocean acidification, and the ways the ocean floods the center of today's environmental crisis. All these currents reveal Alien and Core influences that flow around us. Human bodies barely touch and only partially know the ocean, even as its waters structure our historical, political, and personal lives.

In what is probably the most influential book written in English about the ocean in the twentieth century, *The Sea Around Us* (1951), Rachel Carson places "that great mother of life, the sea" at the core of the human story. But she also recognizes that when humans touch the great waters, as "in the course of a long ocean voyage," the insights that swim into our imaginations reflect alienation: the sailor "knows the truth that his world is a water world, a planet dominated by its covering mantle of ocean, in which the continents are but transient intrusions of land above the surface of the all-encircling sea." Few sea-writers speak with Carson's particular combination of poetic fervor and scientific exactitude. Her responsiveness to both experience and emotion remains

my polar ideal. One way to describe this book might be an effort to juxtapose Carson's precision with Herman Melville's obsessions, but there will be time enough to hurl harpoons after several other deep-diving whales. A different theoretical and historical complement to Carson's material sea appears in the "socially constructed" ocean of geographer Philip Steinberg, who charts the changing political, legal, and economic frames through which humans have understood the ocean. Steinberg writes a complex social history that unfurls the classical Greek geographer Strabo's notion that humans are "amphibious," intimately connected to both land and sea. Bringing together the contrasting strains of Carson's positivism, Melville's mania, and Steinberg's critical theory makes this book intellectually amphibious as well.

These models of ocean thinking do not exhaust even the water's undulating surface, to say nothing of its violet-black depths. Carson's history, Melville's epic, and Steinberg's theory map out entwined planes, but the ocean's verticality plunges down into hidden ways of thinking, including histories of change and human suffering. Another guiding star, to whose work I'll return often, is Martiniquan poet and philosopher Édouard Glissant, who envisions the sea as a site of human crimes and imagined retribution. For Glissant, the essential point of origin is neither Alien arrival nor Core secretion, but instead the drowned human bodies of the Middle Passage whose remains sediment the Atlantic floor. Glissant imagines "the entire ocean, the entire sea gently collapsing in the end into the pleasures of sand, make[s]

one vast beginning, but a beginning whose time is marked by those balls and chains gone green.” Sunken bodies and rusting chains present a more painful and intimate origin story than comets and planetary accretion. Can a small book have a whale’s throat to swallow all these stories whole?

The singularity behind these currents of history and thought is Ocean as object, vast, moving, vibrant, imagined, and ungraspable collective.

Let’s dive in.