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Lilly's Wager

According to experts on the topic, it is only a slight exaggeration to say that music saved the whales. Indeed, several species of whale were well on their way to extinction before Roger Payne and Scott McVay discovered whale song, or rather, before Payne and McVay taught the public to hear whale phonation *as* song. Despite the protestations of long-time marine mammal researchers, when it came time to make a case against the whaling industry, the gentle bellowing of a single male humpback some two thousand meters below the ocean surface proved more effective than careful argumentation.[1]

In contemporary biosemiotics terms, whale song is a set of patterned gesture-calls: humpbacks and other whale species vocalize "units" of sound in repeated and combinatorial ways over long durations. Recordings of these elaborate vocal expressions served as the source for a movement in the 1970s that reconceptualized whale sound as singing.

Payne produced the recording *Songs of the Humpback Whale* in 1970 and, with McVay, published the groundbreaking article "Songs of Humpback Whales" the following year.[2] When NASA opted to include an excerpt of whale song on the famous *Voyager* album that was sent into space, the president of the National Geographic Society, Gilbert Grosvenor, declared that "the whale has become a way of thinking about our planet and its creatures."[3] McVay made the analogy even more explicit: "To leave the oceans barren of whales is as unthinkable as taking all music away."[4]

Several scientists and historians have observed that song was the single important feature in the battle against the whaling industry, which was largely won when the Marine Mammal Protection Act passed in 1972, just a year after the publication of Payne's and McVay's first article.[5] In that 1971 article, Payne and McVay made the dramatic claim that whale phonation is composed of clear, repeating structures—what the scientists insisted were *songs*.[6] While the "haunting mewls and honks" of humpbacks

had been known to scientists since the 1940s, these had previously been thought of as mere noise.[7] But now, in addition to the article in *Science*, Payne's 1970 album *Songs of the Humpback Whale* brought the music of these newly majestic creatures into people's living rooms.[8] In a few short years, the sounds of whales were transformed in people's minds and ears from mere animal cries into ethereal or even transcendent music.

This emphasis on whale song notwithstanding, the conditions of possibility for such a musically inflected political gesture ran deeper. Most whale historians agree on a deep transformation in the perception of whales roughly between 1960 and 1975: over the course of fifteen years, these creatures went from dangerous, even vindictive behemoths (desirable primarily for their blubber) to intelligent and peaceful creatures harboring the capacity to show us how to truly live.[9]

The transformation was the result of multiple industries, innovations, and political projects. It also often included marine mammals other than whales—especially dolphins. (In contemporary scientific terms, whales and dolphins are part of the order Cetacea.)[10] Following WWII, the United States invested millions of dollars in oceanic research, which included training dolphins to detect underwater mines and developing submarine sonar technology based on marine mammal echolocation.[11] This research took place alongside an explosion in American popular culture, including films like *Flipper*, *The Day of the Dolphin*, *Star Trek IV: The Voyage Home*, science-fiction literature like Leo Szilard's *The Voice of Dolphins*, and the development of a robust animal rights movement in the 1960s and '70s, including anti-whaling campaigns, such as those initiated by Greenpeace. These disparate factors coalesced to produce a coherent understanding of cetaceans. The period between 1960 and 1975, in other words, brought a dramatic epistemic shift.

A number of unpredictable conceptual linkages were also forged—for example, the symmetry between outer space and the "inner space" of oceans. Feminist theorists Metta Bryld and Nina Lykke write about how dolphins encapsulated the zeitgeist: "All of a sudden, these sea creatures jumped smilingly out of the blue as stand-ins for the citizens of the cosmic super-civilizations that possessed techno-godfatherly wisdom, and with whom it was believed the Space Age would bring us into contact."[12]

Although the dramatic shift in our perception of cetaceans is not reducible to any individual person or institution, historians have emphasized the role of John C. Lilly (1915–2001), an American researcher who is best remembered for his attempt to break through the human/dolphin communication barrier.[13] In the 1950s and '60s, Lilly was viewed as a renowned if highly idiosyncratic thinker. He won major research grants,

and counted luminaries such as anthropologist Gregory Bateson and astronomer Carl Sagan among his closest friends. But consistent scientific failure (Lilly never managed to teach a dolphin to speak) and unorthodox practices (he administered LSD to his dolphins and himself) sent Lilly's research into a cul-de-sac. For the last decades of his life, Lilly was dismissed by mainstream science and lived out his years as some combination of activist, hippy, guru, and quack. Through it all, Lilly never gave up on his idea, his unshakable axiom, that communication with dolphins is possible. Dolphins would continue to attempt to speak to us, he insisted, even if we stopped trying to speak to them. His faith in dolphin intelligence and empathy hardly wavered for a second.

Although Lilly has long been dismissed in mainstream science, the ideas he promulgated in his 1961 book *Man and Dolphin* have since become mainstream ideas in Euro-American culture. But even in the domain of science Lilly's position is not so simple to assess. The historian D. Graham Burnett has argued that, despite the onward march of science, demystifying the Leviathan through observation and empirical research led unexpectedly to more mystification, to re-mystification.[14] Over the course of the twentieth century, Burnett observes, "the wild legends, the seafarers' yarns, the biblical tales, all gave way—fell away—as men of learning pursued the cetaceans with harpoons, microphones, nets, and neurological probes, leaving a pile of quaint old beliefs in shards (on the one hand) and a proper knowledge of what cetaceans were (on the other). And yet," Burnett continues,

> somehow, in the process, what emerged was a new creature of extraordinary symbolic power, whose looming significance swelled with each seemingly deflationary blow, whose new iconography was composed, rapidly, mosaic-like, out of the broken bits of old myths (so navy dolphins *were* being trained to help sailors, as in the ancient tale of Arion . . .), heightened with the bright shards borrowed from the workshops of scientific cetology (so the whale hugger-saboteurs releasing navy dolphins back into the wild could believe that the animals "saw" the fear and goodwill of their liberators by sonar-scanning their racing hearts.).[15]

As the brief allusion to Arion in the above passage implies, the history of human/cetacean relationships goes back a long way. The ancient Greek myth tells the story of musician and poet Arion, son of Cycleus, who was captured and nearly put to death by sailors. Arion escapes by playing his lyre and singing to dolphins in the nearby waters, who come to his aid and rescue him. The story of Arion, in other words, is a foun-

dational interspecies communication myth. And while any such lofty thoughts about cetaceans seem to have disappeared during the brutal period of modern whaling (roughly between the seventeenth and early twentieth centuries), Burnett suggests that scientists in the 1960s tapped into remnants of those myths.

There is an argument to be made, in fact, that Lilly's imprint can still be felt not only in popular culture, but even (if only indirectly) in the most rigorous scientific discourse. Burnett concludes that, although Lilly's work has been maligned by the scientific establishment for decades, it was his mystical, quasi-scientific position that ultimately won out, that most contributed to anti-whaling activism, and that provided the framework for listeners to hear whale phonation as song. It was this framework, moreover, that inscribed whales within an ethical grammar of suffering and care.

This chapter focuses on John Lilly. I understand Lilly not as some quirky, minor historical figure who might, by virtue of his failures, help us understand hegemonic perceptions.[16] Lilly, rather, was a well-resourced researcher who, although he certainly took an unconventional turn, can nonetheless be viewed in historical hindsight as a spectacular success.

His success notwithstanding, Lilly was more than a bit naive. In some cases, his naïveté is vaguely charming, but in many more cases it makes the contemporary reader cringe. During the main period of his research, scientists were thinking deeply about the issues Lilly was tackling in an explicitly iconoclastic way.[17] Lilly was not working in a vacuum—even though he often acted that way. And therein lies the rub: Lilly's most misguided ideas became his most popular, entering even into the scientific domain. He was most successful when tapping into the deep wells of Euro-American ideology.

But significant historical lacunae remain. Burnett implies that Lilly laid the groundwork for the global whale song phenomenon, but the historian does little to explain the actual connection between Lilly's dolphins and Payne's whales, in part because Lilly himself seldom wrote about whales, singing, or music.[18] In this chapter, I return to Lilly's work in an attempt to tease out those connections. More generally, however, I consider the way that music has often mediated human perceptions of cetaceans. This is related to what Ana Mariá Ochoa Gautier calls the "ecologization" of music: that is, the scenario in which music becomes the "much-needed suture for the torn relations both between humans and between humans and the environment."[19] We see this use of music during the Hippie movement of the 1970s, and today again in the deployment of music in New Age circles.

This chapter shows that Lilly's attempts at suturing the torn relations between humans and non-human animals were constantly frustrated by the actual media required to do that suturing. By "media," I mean anything between or linking two things—whether that be technological media (such as magnetic tape), communication media (like sound or vision), or environmental media (such as water or air). Much of our contemporary perception of marine mammals, especially as it has been bequeathed to us by Lilly, depends upon an impatience with and ultimately a disavowal of media. Music and water become important grist for the anti-media mill. Music and water become anti-media figures that purport or pretend to allow immediate connection—connection without mediation.