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The Ivory Bandwagon

International Transmission of Interest-Group Politics

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WILLIAM H. KAEMPFER
AND
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In October 1989 the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), meeting in Lausanne, Switzerland, voted to classify the African elephant as an endangered species and to make trade in ivory illegal. That policy decision displeased many conservation experts in Africa and elsewhere, who argued that a ban on the ivory trade would prove disastrous for the African elephant. Opponents of the ban favored a free-market approach that would offer rural Africans tangible benefits as an incentive to preserve their elephant herds and would help to compensate for the costs of coexisting with elephants.

The free-market approach presupposes consumptive utilization of elephants, which in turn requires that Africans have access to a market for ivory.¹ The 1989 CITES treaty abolished the legal ivory market, overriding the protests of the scientists and economists who advocated consumptive utilization. The blanket ban on ivory trading prevailed until June 1997, when it was partially lifted, at the request of southern African countries, to allow limited sales of existing ivory stockpiles. Widespread ivory trading remains illegal, however, under the international regime established by the CITES treaty.²

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How could such a policy have been implemented despite considerable evidence that a ban on ivory trade would have the perverse effect of exacerbating the decline of the African elephant? We try to answer this question by examining the interest-group pressures that led to the CITES decision. We show how lobbying and publicity efforts by a small group of animal-rights activists and preservationists, whose views did not coincide with those of mainstream conservationists, ultimately succeeded in generating broad-based public support for an ivory-trade ban. Our analysis provides a case study of the spread of a political position, publicly articulated, from one interest group to another and even from one country to another. Starting from a very small base of support, a policy with little scientific respectability can easily snowball into a national and international program with unstoppable momentum, and thus tiny special-interest groups can wield an enormously disproportionate degree of influence in the political process.

Elephants: Menace or Treasure?

Elephants can do a considerable amount of damage to livestock and crops, and they are extremely dangerous to humans, more so than most other wildlife. Elephants spend sixteen hours a day eating. An adult bull consumes 300 pounds of trees and 50 gallons of water per day and can weigh more than 5,000 kg. An elephant clan's home range can cover up to three thousand square kilometers, depending on the availability of water and forage (Kreuter and Simmons 1995, 148). "A herd of elephants goes through an area like a slow tornado, snapping off branches and uprooting trees, leaving devastation behind" (Bonner 1993, 101). No wonder that the prevailing sentiment toward elephants among rural African villagers is one of fear (Bonner 1993, 28, 221–23).³

Africans who compete with wild animals for land and food have strong incentives to kill them (Kreuter and Simmons 1995, 148). Indeed, rural Africans have traditionally hunted elephants and other game. Hides were used for clothes, shields, and containers, and ivory and rhino horn were carved into ornaments and jewelry. European and Arab traders in East Africa purchased ivory and rhino horn for sale abroad. By the 1950s many East Africans were engaged in widespread commercial hunting to supply meat and skins to growing urban populations (Bonner 1993, 43, 45). Conservation

1. On free-market approaches to environmental and conservation issues, and on differences of interpretation among practitioners of these approaches, see Cordato 1997 and Hill 1997.

2. In February 1999 the ban was relaxed to permit Botswana, Namibia, and Zimbabwe to ship some ivory to Japan ("U.N. Legalizes Sale").

3. In Kenya's Laikipia region, for example, elephants have not only trampled crops and devastated grazing land but also torn up water pipes and smashed dams. Elephants destroy the simple structures erected by villagers to store their harvested corn, and they typically linger near the water holes where the village women fetch water (Bonner 1993, 28, 213–14).

was viewed as a less-than-honorable profession by many Africans, for whom wild animals were a potentially life-threatening liability, and such anti-conservation sentiments led to an escalation of hunting in post-independence Africa (Kreuter and Simmons 1995, 149).

The attitude of rural Africans toward elephant conservation contrasts starkly with that of many Westerners. Africans living among the elephants incur all of the costs of allowing elephants to exist in the wild, but the benefits accrue largely to Westerners, who view elephants as “an important conservation symbol with high aesthetic and emotional appeal” (Kreuter and Simmons 1995, 149). Westerners obtain “existence value” from the elephants, a benefit deriving from the knowledge that elephants continue to exist in the wild even if the Westerners in question will never personally have any contact with them (Kreuter and Simmons 1995, 149; ‘t Sas-Rolfes 1998, 17).⁴

In 1933 the European powers that had African colonies held a conference in London to discuss conservation. Although some conservationists at the time were motivated by a desire to preserve biological diversity, others were big-game hunters who wanted to ensure a steady supply of wildlife for hunting safaris (Bonner 1993, 39–46). The 1933 conference called for the creation of a system of national parks in which licenses would be required for access to the game, whether for photography or for hunting. The philosophy underlying the parks was one of separating wildlife from indigenous people, thus preserving the wildlife in a pristine state as a part of the country’s national heritage and primarily for the benefit of foreign visitors.⁵ Human populations were relocated to areas outside the parks, often resulting in disruption of their agricultural economies and consequent impoverishment.⁶

But the notion that wildlife and rural Africans can be separated is fundamentally flawed. Elephants in particular are notoriously difficult to confine, and they have broken through virtually every type of barrier, including electric fences, which they tear down with their tusks. Any barrier that might successfully keep elephants within a large perimeter would require a technology far too expensive for rural Africa (Bonner 1993, 215–16). By roaming around in agricultural areas adjacent to the parks, the elephants became pests to African farmers and ranchers, who were then even more inclined to shoot them. This issue of animal damage to agriculture is important for the survival of wildlife species, especially inasmuch as 80 percent of Kenya’s wildlife live *outside* parks; for elephants in Africa as a whole the figure is 50 percent (Kreuter and Simmons 1995, 158; Bonner 1993, 223).

4. For a critique of the notion of existence value, see Nelson 1997.

5. Fewer than 5 percent of the visitors to Kenya’s parks are Kenyans, and the percentage of indigenous use is higher in Kenya than in any other African country except South Africa (Bonner, 1993, 221).

6. An example is the case of the Masai who were evicted from the Serengeti National Park and Ngorongoro Crater in Tanzania (Bonner 1993, 179–93).

Another problem with the separation approach is that the parks require game wardens or rangers to enforce laws against hunting and poaching. But African countries are among the poorest in the world, and expenditures on maintaining and protecting the parks are low.⁷ The consensus among conservationists is that, ideally, \$400 per square kilometer must be spent annually to protect elephants and rhinoceroses from poachers and that at least one ranger per fifty square kilometers is required. Yet in the late 1980s Kenya, one of the wealthier countries in sub-Saharan Africa, was spending \$10 per square kilometer in Tsavo National Park, and Zambia had only one warden per four hundred square kilometers of parks. At \$400 per square kilometer, Tanzania would require \$48 million annually to adequately protect its parks; that country's actual wildlife expenditure in 1991 was less than \$5 million. Tanzania was paying its game rangers a salary of about \$30 per month, and Zambia less than \$20 per month (Bonner 1993, 93–94, 195).

With such low wages and minimal resources for law enforcement, it is not surprising that corruption is rampant among game wardens and other officials in Africa's parks. In East Africa in particular, corruption in game parks is so entrenched that it has severely undermined conservation efforts. Game wardens are easily bribed to ignore, and even assist, poachers.⁸ Poorly paid rangers poach out of desperation for food and to support their families. Local officials have skimmed about 40 percent of the entrance fees paid by visitors to Kenya's Maasai Mara. Some of the large lodges in the park have routinely underreported occupancy rates in order to avoid remitting taxes to the authorities (Bonner 1993, 134–36). In all countries where poaching has been a serious problem—Tanzania, Kenya, Congo, Zambia—government officials at the highest levels have been involved in the ivory trade (Simmons and Kreuter 1989, 47).⁹

In 1977 such corruption forced Kenya to ban hunting altogether.¹⁰ The hunting ban resulted in the forfeiture of significant revenues for Kenya, because the going

7. Expenditure is low in absolute terms but relatively high as a percentage of government budgets. This percentage ranges from 0.2 percent in Botswana to 0.45 percent in Tanzania and 0.6 percent in Zimbabwe. By contrast, the U.S. government spends 0.15 percent of its total budget on management of protected areas (Kreuter and Simmons 1995, 157).

8. In 1989 the newly appointed head of Tanzania's wildlife department launched a serious campaign against elephant poaching, as a result of which wardens were caught with ivory in their possession. It turned out that the wildlife department itself was actively involved in poaching (Bonner 1993, 134).

9. Traders in Kenya arranged with poachers in advance to buy ivory, some of which originated from elephants killed in Tanzania and Sudan and then smuggled into Kenya. When government inspectors asked store owners for proof that they had legally acquired wildlife products, the owners simply bribed the inspectors (Bonner 1993, 216). In the 1970s a Kenyan game department official reported that between 10,000 and 25,000 elephants were killed for their ivory each year, and that two assistant ministers responsible for wildlife management were involved in poaching and smuggling (Bonner 1993, 51; Simmons and Kreuter 1989, 47). Tanzania banned all trade in tusks in 1987, yet a year later a member of parliament was caught with 105 tusks in his official truck (Simmons and Kreuter 1989, 47).

10. Many professional hunters had been shooting more animals than their permits allowed and then bribing rangers not to report them to the game department (Bonner 1993, 242).

price for hunting an elephant in South Africa is \$12,000, and a rhino fetches \$28,000 (Anderson and Hill 1995, xii). In 1989 a pair of uncarved elephant tusks sold for an average of \$2,000 (Simmons and Kreuter 1989, 47).

Few of the benefits of the parks trickle down to rural Africans living in the vicinity. Unless they become poachers themselves, rural Africans typically see little benefit from wildlife conservation. Pervasive corruption siphons off the revenues to officials at all levels of government, and only a small fraction of tourism earnings accrues to local residents. More than 100,000 tourists a year visit Kenya's Maasai Mara, generating millions of dollars in revenue. Yet a 1988 study of the Mara found that less than 10 percent of gross tourism revenues accrued to the locals (Bonner 1993, 220). Although the benefits to adjacent villagers are elusive, those villagers pay the price of living with the wildlife: their personal security and property are constantly threatened by marauding wild animals.

Quite apart from poaching, attempts to contain wildlife in parks and nature reserves have sometimes turned out to be disastrous because of habitat imbalances that are created when numerous species are confined in a given area. Unable to range widely across the countryside in search of food, elephants put enormous pressure on the land in the parks. They destroy trees and other vegetation, leaving the land exposed to the elements. By the late 1960s the elephant population in Kenya's Tsavo National Park had grown to an unsustainable level of 40,000. Some conservationists suggested culling the elephants in the park, but culling is anathema to many in the West.¹¹ In any event, the culling was not done, and a severe drought hit Tsavo in 1969–70, causing some 6,000 to 10,000 of the park's elephants to die of starvation (Leakey and Lewin 1996, 204; Kreuter and Simmons 1995, 148). Meanwhile, in areas outside protected reserves, the opposite problem occurs—namely, bush encroachment due to diminished cyclic thinning by elephants and overgrazing by domestic livestock. Maintaining elephant-induced ecological processes over wider areas than those encompassed by national parks would help to promote biodiversity on the African savannas; but it would inevitably exacerbate human–elephant conflicts if property rights did not provide positive incentives for rural Africans to conserve elephants (Kreuter and Simmons 1995, 148).

In property-rights terms, the problem of elephant conservation is that legal title to the elephants is typically vested with the state in which they occur (the so-called range state) or its designated agencies, but because of low funding and internal corruption most states' ownership rights are not effectively enforced. When elephants are, in effect, an open-access resource, as they continue to be in much of Africa, there are no owners to insist that potential users (consumptive or nonconsumptive) pay the opportunity costs of their use.¹² Moreover, the public-good nature of elephant existence means that

11. And not only in the West. Kenyan conservationist Richard Leakey presents an impassioned argument against both culling and trophy hunting. See Leakey and Lewin 1996, 209.

it is impossible to charge a price for existence value. Because individuals cannot be excluded from enjoying the benefits of knowing elephants exist in the wild, they face an incentive to under-reveal the true value they place on the elephants' continued existence and to enjoy a free ride in nonconsumptive use of the elephants (Kreuter and Simmons 1995, 150).

However, the lot of the elephant has varied across Africa. Although Kenya, Tanzania, Congo, and Zambia have seen a diminution of their elephant herds due to poaching, corruption, and poor management, the countries of southern Africa—Zimbabwe, Botswana, Namibia, and South Africa—have practiced successful conservation, and hence southern African elephant populations are not at risk.¹³ The fundamental reason for the greater success in southern Africa is that, for the most part, wildlife authorities there have not pursued the rigid separation strategy of East Africa, with all its attendant flaws. Consumptive utilization has been the way of the southern Africans. This approach rests on the recognition that people cannot realistically be separated from wildlife and that, so long as people and wildlife do live together, the future of the wildlife depends crucially on the willingness of the people to tolerate the animals in their midst. If rural people are to support conservation, they must gain tangible benefits by doing so (Bonner 1993, 216, 223). Farmers' antagonism toward the animals can be mitigated only if they are compensated for the damages caused by elephants and other wildlife. Consumptive utilization embeds wildlife in the economic life of local cultures (Kreuter and Simmons 1995, 157–58).

The most successful programs of consumptive utilization are founded on the creation of community-based usufruct rights to wildlife, which mitigate the effects of its open-access status (Kreuter and Simmons 1995, 150).¹⁴ These rights are vested in the local people who live among or adjacent to the animals. At least some

12. The problem with resources that are not controlled by a single agent, as in the open-access or common-property case, is the "use it or lose it" incentive. For example, the American bison was hunted nearly to extinction because each hunter had an incentive to kill an animal before someone else did (McPherson and Nieswiadomy 1998, 2). Effective governance of a common-property resource by local communities becomes especially problematic when the resource is mobile across community boundaries (Hill 1997, 391–92), as is the African elephant.

13. It is not coincidental that the countries experiencing the most rapid declines in elephant populations are those with the most political instability, wars, coups, repressive governments, corruption, and attenuation of private property rights. McPherson and Nieswiadomy (1998) point out that countries lacking democratic institutions and secure property rights are unlikely to be able to control poaching successfully. Moreover, political strife and war lead directly to elephant slaughter as soldiers seek ivory revenues to finance their campaigns. In an empirical cross-country study of the determinants of elephant populations in Africa, McPherson and Nieswiadomy (1998) demonstrate that political instability and unrepresentative government are associated with decreasing herd sizes, whereas countries that recognize private property rights to wildlife have experienced, on average, a 15 percent higher annual growth rate of elephant populations.

14. Economists have long recognized that private property rights generally favor conservation of wildlife species whereas collective rights encourage poaching. See, for example, Vorhies and Vorhies 1993. Under collective rights there is no residual claimant who can potentially prosper by superior game management (Hill 1997, 393–94). See Kremer and Morcom 1996 for a formal analysis of the conditions under which alternative preservation policies toward common-property resources such as elephants are likely to produce desirable results.

of the revenue from commercial utilization of the wildlife, whether it comes from tourism, hunting, or the sale of animal products such as meat, hides, or ivory, accrues to local communities. Because the communities may sell access to “their” wildlife to the operators of hunting or photo safaris, they obtain real benefits from the animals and have a strong incentive to invest resources to protect them from poachers (Kreuter and Simmons 1995, 150).¹⁵

Consumptive Utilization

According to Raymond Bonner (1993, 33, 286), the two most cost-effective and successful conservation programs in Africa are the community guard program in the Kaokoveld in northwest Namibia and CAMPFIRE (Communal Areas Management Program for Indigenous Resources) in Zimbabwe. Both are based on the principle of consumptive utilization.¹⁶

In the Kaokoveld, poaching started on a large scale in the mid-1970s after a heavy influx of whites into the area. The community guard program, the brainchild of Garth Owen-Smith, a Kaokoveld conservationist, was devised in 1982 as a response to the poaching as well as to the poverty of the Himba and Herero people, pastoralists who had lost 80 percent of their stock in the devastating drought of 1979–82. The Himba and Herero depended increasingly on international aid for survival, and they began to expand their game hunting. Owen-Smith realized that conservation would succeed only if the local people received some tangible benefits from the presence of the wildlife. Using funds provided by the Endangered Wildlife Trust, a private organization based in Johannesburg, Owen-Smith recruited volunteer rangers, who were paid the equivalent of \$25 per month plus food and household supplies. The program also encouraged villagers to make crafts for sale to tourists. A local Conservation and Development Committee was established, its revenue derived from a tax of \$10 per tourist paid by tour companies, safari operators, and game lodges. The Himba and Herero volunteer auxiliaries turned out to be far more successful at identifying and tracking poachers than were the overextended and underfunded government officials. The task of the auxiliaries was to give information on the whereabouts of poachers to the local headmen, who apprehended and punished the perpetrators. The program succeeded in curbing poaching, and by 1987 so many animals had returned to the area that the villagers experienced something of a tourism boom (Bonner 1993, 21–22, 26, 31, 33).

15. On the effectiveness of community-based wildlife management programs, see Gibson and Marks 1995.

16. Our description of both programs relies heavily on Bonner’s (1993) account. Subsequent applications of the consumptive utilization approach include Zambia’s Administrative Management Design for Game Management Areas (ADMADÉ) and Luangwa Integrated Rural Development Project (LIRD), Botswana’s Natural Resources Management Project (NRMP) and Tanzania’s Selous Conservation Program, which started in the early 1990s (McPherson and Nieswiadomy 1998, 7–8).

The CAMPFIRE project in Zimbabwe operates on a much larger scale. During the colonial period, when Zimbabwe was known as Southern Rhodesia, tribal trust lands—referred to as communal lands—were set aside for rural blacks. Those lands include some of the poorest in the country; in many such areas wildlife is the only valuable resource.¹⁷ CAMPFIRE was started in 1982 by the Zimbabwe government, but it languished at first for lack of funds. The project really came to life in 1988 when it was adopted by a local nonprofit development organization, Zimbabwe Trust. The primary goal of the trust's founders was not conservation but to find an approach to promoting development and alleviating poverty more workable than those of international aid agencies, which seemed mainly to produce more dependency. Zimbabwe Trust allocated funds to help rural Africans in the communal lands to establish their own wildlife management programs that would incorporate consumptive utilization practices to increase their wealth and improve their nutrition (Bonner 1993, 253, 262–63). The program's main objective was to establish cooperatives with territorial rights over well-defined communal resource areas (Kreuter and Simmons 1995, 160). Under CAMPFIRE, villagers in communal lands may cull wildlife for meat, sell hunting concessions, and set up tourist joint ventures. Previously impoverished people in areas such as Nyaminyami on the shores of Lake Kariba and Guruve on the northern border with Mozambique have been able to increase their incomes substantially through CAMPFIRE. Wildlife revenues have enabled villagers in those regions to build schools, clinics, and corn-grinding mills.¹⁸ Unlike park entrance fees and other game-reserve revenues throughout Africa, these funds do not accrue to the central government treasury but go directly to the communal wildlife management trusts. In 1989 Nyaminyami used the funds to hire and equip twelve game rangers at a salary of \$100 per month, creating one of the best-paid, best-equipped ranger units in Africa (Bonner 1993, 268). Wildlife revenues are also allocated to compensate villagers for damage inflicted by wild animals.¹⁹ Besides yielding hunting revenues, tourist operations offer enormous economic potential to the communal lands of Zimbabwe.²⁰ Bonner (1993, 263) cites a 1990 estimate that Nyaminyami, originally one of the

17. In 1989, 10,000 elephants lived on Zimbabwe's communal land (Simmons and Kreuter 1989, 48).

18. In 1989 Nyaminyami earned enough from hunting revenues to cover the costs of its conservation program. In that year, the governmentally determined trophy fee for an elephant was \$3,750 (Bonner 1993, 268).

19. Nyaminyami's compensation schedule paid Z\$20 for the loss of a goat and Z\$20 for a 90-kilogram bag of corn or sorghum (in 1989 Z\$2 was equivalent to US\$1). When elephants or buffalo trample crops in the field, the local wildlife trust pays a settlement based on average yield (Bonner 1993, 273).

20. The Nyaminyami Wildlife Management Trust was offered 10 percent of after-tax profits by a tour company in exchange for the right to lease land on Lake Kariba's Bumi Bay for a game-viewing camp. Another company offered 5 percent of its gross income, amounting to Z\$100,000 a year, for the right to develop a luxury camp, also on the shores of Lake Kariba. These examples contrast starkly with the experience of East Africa, where tourism revenues from game parks generally failed to trickle down to neighboring residents to any significant degree (Bonner 1993, 219–23, 273–74; Simmons and Kreuter 1989, 47).

poorest areas of Zimbabwe, would be generating \$500,000 a year from wildlife by the mid-1990s.

Apart from CAMPFIRE, Zimbabwe has attempted to foster custodial and participatory relationships between rural people and protected areas in general (Simmons and Kreuter 1989, 49). In the 1980s the Zimbabwe Department of National Parks and Wildlife Management gave peasant communities the right to hunt specified numbers of elephants and other game. The communities are allowed to exercise the right themselves or sell hunting permits to commercial operators. Under this system, villages that successfully increase their wildlife herds are rewarded with a greater number of hunting permits, so their incentive to preserve herds is further enhanced (McPherson and Nieswiadomy 1998, 3). For example, one subsistence community received hunting permits for elephant and buffalo in exchange for relinquishing some of the community's land and voluntarily refraining from poaching in Gona-re-Zhou National Park. The permits were sold to a safari operator; part of the proceeds was used to develop community facilities, and the rest was distributed directly to community members who had lost crops to animal damage. When animals that destroy property are killed by National Parks personnel, income from the sale of their hides and ivory accrues to neighboring communities (Simmons and Kreuter 1989, 48).

Consumptive utilization approaches to conservation have been tried also in East Africa, although on a much smaller scale than in southern Africa. When Masai pastoralists were evicted from Amboseli Park in Kenya in 1974, they responded with a campaign against the wildlife, spearing the leopards and rhino, which are great tourist favorites. To stop the slaughter, the government promised annual payments to compensate the Masai for the loss of prime grazing land and watering spots and for tolerating wildlife on their property adjacent to the park. When the payments were made, the poaching stopped.²¹ In 1992, when Richard Leakey, the head of Kenya's wildlife department, devised a revenue-sharing scheme that paid 25 percent of Amboseli's gate receipts to people living near the park, "the first thing they did with the money was hire fourteen of their own game rangers to protect the wildlife—the very wildlife that is such a menace to them, which suddenly becomes an acceptable menace when there is money to be made from it" (Bonner 1993, 230). Also exemplifying consumptive utilization is a scheme devised in 1985 by safari operator Robin Hurt. Appalled by the decimation of elephants and rhino in Maswa Game Reserve on the southern edge of Tanzania's Serengeti National Park, Hurt developed a plan to pay villagers living on the outskirts of Maswa for turning in poachers, rifles, and snares, to pay them to work as rangers, and to give the village council a share of his safari revenue for community projects. Hurt's program succeeded. In its first six months, sixty-eight poachers were caught and convicted and seven poachers' camps were discovered and destroyed, five

21. Later the payments stopped, too, when the government ran out of funds.

inside Serengeti, and the local village of Makao acquired a shining new corn-grinding mill as a clear *quid pro quo* (Bonner 1993, 228, 235, 249–50).

The difference between these few consumptive utilization experiments in East Africa and their southern African counterparts such as CAMPFIRE and the Kaokoveld project is that in East Africa, the benefits received by rural Africans are partial. Rather than having full usufruct rights to the wildlife as in CAMPFIRE, the villagers in Kenya and Tanzania receive only a small portion of the income generated by their conservation efforts. The pattern throughout much of Africa is that wildlife proceeds go into national treasuries, which allocate expenditures in accordance with the preferences of the politically influential urban elite (Bonner 1993, 274). Successful conservation, however, requires that the benefits of consumptive utilization accrue directly to those interested and affected parties whose decisions are instrumental in controlling poaching and protecting wildlife (Vorhies 1996).

The International Propagation of Special-Interest Policies

As a first step toward understanding the origins of the international ivory-trade ban, we now describe a conceptual framework for dealing with the question of how the beliefs and preferences of small interest groups—even if they do not, at the outset, reflect broad public opinion or scientific knowledge—can spread throughout a political system, and even from one national polity to another. Several rational-choice models explain how the policy position or preference of a relatively small number of individuals can propagate itself and gain the acceptance of a much larger number. This propagation process, variously characterized in terms of reaching a critical mass or threshold (Kuran 1995; Witt 1989) or a tipping point (Margolis 1998), as herd behavior (Devenow and Welch 1996), or as an “informational cascade” (Bikhchandani, Hirshleifer, and Welch 1992), generally implies a sudden and often difficult-to-predict bandwagon phenomenon.

Here we draw on the threshold approach of Timur Kuran (1987a, 1987b, 1989, 1991, 1995) and on our own previous analysis (Kaempfer and Lowenberg 1992). Individuals are assumed to obtain utility from conforming with certain beliefs even if conformity requires a sacrifice of income or other goods. For example, Robert Higgs (1987) has argued that an individual’s utility depends not only on a basket of goods consumed but also on “the degree to which one’s self-perceived identity corresponds with the standards of one’s chosen (or merely accepted) reference group, that is, with the tenets of the ideology one has embraced” (43). Groups, in essence, reward their supporters with selective incentives, such as the right to share in a feeling of group identity or “political presence” (Uhlener 1989). Individuals obtain “reputational utility” from supporting the policy espoused by a certain group, and that utility increases with the size of the group or the number of its supporters (Kuran 1987b).²²

22. The notion of reputational utility is due to Akerlof 1980.

Reputational utility increases with group size because the private payoff to a nonactivist from supporting a group's policy goal increases as more people endorse that goal. Individuals "fortify their reputation as supporters of a given cause by rewarding other supporters and by withdrawing favors from opponents" (Kuran 1987a, 645). People wishing to draw attention to their decision to support a group do so partly by complimenting and rewarding other supporters, because such actions carry more weight than a mere verbal declaration. "Given that an individual can win praise from both the members and supporters of a pressure group, society comes to believe that the benefit from supporting a group rises with the size of the group's following" (Kuran 1987b, 61).²³ Therefore, the individual obtains greater utility from joining a larger rather than a smaller group of peers because the larger group creates a greater sense of group identity. Of course, as Kuran points out, the individual's desire for a good reputation, and the material and psychic rewards that go along with it, must be tempered by his integrity: a rational individual will falsify his personal preferences in order to display outward support for a group only to the extent that the disutility he obtains from compromising his personal beliefs does not outweigh the reputational utility thereby attained.

The proportion of the population believed to support a given policy or interest group is referred to by Kuran as the "collective sentiment" (1989, 46). Each individual has a private threshold level of population-wide support that will induce him to join the supporters. One individual, for example, might be willing to join if 40 percent of the population has already done so, whereas another individual might require 60 percent of the population to outwardly favor an outcome before he will contribute to their efforts. Kuran (1991) shows that, depending on the cumulative distribution of private thresholds, it is possible for a critical mass of population-wide support for a group to exist: if the perceived collective sentiment exceeds that critical mass by even one individual, support for the group could quickly spread to embrace a large percentage of the population.

The notions of preference falsification and collective sentiment are important in explaining how a sudden and surprising surge of support for a position, previously thought to have few adherents, might easily occur. In the context of a political revolution, such as those in Iran in 1979 and eastern Europe in 1989, many individuals typically conceal their true preferences for political change until they are convinced that a sufficiently large proportion of their fellow citizens is favorably disposed (Kuran 1991). The concept of preference falsification can also help us understand instances of collective conservatism, when individuals who privately support a given change in policy fail to speak out in favor of it because they believe that most of their contemporaries are opposed (Kuran 1987a).

23. Along similar lines, Howard Margolis (1990) demonstrates that "social motivation" occurs when individuals follow a path-dependent rule of behavior, choosing to allocate resources at the margin to the pursuit of social outcomes if the amount of resources they have already spent on such outcomes is small relative to the amount that others are spending.

The availability of reputational utility does not negate the importance of free-riding in any public-good situation. The actual collective outcome sought by a group might not enter into the individual's decision calculus at all, and yet he might choose to support the group in order to obtain reputational rewards or avoid reputational sanctions, such as ostracism. It follows that interest groups or political parties can foster greater support if they can persuade individuals that their platforms are already popular. This relationship helps to explain why the leaders of groups or parties often expend a great deal of effort trying to convince people that their policies command the support of a considerable portion of the public (Kuran 1987b, 72; Uhlener 1989, 272).

The leadership of an interest group might propagate public support for its policies by three distinct methods. First, the group might succeed in lowering private thresholds for collective action, perhaps by saturating the public with information or publicity designed to alter private preferences in favor of the group's objective. Second, the group might increase the reputational rewards available to individuals contributing to the group's cause, perhaps by convincing potential contributors that the group has a good chance of success in attaining political influence or power to make appointments in government. Third, the group might try to convince individuals that a critical mass of citizens already supports its policies. Any one of the three—a lowering of private thresholds, an increase in reputational utility, or an increase in collective sentiment—can initiate a bandwagon process that propagates support extensively among the population.

Such a bandwagon process may have an important international dimension. Specifically, events abroad or the pressures of foreign interest groups can serve as catalysts for all of the three mechanisms. First, individuals might revise their private beliefs and preferences when they discover that foreigners publicly profess support for some policy objective. An individual's private preferences are shaped by his private beliefs, which in turn depend partly on the beliefs expressed publicly by other people. Kuran (1987a, 655) cites a large literature in psychology that shows that cognitive limitations require the individual to rely on beliefs conveyed by others in formulating his own private beliefs. The greater the number of people who appear to hold an opinion, the greater the extent to which private beliefs and preferences will be altered to match that opinion. Lobbying by foreign special-interest groups or the adoption of certain policies by foreign governments can be a source of information for individuals in a given country; that information might lead to a change in private preferences with regard to the policies of the domestic government, and consequently to a lowering of private thresholds for collective action aimed at changing those policies.

Second, foreign events or lobbying might produce an increase in the reputational utility afforded individuals who support certain domestic interest groups by increasing the effectiveness of those groups in rewarding their contributors with selective incentives. Thus, a signal of foreign support for the policies of a domestic

group could be perceived as raising the probability of the group's eventually achieving its goal, which in turn might encourage activists in that group to work harder and devote more effort to organizing collective action. An increased expectation of success could also mobilize nonactivist individuals, attracted by the reputational benefits of victory. To the extent that an individual's ability to enjoy the fruits of enhanced group identity or political visibility depends on having actively contributed (walked a picket line, say, or joined a demonstration), individual participation is increased (Uhlener 1989, 265, 274).

Third, foreign interest-group lobbying might produce an increase in collective sentiment for the policies advocated by a domestic interest group. Such foreign pressures create the perception among individual citizens of the domestic nation that some policy change is deemed desirable by many people abroad. If that is the case, it implies that many individuals in the domestic country—a large proportion of one's own population—probably think similarly and are willing to take action to secure the policy. As pointed out by Kuran (1989, 54, 64), one of the roles of an interest-group leader is to create the belief that almost everyone privately supports the group and that, in reality, opponent groups have only the smallest bases of support. One way to achieve that alteration of collective sentiment is to expose the pervasiveness of preference falsification, so as to convince nonactivists that a substantial percentage of the population actually supports the group's goal. Events abroad or foreign pressures can help to persuade individuals of the plausibility of such claims of widespread support.

Genesis of the CITES Ban

We now consider the dynamics of conservationist interest groups' efforts to preserve the African elephant from a perceived threat of extinction. Following Bonner (1993), we document a bandwagon process in which successful pressure by a handful of small interest groups in the West quickly spiraled into increased support for an anti-trade conservation strategy adopted or advocated by like-minded groups throughout the world. Bonner demonstrates how the imperative facing conservation groups to protect their membership bases and sources of funding in the face of pressures from competing groups led to a remarkably rapid policy transition, from nearly universal support for the ivory trade to virtually universal condemnation. That bandwagon process clearly illustrates the types of propagation mechanisms analyzed in the preceding section.

CITES came into existence in 1973. It is the most comprehensive international conservation agreement, the modern successor to the 1900 Convention for the Preservation of Animals, Birds and Fish in Africa. Under CITES, trading is prohibited only in species that are "threatened with extinction," or endangered. These species are listed in appendix 1 of the convention. Appendix 2 lists the species that are not yet endangered but might become so if trading is not controlled. In 1977 the African

elephant was placed in appendix 2, which allowed for limited trade in ivory and hides under a system of permits (Simmons and Kreuter 1989, 47). Because the CITES secretariat was given no enforcement power, implementation of the treaty depended on individual signatory countries. With weak enforcement of CITES controls, poaching and trade in ivory increased. Nonsignatory countries became entrepôts for illegal ivory. Moreover, the treaty applied only to raw ivory, not to ivory that had been worked. That loophole meant that a tusk needed only to be cut, or slightly carved, to be exempt from CITES.²⁴ In 1985, to strengthen CITES controls on ivory, a quota system was established in which each ivory-exporting country would determine how many tusks it would export each year based on “sustainable off-take” (Simmons and Kreuter 1989, 47). The quota system was abused, however: some countries announced preposterously large quotas. Nevertheless, despite the quota system’s evident weaknesses, by 1988 most conservationists believed that it needed more time to work before it could be declared a failure (Bonner 1993, 96–97).

Implicit in the ivory quota system was the assumption that African countries should have the right to earn income from the controlled sale of ivory because that income could then be used to fund their conservation efforts. In the 1980s, the overwhelming majority of wildlife experts and conservationists supported consumptive utilization, sometimes referred to by conservationists as “sustainable utilization.” In 1980 the principle had been formally incorporated into the World Conservation Strategy, a landmark conservation manifesto endorsed by mainstream conservation organizations such as the World Wildlife Fund (WWF; subsequently renamed the World Wide Fund for Nature), the largest conservation organization in the world, and the International Union for the Conservation of Nature and Natural Resources (IUCN), as well as by the U.N. Environment Program (Bonner 1993, 98). By 1988 “it would have been hard to find a conservationist with any zoological background and experience in Africa or with elephants who believed that a ban on the ivory trade was the way to save the African elephant” (Bonner 1993, 87). In early 1989 the CITES secretariat argued that a transfer to appendix 1 “would not contribute to the conservation of the African elephant, and may in fact be counterproductive” (quoted in Kreuter and Simmons 1995, 153). Even a limited consumer boycott of ivory products was not supported in the scientific community (Bonner 1993, 54). But although endorsement of ivory trading was widespread among conservationists, it certainly was not among animal rights and preservation advocates such as the Humane Society and the more extremist Friends of Animals (FoA), which lobbied vigorously against consumptive utilization.

Bonner (1993) describes how conservationists with impeccable scientific credentials, who were opposed to an ivory-trade ban, were “overcome by the public pressure and emotion and concerns about money” (34). They discovered that calling for a ban

24. A carving industry for illegal ivory developed in Dubai and the United Arab Emirates (Bonner 1993, 96).

brought in more funding than any other cause and that any organization that failed to climb on the ivory-trade ban bandwagon risked losing members to more extremist competitors. The African elephant turned out to be a “flagship species”: it could draw donations needed for other conservation activities that by themselves would attract little interest (Kreuter and Simmons 1995, 153; Leakey and Lewin 1996, 210).²⁵ In terms of the analysis in the previous section, emotive publicity campaigns to “save the elephant,” together with competition for funds, led many individual conservationists to falsify their preferences for consumptive utilization in order to outwardly support the ivory-trade ban.

Heightened attention had been drawn to the African elephant by a preliminary report released in 1989 by the Ivory Trade Review Group (ITRG), financed by the WWF and Wildlife Conservation International, which claimed that elephants had decreased from 1,343,340 in 1979 to 631,930 in 1989. The report indicated that elephant populations had fallen during that decade by 77 percent in East Africa and by 44 percent in Central Africa. The accuracy of the estimates was questioned by some biologists, however, on the grounds that most of the data were derived from informed guesses rather than from scientific census figures. In addition, increasing elephant populations in Zimbabwe, Botswana, and Kenya’s Amboseli Park were not acknowledged in the report. Nor did the report take into account that elephant populations had been rising in many areas before 1970 and that the subsequent decline in the 1980s might have been a natural adjustment to shrinking elephant-carrying capacity of the land caused by increasing human population and declining forage resources (Kreuter and Simmons 1995, 151). In any case, the ITRG report, noting that ivory prices had been rising as a result of increasing demand for ivory products, especially in Asia, concluded that the ivory trade posed a threat of extinction to the African elephant: “It is the ivory trade and hunting for ivory, and not habitat loss or human population increase, that is responsible for the decline in [African] elephant numbers” (quoted in Simmons and Kreuter 1989, 46).

According to Bonner (1993), the campaign to ban the ivory trade started in earnest in February 1988, when the African Wildlife Foundation (AWF), a small conservation organization based in Washington, D.C., mailed out an “Urgent Memorandum” to its supporters, informing them that the “insatiable greed of the ivory hunters” was responsible for a “slaughter” of African elephants and declaring 1988 the “Year of the Elephant” (53–54). The foundation asked for tax-deductible gifts, which started flowing in almost immediately. Three months later the AWF held a press conference at the National Zoo in Washington, D.C., and urged the public not to buy ivory. At that time the AWF was not in fact calling for a ban on the ivory trade. It merely wanted to draw attention to the plight of the African elephant at the hands of poachers and to increase Americans’ awareness that ivory comes from elephants

25. Conservation of a flagship species can also help in the conservation of other species by preventing habitat loss. On the notion of flagship species as it pertains to tigers, see ‘t Sas-Rolfes (1998, 17).

(54, 87). The magnitude of the public response to the press conference surprised even the AWF, although it is not all that surprising in the context of the threshold analysis of the previous section. Recall that one way to mobilize support for a group is to lower private thresholds for collective action through a successful publicity campaign. As we have noted, individual preferences and beliefs are shaped in part by perceptions of others' beliefs. By portraying the consumption of ivory products as morally indefensible, the AWF was able to convince many people to come out in support of an ivory boycott.

The AWF, however, was only a small organization. In 1988 it had a budget of \$2 million and a staff of six. By contrast, the WWF, with its well-known Chinese panda logo, had 5 million members internationally and annual donations exceeding \$200 million. In 1988 the U.S. chapter of the WWF alone had a budget of \$23 million, a staff of two hundred, and 450,000 members. At first the WWF did not support an ivory-trade ban. In April 1988, at a meeting convened by the WWF in Lusaka, Zambia, the delegates criticized the AWF's Urgent Memorandum as "emotional and inaccurate." In a May 1988 internal memo, WWF-U.S. wrote that although elephant populations had declined, the species was not yet endangered (Bonner 1993, 90, 94).

But the WWF faced a difficult conundrum: although most of its own conservation professionals strongly opposed an ivory-trade ban, explaining to the public the basis of their opposition would not be easy. Consumptive utilization is a difficult position to defend, from a public-relations perspective, because it implies that individual elephants might have to die for the sake of the survival of an entire elephant population. The WWF did not tell its members and supporters that it funded programs in Africa in which communities made money from selling wild-animal products and from the right to hunt wild animals. The WWF was afraid that people gave contributions to conservation organizations because they wanted to see animals preserved, not utilized (Bonner 1993, 99–100). Indeed, there is some justification for this viewpoint: for Westerners whose chief nexus with the African elephant is one of existence value, the death of even a single elephant is utility-reducing. The fund-raisers of the WWF argued that the organization would have to support an ivory-trade ban or risk losing large numbers of members and contributors to other organizations such as FoA that had no scruples about opposing consumptive utilization.

As noted previously, individuals who privately support a given policy position sometimes refuse to champion it outwardly because they believe that most of their contemporaries are opposed. Such preference falsification clearly played an important role in the propagation of support for the international ivory-trade ban. According to Bonner's account (1993), when the WWF-International convened its April 1988 meeting in Lusaka to discuss what its elephant conservation strategy should be in light of pressures from other groups to embrace an ivory-trade ban, some delegates evidently made statements that they would not have made publicly—statements in some cases contrary to what they had said publicly—because the meeting was closed (89).

Once Kenyan officials had announced that they wanted a ban, however, some local conservationists who had previously argued against such a strategy did not speak out. “It was not that they had changed their views; indeed, they had not. But they were not about to challenge what had become the popular position. . . . None of the other conservationists in Kenya who believed the ban was a bad idea—and most felt that way—had the courage of their convictions” (130).²⁶

The debate among conservationists was transmitted from country to country. In the fall of 1988, as the WWF-International came under increasing pressure to formulate a policy toward the African elephant, memoranda and comments were faxed back and forth between the international office in Gland, Switzerland, and the various national organizations. The latter wanted a coherent policy statement that they could use to respond to letters from members and questions from the media. Finally, it was decided that the WWF’s position should be that it opposed the killing of elephants “except where absolutely necessary for the conservation of the species” (Bonner 1993, 108). National organizations in the Netherlands, Finland, and New Zealand found this compromise acceptable. But WWF-U.S. balked, arguing that *any* policy endorsing the killing of elephants would be problematic for public-relations reasons, especially in light of the vicious attacks on such a policy that could be expected from animal-rights organizations.

Meanwhile the AWF escalated its “Year of the Elephant” campaign in February 1989 with a full-page advertisement in the *New York Times* intended to deter consumers from purchasing ivory jewelry. “Today, in America, Someone Will Slaughter an Elephant for a Bracelet,” read the caption, over a picture of an elephant with its face hacked off (Bonner 1993, 117–18).²⁷ Four days later a coalition of animal-rights groups, including the Humane Society, FoA, and the Animal Welfare Institute, held a press conference in Washington, D.C., announcing that it was filing a petition with the Interior Department to have the elephant declared an endangered species under U.S. law, thereby halting ivory imports. The Humane Society petitioned the U.S. Fish and Wildlife Service to formally recommend appendix I listing for the African elephant, but U.S. officials were reluctant to comply without a proposal from an African country for such a listing (Kreuter and Simmons 1995, 154). Meanwhile, an organization called Defenders of Wildlife, which previously had shown little interest in the African elephant, published an article in its magazine, *Defenders*, characterizing the poaching of elephants as “genocide.” In April an organization called the International Wildlife Coalition placed an advertisement in the *New York Times* bearing the caption

26. According to Bonner (1993), one would have expected Richard Leakey, once he became Kenya’s wildlife director, to quickly lift Kenya’s ban on hunting, because he had often made assertions that people who live with wildlife must benefit if the wildlife is to be preserved. Bonner writes: “It is not only because Leakey is unwilling to subject himself to international opprobrium that he has cut his convictions to fit popular opinion.” It is also because Kenya’s powerful tour operators are opposed to hunters (243).

27. The advertisement had been prepared free of charge by the advertising firm Saatchi and Saatchi (Bonner 1993, 118).

“African Chainsaw Massacre” and claiming that the elephant would be extinct by 1997. Three days later, FoA placed an advertisement in the *New York Times* excoriating Sotheby’s for proposing to auction two large pairs of elephant tusks worth \$16,000 a pair. Both FoA and AWF claimed responsibility for persuading Sotheby’s to cancel the auction (Bonner 1993, 118–19).

The effects of these shrill campaigns can be interpreted in light of the threshold analysis of the previous section. Recall that one of the mechanisms available to an interest group to propagate support for its preferred policy is the raising of the level of collective sentiment, that is, the percentage of the population that is believed to support the group’s policy. Clearly in this case the emotive publicity helped to convey an impression of overwhelming public support (who could possibly be in favor of a chainsaw massacre?), so that any remaining opponents of an ivory-trade ban would feel increasingly isolated in their views.

Interest groups also quickly discovered that emotional appeals were phenomenally successful in raising money. The *Defenders* article brought in \$40,000, a large sum for an organization with 80,000 members. When the AWF launched its elephant campaign, it had only 24,000 members and was struggling financially. Within a year its membership had nearly doubled, and its donations had increased by 66 percent. The AWF’s advertisement in the *New York Times* brought in \$42,526 from 1,200 people. Later the advertisement appeared in *USA Today* and generated almost \$26,000. The International Wildlife Coalition’s advertisement raised \$25,000. In other countries, too, elephant campaigns turned out to be bonanzas for conservation groups. In Britain a mailing by WWF–U.K. raised more than \$500,000 (Bonner 1993, 120).

Again, these fund-raising successes are explicable in terms of the threshold analysis of the previous section. When soliciting donations, interest groups offer selective incentives in return. Donors receive subscriptions to the groups’ publications, bumper stickers, and other awards that identify them as participants in the groups’ campaigns and foster a sense of identification with the cause. As noted previously, the ability to capture reputational utility normally depends on making some sort of material contribution to a group’s effort, and the amount of reputational utility the group can dispense to each supporter rises with the size of the group’s following. Therefore, the willingness to make donations rises exponentially as the number of donors expands. Moreover, the emotional nature of the campaigns in this case created an aura of righteousness around contributors, which further raised the value of the reputational utility awarded (or the cost of reputational sanctions imposed on noncontributors).

The bandwagon was gaining momentum, and conservation groups that did not jump aboard risked being left behind in the competition for members and contributions. In frustration, the chief fund-raiser for WWF–U.S. faxed the International in Switzerland, “We are in danger of losing our position with elephants” (Bonner 1993,

121). Bonner's account makes clear that the fear of WWF officials was not that the elephant was threatened, but that the WWF was! Curtis Bohlen, senior vice president of WWF-U.S., came down firmly on the side of the fund-raisers in favor of an ivory-trade ban (124, 126). On June 1, 1989, WWF-U.S. held a press conference in Washington, D.C., at which it "strongly endorsed" the proposals to place the elephant in appendix 1 of the CITES treaty. A few days earlier Bohlen had called the International to indicate what WWF-U.S. intended to do. He threatened to publicly upstage the IUCN if it did not support the ban (Kreuter and Simmons 1995, 154). The message was: "Go along or be embarrassed" (Bonner 1993, 139). The WWF-International went along, holding a press conference in Geneva and faxing a memorandum to all WWF national organizations instructing them to "follow the line we are taking as closely as possible in order to avoid any further stories of splits in the WWF family over the ivory issue" (139). In this way, mobilization of support for the ivory-trade ban was transmitted from one nation to another through the success of like-minded groups abroad and the raising of public awareness of the issue.

On June 5, 1989, President Bush announced that ivory could no longer be imported into the United States. The 1988 African Elephant and Conservation Act had given the president the authority to ban imports of ivory from countries that violated CITES provisions or dealt in illegal ivory. Now he simply extended that authority to ban all ivory from all countries (Bonner 1993, 140).²⁸ A few days after President Bush's announcement, Prime Minister Margaret Thatcher banned ivory imports into Great Britain. The interest-group campaigning had been just as intense in Britain as in the United States. In fact, WWF-U.K. had four times as many members, as a percentage of the population, as did WWF-U.S. The European Union also banned ivory imports, and Japan and Hong Kong, the destinations of most raw ivory, instituted some controls as well (Simmons and Kreuter 1989, 46).

Western animal-rights and conservation groups pressured African officials to formally propose an ivory-trade ban at the 1989 CITES meeting. Such a formal proposal coming from African governments would not only enhance the likelihood of Western governments' going along with a ban but would also increase the reputational utility awarded to supporters of the interest groups in question by increasing the probability of their ultimate success. Founders of the London-based Environmental Investigation Agency, with funding from the Washington-based Animal Welfare Institute, worked to persuade Tanzanian conservationists to support a ban and even drafted the letter sent by Tanzania's Wildlife Conservation Society to the Tanzanian president asking him to propose an appendix 1 listing for the elephant (Kreuter and Simmons 1995, 154). After the

28. At the behest of big-game hunters in the United States, however, the Interior Department enacted regulations permitting the importation of trophy tusks from sport hunting in Zimbabwe and South Africa. The justification was that those countries had healthy elephant populations and strong management programs—precisely what South Africa and Zimbabwe had argued in Lausanne in an unsuccessful effort to be exempted from the ivory-trade ban (Bonner 1993, 270).

Tanzanian proposal was released, Kenya quickly followed suit.²⁹ Not coincidentally, these East African countries were the ones that had experienced the greatest declines in elephant populations in the 1980s. The trade ban “became a convenient way to avoid scrutiny of the widespread participation in illegal trade by Kenya’s leading politicians” (154). According to the ITRG’s population estimates, elephants had decreased by 74 percent between 1979 and 1989 in the predominantly East and West African countries voting in favor of the ivory-trade ban, whereas elephants had increased by 9 percent during the same period in the predominantly southern African countries voting against the ban.³⁰ In essence, countries with declining elephant populations voted to impose an anti-trade policy on countries with sound wildlife management programs whose elephant populations were stable or increasing (152).

Kenyan wildlife director Richard Leakey justified the ban by arguing that to permit even limited trade would leave “an open door to further catastrophic poaching” (Leakey and Lewin 1996, 210). Leakey claimed that as long as ivory was “available in the marketplace” it would have economic value, and therefore elephants would be “exploited” without regard to the fate of the species (205). However, this argument reveals a fundamental misunderstanding of how markets work. Ivory has economic value because people desire to consume it. Attempts to abolish that value by keeping ivory from the marketplace are futile, because a market, illegal if need be, always arises for a valued good, despite the best efforts of regulators.

The ivory-trade ban effectively passed the full social cost of internationally adopted conservation policies onto the African range states, while virtually all of the benefits accrued to Westerners who, despite benefiting from the existence value of the elephants, have failed to compensate the range states with financial support during the CITES ban (McPherson and Nieswiadomy 1998, 12). By foreclosing all commercial use of elephants, the trade ban accorded rights to elephants but violated the legitimate rights of native people to manage their own resources (Kreuter and Simmons 1995, 155). African range states continue to allocate considerably higher proportions of their territory to wildlife preservation than do most Western countries.³¹ But elephants living outside the parks receive no protection. Their survival in the long run depends on the creation

29. In a famous act of symbolism, on July 18, 1989, Kenyan President Daniel arap Moi set fire to a 12-ton pyre of elephant tusks valued at nearly \$3 million that had been confiscated from poachers, to demonstrate Kenya’s dedication to ending the trade in ivory (Simmons and Kreuter 1989, 46; Leakey and Lewin 1996, 201).

30. East Africa’s parks lost 56 percent of their elephants between 1979 and 1989, and outside the parks 78 percent disappeared. Fourteen non-southern African countries lost more than 60 percent of their elephant populations between 1979 and 1994 (McPherson and Nieswiadomy 1998, 1). By contrast, Botswana’s elephant population rose from 20,000 to 51,000 between 1979 and 1989, and Zimbabwe’s elephant population increased from 30,000 to 43,000 over the same period (Simmons and Kreuter 1989, 46) and stands at 60,000 to 80,000 today (McPherson and Nieswiadomy 1998, 2). Botswana and Zimbabwe voted against the ban.

31. Botswana devotes almost 18 percent of its land to wildlife, Tanzania more than 13 percent, and Zimbabwe just under 13 percent. The corresponding figure for the United States is 8 percent (Kreuter and Simmons 1995, 157).

of institutions that enable people to use their land and their wildlife jointly³² and to attain access to markets once property rights are established (158).

By removing the legal market for ivory, the CITES ban imposed significant costs on the Africans who were already successfully practicing consumptive utilization. To estimate the income lost by the Nyaminyami Wildlife Management Trust because of the ivory-trade ban, warden Elliot Nobula calculated the total weight of the tusks of those elephants that had been killed, not by hunters, but because they were damaging farmers' fields, and concluded that Nyaminyami lost \$20,000 during the first eight months of 1990. In addition, but for the ban, Nyaminyami would have culled a few elephants (constituting a sustainable offtake of 3 percent) and sold the ivory and skins. That sale alone would have garnered Nyaminyami Z\$250,000, enough to increase every family's income by at least 25 percent (Bonner 1993, 271). Overall, the ivory-trade ban deprived Africans throughout the range states of \$50 million in annual revenue from ivory sales and another \$50 million in earnings for African ivory carvers (Barbier and others 1990, cited by Kreuter and Simmons 1995, 159). That \$100 million is equivalent to the estimated amount needed annually for effective protection of elephants in Africa's parks and reserves.

Economic theory predicts that when the sale of a valued commodity is prohibited, its price inevitably increases; individuals with a comparative advantage in avoiding detection (usually criminals and corrupt public officials) take over the formerly legal market; and, in the case of a common-property resource such as elephants, the quantity of the resource shrinks, and eventually it disappears (Simmons and Kreuter 1989, 48). Yet the proponents of the ivory-trade ban argued that it would cause demand and prices of ivory to fall, leading to reduced illegal elephant hunting. Although legal purchases of ivory in signatory states have indeed stopped since the trade ban, there is some evidence that illegal trade and trade among nonsignatory states have increased. Consistent data on ivory prices are difficult to obtain because most of the trade now takes place on the black market.³³ Nor is it clear whether the CITES ban has been successful in reducing poaching. In the Zambezi Valley of Zimbabwe, illegal elephant hunting has escalated significantly since the 1989 ban was implemented. By contrast, Kenya attributed its reported 32 percent increase in elephants between 1989 and 1991 to reduced poaching because of the ban. (The 32 percent increase is implausible, however, given a maximum annual population growth rate of about 4 percent for elephants; more likely the increase reflected immigration or an inaccurate census. See Kreuter and Simmons 1995, 159.) Where noticeable decreases in poaching have occurred, they reflect increased levels of law enforcement rather than the closing of legal markets for ivory.

32. Land is communally owned in much of Africa.

33. Although Leakey claims that the world price of ivory fell from \$120 per pound to \$4 after implementation of the ban (Leakey and Lewin 1996, 210), Kreuter and Simmons (1995, 158–59) cite contrary evidence of rising ivory prices.

Conclusion

Using a rational-choice approach, we have identified three mechanisms whereby widespread support for an interest group's policy position might be propagated internationally: reductions in private thresholds for collective action; increased reputational utility from group participation; and enhanced collective sentiment in favor of the policy. Clearly, all three were instrumental in bringing about the international ivory-trade ban.

References

- Akerlof, George A. 1980. A Theory of Social Custom, of Which Unemployment May Be One Consequence. *Quarterly Journal of Economics* 94 (June): 749–75.
- Anderson, Terry L., and Peter J. Hill. 1995. From a Liability to an Asset: Developing Markets for Wildlife. Introduction to *Wildlife in the Marketplace*, edited by Terry L. Anderson and Peter J. Hill, pp. xi–xv. Lanham, Md.: Rowman and Littlefield.
- Barbier, Edward B., Joanne C. Burgess, Timothy M. Swanson, and David W. Pierce. 1990. *Elephants, Economics and Ivory*. London: Earthscan Public.
- Bikhchandani, Sushil, David Hirshleifer, and Ivo Welch. 1992. A Theory of Fads, Fashion, Custom, and Cultural Change in Informational Cascades. *Journal of Political Economy* 100 (October): 992–1026.
- Bonner, Raymond. 1993. *At the Hand of Man: Peril and Hope for Africa's Wildlife*. New York: Knopf.
- Cordato, Roy E. 1997. Market-Based Environmentalism and the Free Market: They're Not the Same. *Independent Review* 1 (Winter): 371–86.
- Devenow, Andrea, and Ivo Welch. 1996. Rational Herding in Financial Economics. *European Economic Review* 40 (April): 603–15.
- Gibson, Clark C., and Stuart A. Marks. 1995. Transforming Rural Hunters into Conservationists: An Assessment of Community-Based Wildlife Management Programs in Africa. *World Development* 23: 941–57.
- Higgs, Robert. 1987. *Crisis and Leviathan: Critical Episodes in the Growth of American Government*. New York: Oxford University Press.
- Hill, Peter J. 1997. Market-Based Environmentalism and the Free Market: Substitutes or Complements? *Independent Review* 1 (Winter): 387–96.
- Kaempfer, William H., and Anton D. Lowenberg. 1992. Using Threshold Models to Explain International Relations. *Public Choice* 73 (June): 419–43.
- Kremer, Michael, and Charles Morcom. 1996. Elephants. NBER Working paper no. 5674, July.
- Kreuter, Urs P., and Randy T. Simmons. 1995. Who Owns the Elephants? The Political Economy of Saving the African Elephant. In *Wildlife in the Marketplace*, edited by Terry L. Anderson and Peter J. Hill, pp. 147–65. Lanham, Md.: Rowman and Littlefield.

- Kuran, Timur. 1987a. Preference Falsification, Policy Continuity, and Collective Conservatism. *Economic Journal* 97 (September): 642–65.
- . 1987b. Chameleon Voters and Public Choice. *Public Choice* 53: 53–78.
- . 1989. Sparks and Prairie Fires: A Theory of Unanticipated Political Revolution. *Public Choice* 61 (April): 41–74.
- . 1991. The East European Revolution of 1989: Is It Surprising that We Were Surprised? *American Economic Review* 81 (May): 121–25.
- . 1995. *Private Truths, Public Lies: The Social Consequences of Preference Falsification*. Cambridge, Mass.: Harvard University Press.
- Leakey, Richard, and Roger Lewin. 1996. *The Sixth Extinction: Patterns of Life and the Future of Humankind*. New York: Anchor Books.
- Margolis, Howard. 1990. A Note on Social Equilibrium. Working paper. University of Chicago, Graduate School of Public Policy Studies, March.
- . 1998. A Formal Model of Ethnic Conflict. Working paper. University of Chicago, Graduate School of Public Policy Studies, March.
- McPherson, Michael A., and Michael L. Nieswiadomy. 1998. African Elephants: The Effect of Property Rights and Political Stability. Working paper. Department of Economics, University of North Texas, July.
- Nelson, Robert H. 1997. Does “Existence Value” Exist? Environmental Economics Encroaches on Religion. *Independent Review* 1 (Spring): 499–521.
- Simmons, Randy T., and Urs P. Kreuter. 1989. Herd Mentality: Banning Ivory Sales Is No Way to Save the Elephant. *Policy Review* 50 (Fall): 46–49.
- ‘t Sas-Rolfes, Michael. 1998. Who Will Save the Wild Tiger? PERC Policy Series No. PS-12. Political Economy Research Center, Bozeman, Mont., February.
- Uhlaner, Carole Jean. 1989. “Relational Goods” and Participation: Incorporating Sociability into a Theory of Rational Action. *Public Choice* 62 (September): 253–85.
- U.N. Legalizes Sale of African Ivory to Japan. *Seattle Times*, February 10, 1999.
- Vorhies, Frank. 1996. Economics, Policy, and Biodiversity. Paper presented at the Economics, Policy, and Natural Resource Management Southern African Regional Workshop, Pretoria, South Africa, September.
- Vorhies, Frank, and Deborah Nolte Vorhies. 1993. Managing the African Elephant as a Resource. Working paper. EcoPlus, Johannesburg, South Africa.
- Witt, Ulrich. 1989. The Evolution of Economic Institutions as a Propagation Process. *Public Choice* 62 (1989): 155–72.

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