BEN A. MINTEER LEAH R. GERBER

Buying Whales to Save Them

Current policy approaches to manage whaling and protect whales are failing. It's time to try a new approach that combines economic pragmatism and ethical principles.

Opposite:

BRYANT AUSTIN, *Dwarf Minke Whale Composite Portrait 1257 with Killer Whale Bite Scars*, Great Barrier Reef, Australia, C-Print, 139 x 64 inches (1:1 scale), 2009.

ince the beginning of the conservation movement in the late 19th century, decisionmakers facing environmental issues have struggled to square the impulse to respect nature's dignity with more anthropocentric calculations of economic utility. It is a task that has often divided scientists, ethicists, and advocates who share a regard for biodiversity and ecological integrity, yet differ on how such goals are to be justified and promoted in policy discourse. This debate has evolved over the years as new conservation initiatives and policy proposals have taken center stage, but the core of the dispute remains relatively unchanged: Does viewing species and ecosystems as economic goods preclude seeing them as objects of moral duty? Will the use of economic valuation methods extinguish rather than encourage public support for environmental protection? Can conservation really be expected to succeed by ignoring economic incentives bearing on the protection of wild populations and ecosystems?

A recent proposal to create a "whale conservation market" has highlighted this stubborn ethics/economics divide in a very visible and contentious way. The whale market or "whale shares" idea presents an alternative to the traditional regulatory approach. By calling for the establishment of quotas that could be bought and sold, it allows conservation groups as well as whalers to purchase a fixed number of whale shares, thereby providing a mechanism for whale protection as well as managed harvest. The proposal is for the International Whaling Commission (IWC) to allocate the quotas to member nations on a sustainable-yield basis, which would permit buyers of whale shares to use or sell.

The whale shares idea was first proposed in the January 12, 2012, issue of *Nature* by one of us (Gerber) and two other researchers: Christopher Costello, the lead author, and Steven Gaines, both at the Bren School of Environmental Science and Management at the University of California, Santa Barbara. The concept was intended to attempt to deal with what many conservationists view as a significant policy failure in international whale management. The IWC, charged with the global conservation and sustainable use of whales, introduced a moratorium on commercial whaling in 1986 as a temporary strategy to conserve depleted whale stocks while a more long-term plan was developed to manage whales. Fueled by interests that challenge the ethics of whaling, however, the ban has not yet been lifted.

Though still in effect, the ban has not been effective. Despite the moratorium, whaling continues at a pace that is widely considered unsustainable. Scientific whaling, which nations (primarily Japan) conduct under the IWC for re-

search purposes, results in the taking of roughly 1,000 whales per year. Subsistence whaling, which the IWC allows for certain aboriginal groups for cultural or nutritional reasons, yields roughly 350 whales per year. Commercial whaling conducted by nations (primarily Norway and Iceland) under objection to the IWC yields roughly 590 whales per year. These harvest totals have been on the rise, as whaling has more than doubled since the early 1990s. The lack of agreement on how to manage whaling despite decades of negotiations between pro- and antiwhaling nations has called into question the future of the IWC as a path to resolution.

Despite the widely acknowledged failure of the IWC moratorium to curtail unsustainable whaling, the whale conservation market idea has proved to be wildly controversial within conservation and antiwhaling circles. Concerns have been raised about how the system would be established (for example, under what guidelines would the original shares be allocated?) and how it would play out over time (for example, would a legal market lead to increased whaling?). Many critics of the idea are also plainly not comfortable with the ethics of putting a price on such iconic species—that is, with using contingent market methods for what they believe should be a categorical ethical obligation to preserve whales.

On the other hand, the negotiation failures surrounding the global management of whales underscore the need for a realistic and pragmatic discussion about available policy alternatives. Indeed, the vulnerable status of many whale populations and the failure of the traditional regulatory response to halt unsustainable harvests call for a more innovative and experimental approach to whale policy, including considering unconventional proposals, such as the whale conservation market. Although it has generated a fair amount of controversy among conservationists, we believe that the whale shares approach does not in fact violate the customary aesthetic, cultural, and scientific regard for whale species; nor does it require the relaxation of the moral commitment to saving species from further decline and slipping into the extinction vortex. But we also believe that conservationists and antiwhaling activists will need to embrace a more experimental policy stance and a less ideological ethical posture if society wishes to make better progress on this intractable international conservation challenge.

Price versus principle in conservation

Presumably, some of the critics of the whale conservation market idea would agree with the great nature advocate John Muir, who warned that "Nothing dollarable is safe, however guarded." Muir's skepticism toward economic valuation is





BRYANT AUSTIN, *studio: cosmos*, Kingdom of Tonga, C-Print, 31 x 24 inches, 2006.

fairly typical of the conservation tradition in the United States. The well-known environmental writer Aldo Leopold, for example, wrote in *A Sand County Almanac* (1949) that society needed to stop viewing the question of good land use as "solely an economic problem" and to do "what is ethically and esthetically right, as well as what is economically expedient."

More recently, the economics/ethics debate in conservation has centered on the embrace of the ecosystem services framework as an instrument for biodiversity protection. Crit-

Bryant Austin

Bryant Austin became inspired to photograph whales in 2004 when, floating motionless in the ocean, he felt something touch his shoulder. As he slowly turned, he came eye-to-eye with a 45-ton female humpback whale. Looking into her eye, he was struck by her calm mindful expression. In that instant he saw clearly what had been missing in past efforts to visually communicate the reality of a whale—moments like these documented on their terms and at their scale. This experience led him to embark on a new body of work and a new chapter in his life.

These photographs only become possible when a whale decides to initiate a close inspection of the artist at a distance less than six feet. During these rare moments, Austin carefully composes a series of photographs along a whales body in five foot wide sections using a 50 mega pixel camera. The combination of proximity and high data capture allows him to document every detail, color and tone. The massive scale of his work reaching dimensions up to 10 x 36 feet is secondary to the calm mindful expressions of a whale's eye which remains central to his work.

His work has been met with international acclaim and been exhibited in Oslo and Tokyo. His book, *Beautiful Whale*, will be released this year. Coinciding with the release of the book, the Museum of Monterey in California features an exhibition of his work through September 2, 2013.

Austin has recently begun working on a series that will focus on the impact of our lifestyle choices on whales and their ocean habitats. His vision is to create a ninety-foot-wide photograph of a blue whale in extraordinary detail and to compose a life-size photograph of a living whale entangled in fishing gear. He believes that we may someday lose whales to extinction, and if so, we will lose more than five million years of evolving culture and communication in the largest brain to ever exist on Earth before we even understand what we are losing.

Photos courtesy of the artist.

ics of this move have suggested that the ecosystem services approach fails on moral and practical grounds to ensure the protection of wild species; its supporters have claimed just the opposite. Specifically, to preservationist-minded conservationists, putting a price on nature, or "making conservation pay," violates the obligation to respect the beauty and moral worth of species and ecosystems. For utilitarian- or economically oriented conservationists, however, it only makes sense to bring nature's goods and services into the economic sphere,



BRYANT AUSTIN, Humpback Whale Calf I, Kingdom of Tonga, C-Print, 43 x 75 inches (1:1 scale), 2006.

since this is where they can be appropriately valued and traded off against other societal goods. The debate has proved resilient to settlement. Even attempts to broaden the instrumentalist model beyond narrow economic criteria have not mollified critics, who still argue that conservation should be motivated by aesthetic values and a sense of moral duty, rather than by economic considerations.

Although there are important methodological and philosophical issues of environmental valuation at stake here, the debate can often conceal common policy ground among conservationists, clouding the widely held view that the protection of global biodiversity is a primary societal obligation, a duty that exists regardless of whether it is framed anthropocentrically or for the sake of wild species. This contest, especially when it devolves into an ideological struggle between the respective proponents of ethics and economics in conservation decisionmaking, can hinder efforts to experiment with the design of effective institutions to achieve



BRYANT AUSTIN, Humpback Whale Mother and Calf II, Kingdom of Tonga, C-Print, 24 x 42 inches, 2005.

widely supported policy goals. It has a polarizing effect on conservation stakeholders rather than drawing them together in support of new ideas that deserve to be heard and empirically tested.

In the whale conservation market debate, we believe there is an important distinction to be made between, on the one hand, advocating the use of a particular policy instrument (whale shares) to achieve an important conservation objective (maintaining sustainable whale populations) and, on the other hand, arguing that this policy instrument somehow captures the "real" or "full" value of the conservation target. The whale market approach should not be read as presenting an account of the ultimate moral worth of whale populations; it is instead a proposed economic tool that could—we want to emphasize *could*—help move actors more swiftly toward the policy outcome of effective whale conservation, an outcome that, it is important to note, may be justified by appeal to the shared ethical responsibility to conserve whales and protect global biodiversity.

In his recent book What Money Can't Buy, Michael Sandel, an influential political philosopher at Harvard University, warns of the "corrosive tendency" of markets in civic life (including in environmental affairs), a malevolence owing to their tendency to "crowd out" nonmarket attitudes and norms, such as the moral and aesthetic regard that society should have for species, by turning such goods into commodities. Sandel lists a variety of examples of this crowding-out process, from commercializing blood donation, to paying children for good grades, to establishing a market to hunt wildlife that simultaneously funnels revenue into species conservation programs. He concludes that by turning nonmarket relationships and goods into market commodities, the character of the good exchanged in the market is transformed as a result of this commoditization process. As a consequence, the conviction to promote the nonmarket good as a moral obligation, such as the commitment to preserve wildlife for its own sake, is eroded.

The argument from moral corruption is indeed an im-



BRYANT AUSTIN, Humpback Whale Fluke, Kingdom of Tonga, C-Print, 24 x 42 inches, 2005.

portant consideration in these kinds of cases and should be of concern to any conservationist worried about the extinction of moral attitudes promoting a respect for nature. Yet Sandel does not seem to consider a scenario, such as the whale shares idea, whereby a market in wildlife could be designed to also allow conservationists to purchase permits or shares in order to protect (rather than harvest) the wildlife in question. Although one could still argue that a whale conservation market has the potential to crowd out nonmarket values (for example, the love of cetaceans for their own sake), this is by no means an inevitable outcome, especially if concerted efforts are made to promote the moral values of whales as part of the overall management response.

Why whales matter

Discussion of a "shared responsibility" to conserve whales, their "moral value," however, begs a basic question: Why should society care about the decline of whale populations? For conservationists, the answer may seem self-evident (and perhaps asking it appears unseemly to some). But it is not always obvious how different stakeholders value whales, what ethical responsibilities these values generate, and what tradeoffs they may require in practice. Examining this dimension of the response to the whale market proposal reveals a second, and perhaps more nuanced, division: the distinction between holistic and individualistic conservation ethics.

Focusing on the aggregate value of whale populations, it might be argued that as units of biodiversity they possess intrinsic value, a value derived from their evolutionary history or ecology, or both. This view takes an ecocentric position regarding natural value. It could also be argued on more humanistic grounds that whales (again, considered in the aggregate) should be protected for their unique beauty or cultural resonance, qualities that transcend their utility. Society could value whales for their role in the delivery of ecosystem services, including ecotourism, such as whale watching—a view that recognizes their contributory value for marine primary productivity. Encounters with whales in the wild may also hold transformative value for humans, prompting for some the reevaluation of their material values and preferences. And researchers might make the argument that whales should be saved because of their value for scientific study, including investigations into whale biology, ecology, and behavior; work that could also pay dividends for conservation science and management.

A different range of answers to "why conserve?" would issue from a zoocentric position, which is less concerned with the population- and system-level efforts of most biodiversity conservationists and more focused on the interests or dignity of whales as considered as individuals (that is, as advanced beings that possess aspects of moral personhood, or simply as sentient animals that can suffer). A biocentric view would proceed from similarly individualistic premises, although the moral status of whales is seen to hang less on their advanced mental capacities and more on their status as living beings with biological interests that humans can either subvert or promote. The more vociferous antiwhaling arguments often reflect either a zoocentric or bio-



centric ethic (or a hybrid of these views) in objecting to what is perceived as the immoral taking of a complex being's life. The zoocentric/biocentric stance is well illustrated by the recent Rights for Cetaceans initiative spearheaded by the Helsinki Group, a team of scientists and philosophers advocating moral and legal rights for whales and dolphins under the individual "personhood" category.

Although a sustainable use model such as the whale shares approach is not likely to be acceptable under a strict zoocentric or biocentric principle prohibiting harms to individual animals that would occur under any policy of managed use, in principle it could be supported by an ethically diverse array of socially, ecologically, and evolutionarily oriented conservationists who place a premium on the health and long-term viability of biological populations. Yet if the whale shares approach is effective, it would be expected to result in fewer harms to individual whales (by reducing the total take), an outcome that would uphold conservationists' ethical commitment to sustainable whale populations and zoocentrists' and biocentrists' desire to see fewer harms and deaths.

The issue then becomes one of deciding whether the value of ideological purity surrounding the inviolability of animal rights, or of the biological interests of the individual whale, forecloses the pursuit of a policy with the potential to reduce these harms in the aggregate but not end them entirely. By pointing this out, we are not trivializing the difficulty and moral stakes of such choices, but only reinforcing the idea that the international whaling challenge may require conservationists, antiwhaling groups, and animal welfare/rights supporters of a variety of ethical persuasions to come to grips with the tradeoffs and unavoidable political and policy pragmatics of the issue. This means supporting the experimental development of instruments that might be effective in slowing the unsustainable harvest of whale populations, as well as easing the collective suffering of some of the planet's most remarkable beings.

Sandel argues, and we certainly agree, that market reasoning requires moral reasoning in order to be fair and to keep the former from corrupting the moral norms and at-

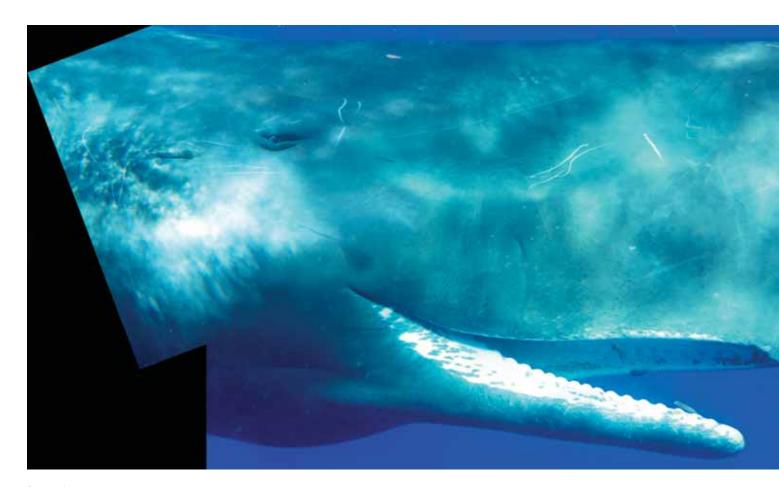
titudes that society attaches to wild species. But his insistence that society will not be able to decide whether to create markets in such goods until it comes to a consensus about the proper way to value them is unrealistic, given that philosophers and others have been arguing over the moral status of nonhuman species for many decades, if not centuries. It is also risky to the extent that it seems to tether any proposal for species conservation employing economic instruments to the precondition of resolving foundational and vexed questions around the moral status of wildlife.

This is not to reject the deeper moral and philosophical project that Sandel describes, but rather to assert that society cannot wait for its resolution before even considering adopting alternative means for protecting species of high conservation value. Although Sandel is right to worry about the extinction of moral norms and attitudes toward species preservation as a result of marketization, he does not worry enough about the extinction of biodiversity and the high stakes of global conservation efforts that may require experimental approaches (including the use of market instruments), approaches joined by the kind of moral analysis and argumentation that he and many environmentalists and antiwhaling advocates champion.

Ethics and experimentalism

The IWC moratorium's failure to protect some whale populations from decline due to commercial harvest is grounds for a more experimental design for conservation policy. Novel and out-of-the-box solutions, such as the whale conservation market idea, are needed to move society beyond the current policy gridlock. Under this plan, quotas for hunting of whales would be traded in global markets. But again, and unlike most "catch share" programs in fisheries, the whale conservation market would not restrict participation in the market; both pro- and antiwhaling interests could own and trade quotas. The maximum potential harvest for any hunted species in any given year would be established in a conservative manner that ensures sustainability of the marketed species (that is, harvest levels would be established that would

A truly principled approach to whale conservation today, and to biodiversity conservation more broadly, requires conservationists to be pragmatic.



BRYANT AUSTIN, Sperm Whale Composite Portrait One, West Indies, C-Print, 6 x 10 feet (1:1 scale), 2009.

Opposite: BRYANT AUSTIN, Dwarf Minke Whale Composite One, Great Barrier Reef, Australia, 2009, exhibited at the Tamada Museum, Tokyo, 2010,

BRYANT AUSTIN, *Dwarf Minke Whale Portrait 1186*, Great Barrier Reef, Australia, C-Print, 24 x 36 inches (1:1 scale, cropped), 2009.





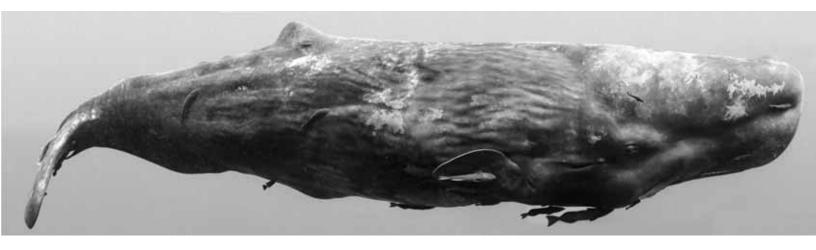
BRYANT AUSTIN, *Dwarf Minke Whale Portrait 1294*, Great Barrier Reef, Australia, C-Print, 24 x 35 inches (1:1 scale, cropped), 2009.

Any future whale conservation market must be securely anchored in a sense of shared responsibility for the conservation of whales and for the protection of globally threatened biodiversity.

not permit taking more individuals than can be replaced) and maintains their functional roles in the ecosystem. The actual harvest, however, would depend on who owns the quotas. Conservation groups, for example, could choose to buy whale shares in order to protect populations that are currently threatened; they could also buy shares to protect populations that are not presently at risk but that conservationists fear might become threatened in the future.

Although market-based incentives have helped resolve many environmental challenges, conservation markets still play a relatively minor role in wildlife management. Establishing property rights for environmental goods and allowing trade between resource extractors and resource conservationists may offer a path forward in the global management of whales, one that is superior to the current situation created by the moratorium. Indeed, we and various other observers maintain that such a market could ensure the persistence of imperiled populations while simultaneously improving the welfare of resource harvesters. Although much research is needed before such an approach is implemented, the approach offers a way for both whalers and conservationists to "win" in a workable management regime. Such new ideas are urgently needed, given the failing global moratorium on whale hunting.

At the same time, we believe that it remains imperative to link institutional experimentation with economic policy instruments such as whale shares with the deeper moral commitment to species conservation. That is, any future whale conservation market must be securely anchored in a sense



BRYANT AUSTIN, Sperm Whale Calf Composite One, West Indies, C-Print, 60 x 240 inches (1:1 scale), 2009.

of shared responsibility for the conservation of whales and for the protection of globally threatened biodiversity. Efforts to expand and enhance environmental education and build greater public awareness and appreciation of whales as part of a broader environmental ethic are therefore essential; these efforts will necessarily be part of any principled and sustainable conservation strategy.

Despite the long history of the debate, the use of economic and other policy instruments to achieve conservation goals, and the use of what might be called the "heartsand-minds" approach to building a sense of moral responsibility for conservation, are not mutually exclusive efforts. We suggest, in fact, that an effective and ethical conservation effort requires that society pursue both types of projects as part of a concurrent, multipronged policy to build institutional capacity and international support for whale conservation. This adoption of an experimental and ethically moored attitude toward whale policy is in step with current strategic and philosophical trends within the wider conservation community to balance moral ideals concerning the protection of global biodiversity with a policy and political realism, as exemplified by the International Union for Conservation of Nature's Biosphere Ethics Initiative.

There are, however, real challenges facing this task of broadening and informing the conservation ethic. One is educational: The public often does not possess much knowledge about biodiversity loss or the policy agendas and efforts of conservation organizations and governments to respond to these declines. For example, in a study of whale

conservation awareness among college students in the United States, a group led by E. C. M. "Chris" Parsons, an internationally recognized expert on cetaceans who currently is based at George Mason University in Virginia, found that the majority of their study sample did not know which whales species were the most threatened, had not heard of the IWC, and did not have a clear grasp of U.S. policy toward commercial and subsistence whaling. These deficits clearly will need to be addressed if the "minds" component of a hearts-andminds campaign is to be successful.

It is also is important to point out that the integrated moral and pragmatic approach to whale conservation described here is squarely in line with one of the most significant traditions in conservation philosophy in the United States. Despite his frustration with economic arguments for conservation, Aldo Leopold, a hero to many biodiversity scientists and advocates, did not wish to purge economic values and tools from conservation policy debates. Rather, he sought to create a more significant space for ethical reflection and argument in environmental decisionmaking and thereby balance utility with beauty and morality in the complex societal calculus of managing and conserving nature.

Leopold implored society to stop thinking about environmental questions as solely an economic concern, not to ignore economic considerations in the formulation of good conservation policy. He challenged society to seek the wise harmonization of economics, ethics, and aesthetics in environmental decisions; a challenge yet to be fully achieved. And Leopold recognized, as today's society should, that the evaluation of conservation policy proposals requires the experiential testing of ideas rather than a priori judgments driven by dogmatic convictions about the efficacy of certain strategies and policy tools in practice.

Toward principled pragmatism

Whale conservation markets may not achieve Leopold's ideal integration in conservation policy. But properly developed and implemented, and motivated by a shared commitment to sustaining wild species, they could become important tools for conserving declining whale populations, an activity undertaken for the good of these extraordinary marine species as well as for their contribution to human culture and society. Although uncompromising ethics focused on the interests or rights of whales as individuals have long inspired many antiwhaling activists, the more absolutist versions of these principles can pose a challenge to more pragmatic efforts to experiment with policy instruments that might prove more effective than the IWC moratorium. Regardless, we believe that only experience will be the judge of whether such alternative conservation programs work in practice, and reflective experience will provide the means for improving these policy instruments and strategies over time.

The debate in biodiversity conservation between economics and ethics, or between pragmatism and principle, is in many ways a misguided contest, one that assumes that there exists a deep philosophical division between environmental ethics and societal action. Being pragmatic in whale conservation policy does not mean selling out on conservationist principles.

Rather, we suggest that a truly principled approach to whale conservation today, and to biodiversity conservation more broadly, requires conservationists to be pragmatic. That is, they must be open to policy experimentation where current approaches do not seem to be working, as with international whale conservation, and they must be accommodating of the plurality of interests, values, and methods that increasingly define the wider conservation community. Ethical convictions about society's duties to sustain whale populations

have an important motivational role in any principled and pragmatic conservation policy moving forward.

Recommended reading

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