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Nancy Shoemaker

Oil, Spermaceti, Ambergris, and Teeth: Products of the Nineteenth-Century Pacific Sperm-Whaling Industry

Laborers in the nineteenth-century whaling industry harvested four body parts of sperm whales: oil from the blubber, spermaceti from whale heads, ambergris if discovered in a whale's intestines, and teeth. Only the first three counted as commodities, as that word is typically used. Oil, spermaceti, and ambergris circulated in a global marketplace as impersonal, passionless objects subject to a standardizing system of weights and measures, quality grading, and monetary exchange. Moreover, these three whale products realized their ultimate value in the act of consumption. Whale teeth took an alternate route. They became a blank template for cultural inscription and consequently were more likely—than other parts of a whale—to be exchanged as gifts, and they gained value through preservation and old age. The different manner in which people treated different parts of a whale adds to our understanding of how global capitalism worked. It fed the growth of two kinds of markets: the commodity market most familiar to historians of capitalism and niche markets attuned to cultural meaning, social relationships, and distinctiveness versus standardization.

Sperm Whale Commodities

The Pacific sperm-whaling industry began with the 1789–90 voyage of the *Emelia* out of England. Prompted by that voyage's success, the *Emelia*'s owners commissioned James Colnett in 1793 to take the *Rattler* to the Pacific Ocean to discover exactly where and when sperm whales congregated. A few years later, Colnett published a narrative of the *Rattler*'s journey along with what is perhaps the earliest, most accurate diagram of a sperm whale (see Figure 1). He divided the whale into different sections. "A" identifies "the case," which held the spermaceti. The diagonal lines across the whale's body demonstrate how whalers cut the blubber into large "blanket pieces" to lift onto the deck of the vessel preparatory to boiling into oil. The whale clearly has teeth in its lower jaw, which the text further describes, but only as one of the whale's physiological features and not, like the spermaceti and blubber, as a merchandisable product.

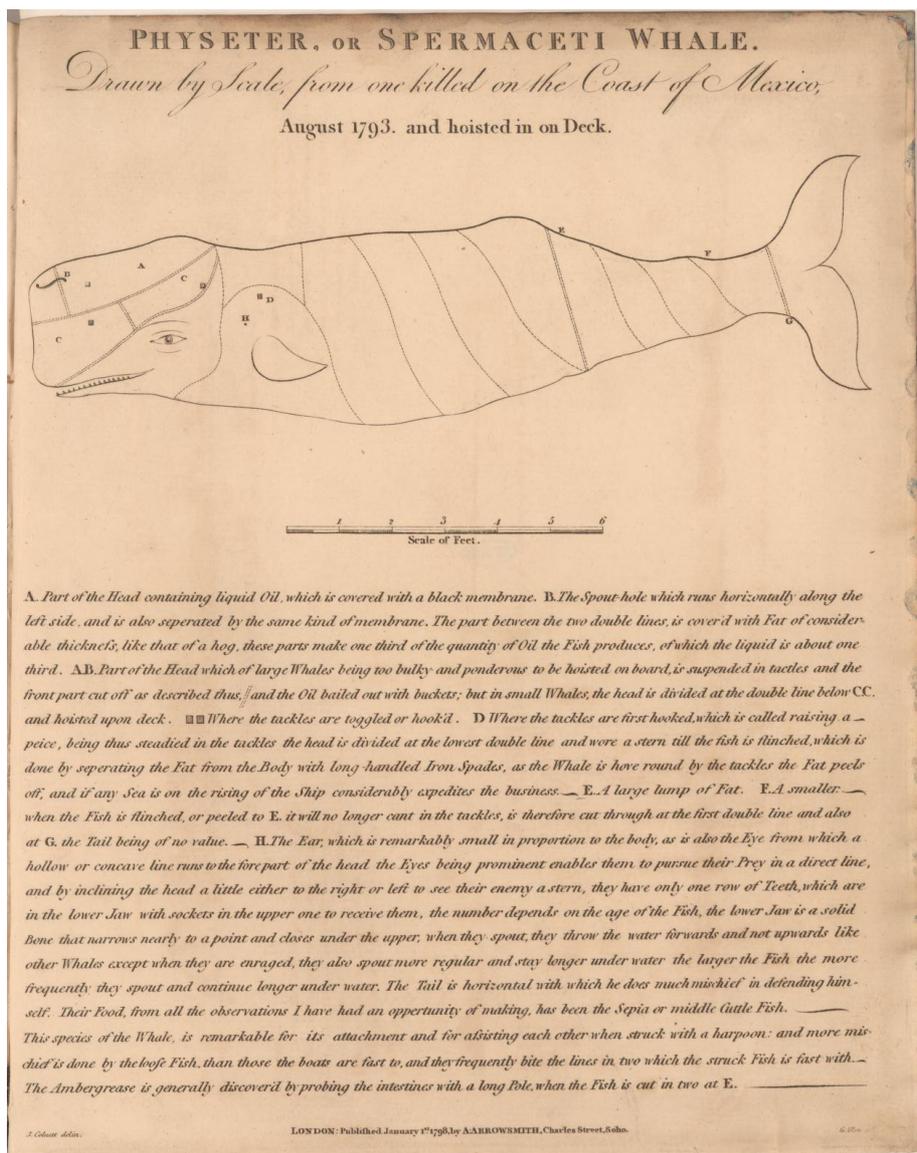


Figure 1: This diagram showing how to “cut-in” a sperm whale appeared in James Colnett, *A Voyage to the South Atlantic and Round Cape Horn into the Pacific Ocean, for the Purpose of Extending the Spermaceti Whale Fisheries, and Other Objects of Commerce* (London: W. Bennett, 1798), 80–81. This version of the image was published separately by Arrowsmith in 1798 and comes from the collections of the John Carter Brown Library. Courtesy of the John Carter Brown Library at Brown University.

Sperm oil and spermaceti, the former used in lamps and the latter in candles, fueled the eighteenth-century lighting revolution, inside homes and outside on public thoroughfares. Like the commonly hunted right whale, sperm whales had a thick layer of blubber that could be melted into oil. However, “sperm oil” burned more brightly and with less odor and smoke than “whale oil” taken from right whales. It therefore commanded a higher price. Spermaceti, called such by early naturalists for its resemblance to male reproductive fluid, was a wax that produced a more luminous and cleaner flame than the candle-making alternatives of beeswax and tallow. Unique to sperm whales, spermaceti came from the case, the membrane-lined cavity at the top of the head, which today is more commonly referred to as the spermaceti organ. Marine mammal scientists theorize that the spermaceti organ is an echolocation mechanism enabling effective sensory perception during deep dives. By the mid-eighteenth century, a large whale fishery developed around sperm oil and spermaceti wax along with an industrial infrastructure of oil refineries, candle works, and merchant middlemen.

Ambergris—a rarer, more precious sperm whale product—was a lump of half-digested fecal matter that occasionally clogged up whale intestines, unless expurgated, in which case it could be found floating at sea or cast up on a beach. Ambergris had an overpowering, earthy odor comparable to musk and civet and acted as a scent fixative, making it a staple in perfumery. It sold at exorbitant prices. Nineteenth-century New Bedford whaleships that happened upon ambergris could expect \$10,000 to \$20,000 for a one-hundred-pound lump.

Niche Markets for Whale Teeth

Very briefly, teeth also became a commodity of the whaling industry once Europeans and Americans realized how much Pacific Islanders wanted them. Anthropologists and other scholars have ruminated at length on the differential value of sperm whale teeth in nineteenth-century Oceania as part of a larger query into the culture, economy, and politics of exchange. Most conspicuously in Fiji, but also in Tonga, the Marquesas, Hawai‘i, and elsewhere in the Pacific, the warm, gold-white glow of polished animal ivory combined with their rarity made whale teeth high-status objects exchanged and displayed as symbols of divinity, truth, integrity, trust, wealth, and power. In Fiji, presentations of a whale’s tooth endowed political pacts and marriages with good intentions. American

commercial interests in the Pacific adapted to take advantage of this regional, niche market. Shortly after the boom in Fijian sandalwood began in 1804, a market in whale teeth emerged in the United States as American ships flocked to the Fiji Islands to harvest the aromatic wood to sell in China. To do business in Fiji, American traders needed to stock up beforehand on large supplies of whale teeth.

Despite the new interest in whale teeth in the mercantile communities of eastern port cities generated by Pacific Islanders' demand for them, the market remained small and confined to Oceania trade. Within the whaling industry, whale teeth never attained the status of whale oil or whalebone (baleen) taken from right whales and bowheads. Whaleship owners reporting to customs officers on goods imported to the United States at the end of a voyage continued to list only sperm oil, "head matter" (spermaceti), whale oil, and whalebone as products of the voyage. Thus, the Pacific whale-tooth trade had little impact on the whaling industry's main objectives.

Another niche market in whale teeth opened up in the early nineteenth century, when the whaling industry's laborers took up scrimshawing. Scrimshaw experts date its origins to at least 1817, based on a tooth engraved with a whaling scene and text that reports it as the London whaleship *Adam* at the Galapagos Islands. Scrimshaw was primarily a sentimental pastime for whalers. They turned out etched whale teeth, corset busks, swifts (yarn winders), pastry crimpers, inlaid boxes, and other knickknacks intended as voyage souvenirs and gifts for loved ones. Much scrimshaw had a feminized cast to it: the swifts, pie crimpers, and busks all evoked women's work or dress. When the tooth's shape was preserved to serve as the canvas for a drawing, often referenced were domestic spaces, such as parlors, or genteel women in fashionable outfits as appeared in magazines from the period. This aspect of scrimshawing reveals it to be more than just a means to kill time aboard ship; it became a contemplative act in which men away from loved ones on three- to four-year voyages embodied their emotional attachments to home through gift production.

The differential uses for and value of whale products—how oil, spermaceti, and ambergris became expendable commodities whereas teeth became treasured relics conveying a host of human emotions—continue to bear on the present day. Many countries prevent the sale of whale oil, spermaceti, and ambergris through such measures as the U.S. Marine Mammal Protection Act, International Whaling Commission mandates, and

agreements reached under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). In contrast to how these national and international regulatory systems prevent whale parts from being treated as commodities, the cultural artifacts of nineteenth-century Pacific Islanders and whalers can be bought and sold as “Antique Parts” of sperm whales. Teeth transformed into expressions of culture by Pacific Islanders or by industrial whalers circulate mainly among museums and art collectors, who are willing to pay a high price for these objects. Fijian *tabua* sold at art auctions can reach a value of a thousand dollars or more. As for scrimshaw, if an etched tooth can be attributed to a well-known “artist,” its price could soar to hundreds of thousands of dollars.

Even though ambergris has also been regarded as precious and, moreover, could be said to acquire its extraordinary value from its power to evoke human emotions (by titillating our sense of smell), like the more mundane, lower-cost oil and spermaceti, ambergris realized its value through a transformation that resulted in its destruction. Sperm whale teeth have had the opposite experience. The blank canvas of the whale’s tooth inspired people to transform it in ways that enhanced its value and called for its preservation. It was the meaning, and not the transitory material benefits, of sperm whale teeth that made them objects of human desire of great worth in a variety of niche markets.

Further Reading

Davis, Lance E., Robert E. Gallman, and Karin Gleiter. *In Pursuit of Leviathan: Technology, Institutions, Productivity, and Profits in American Whaling, 1816–1906*. Chicago: University of Chicago Press, 1997.

Ellis, Richard. *The Great Sperm Whale: A Natural History of the Ocean’s Most Magnificent and Mysterious Creature*. Lawrence: University Press of Kansas, 2011.

Frank, Stuart M. *Ingenious Contrivances, Curiously Carved: Scrimshaw in the New Bedford Whaling Museum*. Boston: David R. Godine, 2012.

Thomas, Nicholas. *Entangled Objects: Exchange, Material Culture, and Colonialism in the Pacific*. Cambridge, MA: Harvard University Press, 1991.