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Approaches to Conserving Vulnerable Wildlife in China: Does the Colour of Cat Matter – if it Catches Mice?¹

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ABSTRACT: China's environmental problems are well known, but recently its record in the area of wildlife conservation, particularly with regard to endangered species, has come under scrutiny. Environmental values colour how we in the West view both China's past experience with wildlife and what strategies it should adopt to foster better conservation. Chinese have long taken a utilitarian view of wildlife, valuing species primarily as resources for man's use and only secondarily for other reasons. However, China has not developed institutions capable of sustaining the desired use of wildlife in the face of ever-growing demands. I suggest that Western criticisms of Chinese utilitarian attitudes are inappropriate, ineffective, and possibly counter-productive: deep-seated cultural mores change slowly. Instead, Westerners concerned with the fate of China's wildlife should assist the development of systems that act to channel demand for wildlife's material benefits toward investment in conservation. Such systems will likely require devolution of considerable control to local levels, strengthening incentives to favour long- over short-term benefits, and – notwithstanding common Western attitudes – substantial consumptive use of wildlife.

KEYWORDS: China, consumptive use, incentives, utilitarianism, wildlife conservation.

INTRODUCTION

Some years ago, while studying musk deer (*Moschus sifanicus*) in a remote forest of Qinghai Province near the border with Tibet, I found myself riding in the back of a rickety old truck, huddled together with about a dozen Tibetans against the November morning chill. We were headed to the local Buddhist monastery where a week-long celebration was in progress, marking the recent construction of a new sanctuary on the monastery grounds. Some of the Tibetans were local pastoralists and their families, others were employed as forest guards.

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Today all were there as pilgrims, en route to pay their respects to their highly revered incarnate lama and to dedicate this newest testament to their re-emerging religion. Sitting up front with the driver was my Chinese host, a zoologist with a wealth of experience on the Qinghai-Tibet plateau.

Suddenly, I noticed up-slope from the road a pair of wolves (*Canis lupus*). They had evidently not heard the truck coming, and were quite close. Upon seeing the truck, the wolves immediately took flight, but not before doors opened, men shouted, pistols emerged from beneath robes and shawls, the truck lurched to a halt, and armed pilgrims strained to get off shots at them. The wolves were too quick that day. They escaped unharmed, and we continued on to our destination where several hundred other Tibetans had gathered from their far-flung tent camps in celebration. Later, I had occasion to discuss the incident with my zoologist-host, and the lesson I took from that discussion made a larger impression than the incident itself.

I began our conversation by noting that my host had seemed interested in helping the Tibetans kill the wolves. 'Yes, I would have taken a shot too, if I'd had a gun', he said. Considering myself far from naive about attitudes toward wolves, particularly in a livestock-growing area, I responded, 'Yes, I can see how the Tibetans would generally be ill-disposed toward wolves, given the danger wolves obviously pose to their livelihood. So it would have been a neighbourly gesture of you to help them out in this instance.' To this, the zoologist responded, 'Oh, it has nothing to do with helping the Tibetans. I'd kill a wolf any time I had the opportunity. Wolves are bad animals.'

Negative attitudes toward wolves are hardly news; indeed, they form the majority opinion almost wherever and whenever wolves and humans interact. A tolerant, not to mention positive attitude toward wolves is a recent, and primarily Western, phenomenon. Yet to find the notion of indigenous fauna categorised into 'good' and 'bad' in the year 1989, by an experienced and respected zoologist, one who had devoted over two decades to studying and conserving the mammals of the region, who spoke English and had participated in training sessions in the U.S., in short, who – in our culture – would likely be among the most progressive in his attitudes toward nature, was, to say the least, enlightening.

I begin with this story to frame the issues: How do Chinese value wildlife, and how might (oft-times divergent) Western values affect our efforts to assist the Chinese in its conservation? Do we really understand what we mean when we talk to Chinese of 'conservation'?³ For that matter, what do we mean by 'wildlife'? What is the desired state of some piece of land, if something other than the status quo? And what mechanisms do we use to achieve our objectives, if a change in the behaviour of a group of people is necessary for success?

My purpose here is to address broadly-defined 'strategies' for conservation of wildlife in China, and to suggest that attitudes we in the Western world hold inevitably influence the choice of strategies we will conclude to be effective. Although I address approaches currently and potentially taken by the Chinese

themselves, my primary audience is the concerned Westerner. While conservation of Chinese wildlife is ultimately China's responsibility, knowledgeable Chinese are frank about needing help, and thus Westerners can legitimately claim an interest. Here, I argue that we in the West have often encouraged ineffective strategies for wildlife conservation in China because we have inappropriately applied our own terms of reference, and that, all too often, Chinese policy-makers have made the mistake of taking our advice.

OF CATS, MICE, AND ATTAINABLE OBJECTIVES

My subtitle comes from an ancient Chinese *chengyu* (proverb) about practicality. The old saying was dusted off a few years back by China's paramount leader Deng Xiaoping, and now has become part of contemporary Chinese lexicon. On hearing complaints about the resemblance between his 'Socialism with Chinese Characteristics' to capitalism, Deng is said to have reminded his listeners, 'it doesn't matter if the cat is black or white, so long as it catches mice'.

For a number of reasons, it is an apt metaphor to keep in mind while examining strategies for wildlife conservation in China. It reminds us of the tremendous changes currently occurring in everyday Chinese life, particularly in the economic sphere to which Deng referred. Where once throngs dressed in drab Mao suits and caps, today's city dwellers spend much of their free time shopping for colourful and fashionable clothing. Where once 'capitalist roaders' were reviled, today's roads are filled with free markets selling everything from vegetables to Rambo posters. Where once a bicycle was a high point in the consumer's wish list, today colour televisions abound, portable cassette stereo players are almost ubiquitous, refrigerator sales are on the march, and one can only guess when air conditioners will replace fans and electric skillets will outsell iron woks.

The 'cats and mice' metaphor is also appropriate because it reminds us that the dominant attitude most Chinese hold toward animals is utilitarian. Why have a cat? To catch mice, of course. If the Chinese appreciation of cats is limited to their mouse-catching ability, at least that ability provides a reason to value and conserve cats. (It hardly bears pointing out the obvious limitations of this attitude as the sole basis for conservation, particularly from the viewpoint of mice).

Viewed in one light, the 'cats and mice' proverb would seem to be the logical equivalent to 'ends justify the means', a position that may be morally abhorrent. I don't intend for it to be interpreted that way. Rather, I see it as a clarion call to abandon orthodoxy, to loosen ourselves of whatever ideological bent we come armed with. We need not renounce passion, convictions, or persistence, but we would be well advised to recall that our actions and attitudes can frequently be counterproductive when applied to other countries if we fail to understand the cultural basis of local beliefs and the social constraints on notions we'd take for granted at home.

The noted African ecologist Richard Bell has summarised well the situation we find ourselves in: '... conservation is based on a conflict of value systems. If everyone was a conservationist, there would be no need for conservation.'⁴ Further, that '... there are two main avenues towards resolution of these conflicts: one involves bringing our ideals more closely into line with physical, biological or economic realities, at the cost of compromising our conservation ideals; the other is to bring physical, biological and economic events⁵ into line with our ideals with costs, in terms of management, enforcement and public relations, corresponding to the degree of the discrepancy between ideals and events'. Bell concludes that 'What we need to do is to map out a strategy of the attainable'.

I don't pretend to know what is attainable for wildlife in China. But we can at least examine the possible strategies to conserve wildlife that one might encourage. I broadly lump these strategies into the three categories *legal*, *educational*, and *economic*, and argue that, while aspects of all three are ultimately necessary for successful conservation, Westerners have tended to over-emphasise the first, have unwarranted faith in the second, and under-utilise the potential of the third.

Further, I suggest that Westerners have focused unproductive criticism on Chinese utilitarian views of wildlife, which may not, in themselves, be detrimental to conservation. Meanwhile, we have remained silent on the most fundamental deficiency in current Chinese efforts to conserve, namely, their inability to develop new, or foster existing social institutions that can cope with protecting wildlife in the face of increasing demand for use and competition for space. I shall defend these contentions through the use of some examples and a general discussion on contemporary Chinese culture.

Before describing potential conservation strategies and their prospects for success in China, however, two quick overviews are needed: first, of the attitudes Chinese generally display toward wildlife; and second, of social factors operating in China that presently make conservation difficult, and indirectly constrain what is attainable. A review of the status of Chinese wildlife is not attempted here; suffice it to say that in the eastern, agricultural and urban section of China wildlife has been reduced to those few species able to survive in habitats dramatically altered by mankind, while in the western, arid, largely pastoral areas, most indigenous species remain, but are generally reduced greatly in numbers.⁶

CHINESE ATTITUDES TOWARD WILDLIFE

Within the Chinese language are suggestions that, traditionally, wildlife and wilderness have been viewed negatively. The word *yeshengdongwu*, 'wildlife', currently carries no great emotional baggage. However, it is suggestive that the

adjective *ye* ('wild'), also occurs in such derogatory terms as *yexing* ('unruliness') and *yexin* ('ambition', in the sense of 'overweening', rather than 'noble ambition'). Similarly, the word used for 'wilderness', *huangdi*, is equally accurately translated as 'waste land', or 'place of desolation'.

However, Chinese culture is hardly unique here. Roderick Nash⁷ has discussed at length how the traditionally Western values of wildlife and wilderness also were predominately negative. He summarises, 'If paradise was early [Western] man's greatest good, wilderness, as its antipode, was his greatest evil'.⁸ Indeed, the Chinese language is considerably older and more resistant to change than European languages, so one would not be surprised to find ancient concepts embodied in current usage.

There have been no scholarly studies of contemporary Chinese attitudes toward wildlife,⁹ yet a broad view of the literature and of language used in Chinese publications suggests that they are predominately 'utilitarian', and secondarily 'dominionistic' and 'aesthetic'.¹⁰ Simply put, most Chinese traditionally view wildlife in terms of its impact on human life and livelihood, and secondarily as objects of beauty, but only when under the control of man.

Utilitarian View

Others have already noted the predominance of the utilitarian view of wildlife among most Chinese. Writers in English have generally been explicit about this, Chinese less so. For example, Greer and Doughty¹¹ concluded that 'Current trends in the utilisation of wildlife in China continue a tradition of satisfying material needs for meat, apparel, and medicinal and other products ... Decisions about conserving or protecting animals are therefore based largely upon utilitarian premises'. Shen and colleagues¹² noted that while 'conservation figures importantly in the national development plan ... in practice it is being promoted for utilitarian reasons', and later, 'China's cultural heritage values wildlife ... but the people have always adopted a utilitarian attitude'. In addition to the utilitarian attributes of wildlife that Westerners are familiar with (e.g., uses such as meat and fur), Chinese culture includes an elaborate relationship with wildlife for medicinal uses, for which there is no clear Western analogy.

But perhaps an even more convincing indication of the depth and breadth that the utilitarian view of wildlife holds on the Chinese mind comes from reading works in Chinese, including those not directly related to the issue of wildlife values. Sheng¹³ provides an overview of contemporary Chinese use of mammalian fauna; the list is long. Almost invariably, when rationalising research on one of China's many *zhengui* ('precious and valuable') species, the words *weile baohu* ... ('in order to protect ...') are followed immediately by ...*yu heli liyong* ('...and rationally use').¹⁴ Wildlife is also more frequently referred to as a 'resource' (*ziyuan*) in the Chinese technical literature than we are used to seeing in the West.

Evidence of the utilitarian view exists in the non-scientific literature as well. A short, educational reader, intended to simultaneously provide reading practice for elementary school students and indoctrinate them with the proper attitude toward nature and the environment, serves as a good example.¹⁵ The book follows the experiences of a group of youngsters as they are educated about environmental issues at the hands of the father of one of them, Mr. Lin, an environmental engineer. It features chapters focusing on water and air pollution, solid waste, protection of greenbelts, and other fashionable topics with environmental themes. Of course, there is also a chapter focusing on wildlife.

After hearing the children exclaim that such creatures as bears, snakes and wild boars can be dangerous to people, Mr. Lin sagely interrupts them: 'These animals can be dangerous, but they are also beneficial! Take the tiger, for example. People call it "King of the Mountain", but one could also say it's quite a treasure'. The children protest, 'But tigers threaten people!' Wanting to appear reasonable, Mr. Lin responds, 'Yes, that's true, but the benefits to people from tigers are also great.' What argument does he use to convince the youngsters? 'The entire body of a tiger is a treasure! Why, one could say that the tiger is a drug store capable of curing 100 ills!'¹⁶ In other words, not only do tigers threaten people, but they are useful to people, at least when dead.

Going on, Mr. Lin asks the children 'Has any of you ever seen a snake?' Needless to say, the response of the children to the notion of a snake is less than positive; one wonders why the authors bring up this particular example if not to attempt to provide a more balanced view to the prevailing one of snakes as evil. But once again, it's the snake's 'usefulness' that is called upon to justify its protection. Mr. Lin explains, 'Snakes can cure diseases with the medicine produced from them, and they can also catch rats [which in turn, saves grain for human consumption]. In southern China, we also like eating snake meat'.¹⁷ Nowhere in this lesson are messages of ecosystem integrity attempted or non-anthropocentric values suggested.

Dominionistic/Aesthetic.

An additional attitude toward wildlife can be discerned among typical Chinese that is somewhere between Kellert's 'dominionistic' and 'aesthetic' types. Here, the notion is of nature the beautiful, but always in its tame state, as in a symmetrically ordered garden. Schafer reviewed the long history of captive rearing of animals from a diverse array of taxonomic groups in China.¹⁸ Throughout, the controlled environment (e.g., zoo, garden) is seen as the preferable state to the natural.

Some examples from translated literature¹⁹ serve to illustrate this view of nature. From an essay describing the same forest in which the wolf-Buddhist pilgrim incident²⁰ occurred, comes this romantic view:

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The ... Forest is often compared to a vast natural zoo and arboretum combined. It is more than that. It is really a colorful, fantastic fairyland! It is grown with towering spruces and Chinese pines [sic] and other groves where scores of different shrubs were blossoming ... Oh, how luscious and attracting the berries are? And how gorgeous are the azaleas in this flowering season! During the ... journey on horseback ... we were always surrounded by hospitable animals. Some of them acted as our guides ... some as followers ... The small number of Kangbaren [Kham speaking people] ... who live here..are kind at heart and never dream of harming the 'residents' in the forest, excepting, of course, vermin. This area is also a paradise for birds. Tibetan pheasants ... looked very much like bouquets of flowers.²¹

Note that throughout, in addition to the inability of the author to resist the reference to 'bad' animals (vermin), nature is compared favourably to a garden or zoo, rather than vice versa. Another reference, here to the newly established Qiangtang Reserve in Tibet, again uses the garden analogy, stretched as it might seem given what precedes it:

With an average annual temperature between minus 3 degrees and zero Celsius and a yearly precipitation between 100 and 300 mm, Qingtang [sic] is too cold and dry to accommodate human souls, but it is what Chinese and American zoologists call 'a rare animal garden'.²²

Similarly, a semi-popular account of China's nature reserve system refers to such reserves (*ziran baohuqu*) set aside specifically for protection of endangered wildlife as 'natural zoos'.²³ In a recent study of attitudes in Japan, Kellert²⁴ found a similar tendency to value wildlife most when it accords with pre-existing visions of beauty and harmony.

In recent years there have been expressions of an expanded set of values for wildlife, particularly among scientists. The same book on Chinese nature reserves²⁵ include a good many rationalisations for the existence of nature reserves that could easily come from western scientists, e.g., integrity of ecosystems, 'balance of nature', etc. Another recent, somewhat more scholarly, Chinese book on nature reserves also includes a variety of rationales, including those that are recognisably ecologicistic, scientific, and naturalistic.²⁶ Nonetheless, the tendency for utilitarian, aesthetic, and dominionistic values to dominate in most Chinese writing is clear.

Attitudes and Interpretation of Behaviours.

It bears pointing out that the prevalence of utilitarian and dominionistic and/or aesthetic views are hardly uniquely Chinese, nor do they, in themselves, prevent good land management. In particular, the utilitarian outlook was recently found to be among the most common ones in a large-scale survey of the American public,²⁷ and even ranked number one when data were obtained from references

in newspapers, rather than from random surveys of individuals.²⁸ Further, the prevalence of both the utilitarian and dominionistic attitudes expressed in the American press was found to increase as one looked further back in time toward the year 1900.²⁹ To the degree that China is still not as 'modern' as America, one should therefore not be surprised to find these attitudes still strong.

What is worth noting, however, is that the utilitarian and dominionistic attitudes expressed in China come not merely from the general public, but also from the educated and interested segment of society that deals with wildlife, directly or indirectly.³⁰ Here, current American attitudes clearly diverge from Chinese. Among college-educated Americans, utilitarian and dominionistic attitudes ranked last, and among bird watchers, trappers, hunters, and those active in environmental/wildlife organisations, naturalistic and ecologicistic attitudes ranked high.³¹ Returning to the story at the beginning of this essay, one would not be surprised to find either a 'typical' Chinese or Westerner hold that some animals are 'good' and others 'bad'; it would, however, be rare indeed to find such an attitude expressed by a contemporary Western zoologist closely associated with wildlife conservation.

We need not condone practices toward wildlife in contemporary China, but we criticise them only blindly if we fail to recall their genesis in prevailing attitudes. Thus, this review of Chinese attitudes toward wildlife is presented not as criticism, but rather because understanding attitudes maybe useful in interpreting some of the actions in China that have been viewed by Westerners as greedy or malicious. For example, much is made of the willingness the Chinese express to engage in consumptive use of wildlife (i.e., hunting and trapping), even if populations are not known to be stable.³² The notion that the Chinese government has been 'using' pandas, by renting them out to foreign zoos (from which they receive both dollars and goodwill) is seen as simply immoral.³³ Controversy similarly surrounds Chinese attempts to satisfy demands for the traditional medicinal properties of bear gall bladders by raising fistulated bears in cages. One need not necessarily defend these types of Chinese activities: even from a strictly mechanistic point of view, we rarely have enough data to assess whether or not they threaten population viability or continuous functioning of ecosystems. But, if viewed from the Chinese basis that animals are primarily to be used, then Chinese instincts to allow hunting when in doubt, or to earn money on 'precious' species, are more understandable. At the least, such an understanding allows one to see these actions as arising from fundamental cultural attitudes, rather than solely from 'greed, corruption, and stupidity'.³⁴

Another criticism of Chinese wildlife policy, one that finds resonance in the academic community in addition to readers of the popular press, is that excessive attention has been paid to captive breeding at the expense of habitat protection.³⁵ But should we be surprised to find this in a culture with a long history of domestication? Indeed, Chinese culture is deeply rooted in the intensive agriculture of the Yellow River basin, the 'cradle' of Chinese civilisation, which is

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considered to have advanced only after the great river was 'controlled' by the emperor Yu.³⁶ With the land needing cultivation, ideas of mastery and manipulation over nature come easily. It is but a small transition to imagine that, like crops, wildlife can be better off under the care and kindness of educated and benevolent mankind.³⁷

Foreigners must begin their examination of Chinese wildlife conservation efforts with an understanding of just how strong and pervasive the utilitarian view is. However, to better understand potentials and constraints for Chinese conservation of wildlife, we also need to look briefly at some characteristics of the functioning of Chinese society which influence the success of whatever strategy we encourage. Listed here are some attributes that stand out as being relevant in devising strategies for conserving wildlife.

SOCIAL FACTORS OBSTRUCTING CONSERVATION

Factionalism and insularity

In a society of over a billion souls, allegiance and cooperation grow weaker as the degree of connection diminishes. Foreigners in China quickly recognise the vast difference in treatment received once included within a circle of *guanxi* ('relationships', 'connections', 'networks'); otherwise, one is undifferentiated from the horde. A similar condition pertains within organisations: it cannot be assumed that personnel working on similar issues even talk to one another, much less actively cooperate. Coordination and cooperation are further strained when multiple organisations must work together, virtually a certainty in complex conservation tasks. While there are individuals who buck the trend, it remains generally true that the four Chinese entities with the majority of responsibility for wildlife (Ministry of Forestry, Environmental Protection Agency, Ministry of Commerce, and the Academy of Sciences) interact competitively, rather than cooperatively.

This tends to surprise Western scientists who, while they are not without alliances and enmities, generally keep up with the work of others in the same field. In wildlife conservation work in particular, most Western workers are used to a spirit of camaraderie in the face of long odds, which tends to overcome whatever institutional rivalries exist.

Lack of commitment and accountability

Conservation is hard work, and particularly with so many other legitimate demands on a country's resources, requires committed, perhaps even zealous, workers. People of this description exist in China, but many, perhaps most, powerful positions are staffed by people who seem to have little of the religious

fervour we find among dedicated conservationists in the West.³⁸ This in part reflects difference in value systems, summarised above, and in part reflects the still largely operative Communist system of job allocation. Rarely does that system manage to match skills and interest with tasks.

Even more pervasive is the lack of accountability at all levels in job performance. Again, this is hardly unique to China, but is striking in its ubiquitousness, particularly within the state sector that maintains a preeminent role in land management and wildlife conservation. Much has been made of the abolition of the 'iron rice bowl' (*tie fan wan*³⁹), but it is alive and well in the corridors of provincial bureaucracies. Perhaps as a result of the Confucian emphasis on harmony (or as a reaction to the Cultural Revolution), criticism, even of the constructive variety, is rarely voiced within organisations. The driver who shows up drunk, the policeman who violates a regulation he is supposed to enforce, the biologist who fails to deliver a final report⁴⁰ – none are held truly accountable by the systems in which they operate.

Emphasis on individual people and events, rather than systems

Commentators on China's political system have emphasised the historical tendency in China to look toward individual leaders to solve problems and lead economic development, rather than to develop systems that protect society from the damage done by mistakes that those leaders inevitably make. The pattern is not restricted to politics; it can be found throughout organisational life.

As it impacts wildlife conservation, this tendency manifests itself in reluctance to think in terms of systems that, by their structure, reward desired and deter destructive behaviours.⁴¹ Rather, issues tend to be viewed in isolation. Poaching is seen as the consequence of bad men, rather than of perverse incentives.⁴² Ineffective game wardens are seen as corrupt or lazy, rather than normal people responding rationally to the perceived costs and benefits of apprehending violators.⁴³ A hunt may be arranged for a wealthy foreigner in return for a large fee that will be spent locally on conservation (e.g., a school is built, thus enhancing local enthusiasm for the species). The plan may ultimately be a positive one, but no system exists by which the local people who receive the incentives can be assured that such benefits will be forthcoming in the future. The one-time nature of the event⁴⁴ undercuts the long-term view necessary when asking people to make sacrifices in the name of future benefits.

Weakness of the rule of law in enforcing standards

Related to the above is the fact that law in Chinese thought has had a much different, more peripheral role to play in ordering society than in the modern West. The word for law, or *fa*, refers to constitutions, common law, rules and regulations, etc. as in English, but embodies a strong suggestion of fear of punishment, and is seen as a secondary, almost regrettable necessity.⁴⁵ Its

peripheral role in Chinese thought can be explained by the enduring Confucian notion that ordering society and resolving human conflicts should ideally be managed by reliance on proper human relations, or *li*.⁴⁶ In other words, controls for human behaviour and methods for resolving conflicts should be internal rather than external. The pervasive pattern throughout Chinese history has been to rely on *li*, or more precisely, on people who embody these proper human relationships, rather than on law in governing society.⁴⁷

Recent efforts to establish a rule by law should not be confused with the Western notion of 'rule of law' with its promise to impersonalise relations and provide greater equity in resolving disputes, however often one might hear such a claim. Rule by law in China today does not suggest that either Chinese leaders or the Chinese people generally have divorced themselves from the Confucian notion of the importance of human relationships (*guanxi*) in governing and settling disputes. The result is that today China is full of laws that are not enforced, which in fact are not expected to be enforced, at least for now.⁴⁸ If we in the West cherish the tradition of being 'nations of laws, not men', then China is clearly the reverse, a place where the ideal of the wise and benevolent leader capable of acting in the public good has been enshrined in the nation's consciousness since the times of Confucius, but in which objective systems to regulate human behaviour have been slow to develop.⁴⁹ Clearly, Chinese leaders, from Deng Xiaoping all the way down to managers of remote nature reserves, continue to operate within this familiar pattern.

A TYPOLOGY OF CONSERVATION STRATEGIES

Potential strategies for wildlife conservation clearly overlap in their fundamental assumptions and suggested courses of actions. Classification systems are necessarily Procrustean; nevertheless, they may help to clarify our thinking. Lester Ross⁵⁰ categorised what he termed 'modes of implementation' into three he named 'bureaucratic-authoritarian', 'campaign-exhortation', and 'market exchange'. He then analysed how well each performed in forestry, water conservation, pollution control, and other aspects of environmental policy. Very briefly, the first can be equated with centralised control and directive; the second with the mass campaigns that typified the Cultural Revolution (such as planting trees in the 'four arounds', and doing away with the 'four pestilences'); and the third with policies that reward economically efficient practices, such as under the responsibility system.

Here, I similarly categorise possible wildlife conservation strategies very broadly into three: *legal*, *educational*, and *economic*. This typology is similar, although not identical to Ross's, with legal corresponding to his 'bureaucratic-authoritarian', educational to his 'campaign-exhortation', and economic, very broadly to his 'market exchange'. I note below some distinctions from Ross' approach.⁵¹

1. LEGAL STRATEGIES

This category includes most of what goes on under the label of wildlife protection in the West: regulations and proscriptions against killing wildlife, and legal protection for land, including establishment of reserves. I contend that this strategy, obvious as it seems to us, has already proven its weakness, as seen by the fact that almost every species in China for which overexploitation is threatening oblivion is fully protected by law.⁵² A wealth of nature reserves and protected areas have been set up;⁵³ additional areas are legally given status as provincially-recognised 'no-hunting' areas. These legal actions are trumpeted both in Chinese and English,⁵⁴ and appear to represent attempts to adopt perceived Western models. Yet we know that poaching is ubiquitous and that it not only occurs in protected areas, but is often carried out by the very people hired for protection. I'll illustrate this point with three examples, two from Qinghai, one from Yunnan.

My musk deer study in Qinghai's Baizha Provincial Forest,⁵⁵ was initially designed under the assumption, gained through incomplete interviews and a short visit to the area, that musk deer in Baizha were legally harvested in some, but not other regions within the Forest. In fact, the entire Baizha forest was off-limits to hunting, and musk deer were listed as Class 2 Protected Species.⁵⁶ However, in practice, protection – not only of wildlife but of all natural resources – was ineffectual. Timber harvest was indeed controlled, but only during the timber harvest season. As soon as the season ended, the 'unofficial' season began, operated at a profit by forest guards, and the harvest during the latter seemed roughly equal to the former. As one Chinese friend there put it, when the official season ended, they 'closed the front door and opened the back door'.

A similar situation existed with regard to poaching wildlife. Musk deer poaching in the vicinity of the forest guard station was uncommon, but most participants were the forest guards themselves. The mountain directly back of the guard station also contained a small population of blue sheep; it was kept small by the constant pressure put on it by the well-armed forest guards. Our study team learned this from personal experience: suspicions about the source of gunfire heard earlier in the day were confirmed one evening by a dinner of blue sheep meat – courtesy of the forest guards.⁵⁷

However, one place in the Forest benefited from virtually complete protection: the area surrounding the local Tibetan Buddhist monastery. It is now well documented that Tibetan Buddhism has suffered greatly under the rule of the Chinese since Liberation, particularly during the Cultural Revolution. But since about 1980, religion has been allowed to flourish in Tibetan society again, and has rapidly re-emerged as a major component of Tibetan life. In Qinghai in particular, Tibetan monasteries have been restored in recent years,⁵⁸ and young people are once again entering monastic life.⁵⁹ Within monasteries, individuals

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who are considered to be re-incarnated deities, known locally as *akkas*⁶⁰ are revered, and they generally make clear that there is to be no hunting in the vicinity of their monasteries.

The effectiveness of this kind of unwritten protection was brought home one day during summer 1989, when a group of hunters from nearby Tibet proper happened on to monastery land while hunting for deer. Despite being armed with military weapons, they were apprehended, arrested, and their guns confiscated by a group of unarmed monks. Their case was brought before the local *akka*, who then handed them over to the civil authorities for punishment. Meanwhile, the same civil authorities routinely turned a blind eye to poaching that occurred within the Forest in areas further away from the monastery.

In reality then, there were three levels of protection given to wildlife within the so-called 'no-hunting area' of Baizha Forest. In general, protection was quite limited, probably not materially different from that on any legally unprotected lands. Near the forest guard station, outsiders were deterred, but the forest guards themselves did most of the poaching. Near the Monastery, protection was virtually complete. Notice, however, that according to law, these three areas should have been treated identically, but that economic (in the case of the guard station) and cultural/religious (in the case of the monastery) factors dictated the operative level of protection.

Another illustrative example was provided in a high valley in western Qinghai, locally termed Yeniugou ('wild yak valley'), where the indigenous high Tibetan plateau fauna still held on in moderate numbers.⁶¹ Illegal hunting of all protected species occurred, the most damaging from outsiders, not local pastoralists. During summer, the valley became a travel route for itinerant goldminers travelling with little food but lots of ammunition. Not only was their poaching illegal, but their entry into the valley itself was proscribed by law. A police check-post was set up during summer 1991 to stop the miners; it slowed them down, but didn't stop them. By September, the check-post had been removed and miners travelled freely. The legal means to prohibit entry existed; it simply wasn't effective.

In Yunnan, illegal hunting had, by the late 1980s, become such a problem that authorities ordered a complete, province-wide ban on hunting for 3 years, beginning on 1 March 1991.⁶² While no statistics are available with which to assess compliance, experience in the mountainous area of western Yunnan (which, unlike much of central and eastern Yunnan, still had some wildlife of interest to subsistence hunters) suggested that the ban was not merely ineffective, it was completely *unknown*, both to hill-tribe hunters, and to the county and township officials entrusted with the responsibility of enforcing it.⁶³ Everywhere we travelled in hill country, local people with strong hunting traditions were continuing to hunt and always travelled armed. Government and forestry officials could hardly intervene even if they wished to, as they were usually full

participants. Thus, it appeared that this dramatic gesture, an absolute ban on hunting, had effect only in places with no wildlife (i.e., cities), but was a non-starter precisely in those places it was intended to apply.

These examples serve to illustrate that the peripheral concept of law in China, as discussed earlier, applies equally well to protection of wildlife and natural habitats. Wildlife finds itself outside the concerns of *li*, but not yet included within the slowly growing realm wherein *fa* is truly effective. Thus, I argue that when Westerners propose more laws, more legally protected lands, or simply better enforcement of current laws, as a solution to China's loss of wildlife, they inappropriately apply concepts from our frame to theirs, failing to appreciate important differences between China's legal heritage and our own. An analysis of current patterns of Chinese wildlife conservation suggests that, put in terms of Deng's analogy, the legal system simply isn't a cat that catches many mice.

2. EDUCATIONAL STRATEGIES

In admitting the deficiencies of a purely legal strategy, many – both Chinese and Western – argue that wildlife's salvation ultimately depends on education. But confusion lies in wait here, because education to Westerners implies formal schooling, while to Chinese it implies propaganda.

Schools

One problem with formal schooling is that many of the people we might be interested in reaching through the school system get only a rudimentary education, and some don't have access to schools at all. Among hill tribes in western Yunnan, while most children have access to elementary schools, their curriculum is largely limited to the stereotypical 'reading, writing, and arithmetic', educational materials are poor, and less than 2% of children move beyond the 5th grade level.⁶⁴ In the Tibetan area of Qinghai (where musk deer are being poached), young children who are being educated are not in government-run schools at all, but rather are in monasteries (and those not entering monasteries simply stay illiterate until adulthood).⁶⁵ I've already argued that monks are, on balance, a positive force for conservation, but it is difficult to imagine a Western-inspired environmental education curriculum having any relevance in this realm. In poor, rural China, school systems become weaker (to the point of non-existence) as one travels closer to the communities that actually live and interact with the species about which they presumably need to be educated.

Secondly, the Chinese educational system, based largely on rote memorisation and blind obedience to the teacher-authority, is particularly conservative and resistant to change. Curriculum reforms face considerable institutional and

cultural obstacles.⁶⁶ Thus waiting for the school system to enhance typical rural Chinese appreciation for nature may take a long time. Further, even elevating 'average' awareness about wildlife, (i.e., educating the 'typical' person) is not sufficient because a very small minority, engaged in unrestricted wildlife exploitation, may be all it takes to cause tremendous damage.

Propaganda

When most Chinese use the word education in this context they are actually thinking more of the word '*xuanchuan*', which is translated as 'propaganda', but doesn't carry with it nearly the negative connotation it does in English, being rather closer to 'propaganda's' root, meaning simply 'to propagate, or disseminate' information.⁶⁷ For example, despite efforts at disassociation with official government policy, a pilot educational program we attempted in Yunnan for hill tribesmen⁶⁸ (and that, in truth, was primarily functioning as community organisation) was routinely referred to by Chinese participants as *xuanchuan*. The elementary children's reader referred to earlier provides another illustration.⁶⁹ In the first chapter, one of the young children announces with great pride that she has become a 'propagandist' (*xuanchuanyuan*), and later she and her siblings march happily out to join the local neighbourhood propaganda team instilling environmental responsibility in their fellow citizens. This is written with complete seriousness, and none of the sense of embarrassment Westerners usually associate with the word 'propaganda'.

In fact, a fair amount of 'propagating' basic wildlife conservation messages has already been done. While the era of 'mass campaigns' may be over, one cannot travel far in China without encountering posters and billboards exhorting environmental responsibility. In Baizha, where musk deer are poached and timber illegally removed, a large sign in front of the field headquarters details the illegality of these acts. The highway leading to Yeniugou, where gold miners and others poach yaks and antelope, is posted in numerous places with large warnings against both poaching and illegal mining. In Kunming, where one can easily buy endangered species in free markets, neighbourhood Party committees frequently use their public blackboards to display a summary of the national wildlife law. In cities, colorful banners extolling the virtues of environmental protection hang from doorways black with coal soot, while in villages near forests subject to unsustainable levels of logging, large characters painted on the adobe walls proclaim the importance of following the rules about conserving forests and soils (whatever they are).

Unfortunately, social propaganda in China has been overdone by so many, for so long, and toward so many issues, that it has lost any power it may have once had to influence public thought. Most Chinese are simply inured to the messages, having been anaesthetised by the blaring loudspeakers from decades of failed

campaigns. People routinely smoke underneath large ‘smoking strictly forbidden’ signs, throw trash in places marked ‘absolutely no littering’, and practice small-scale capitalism beside remonstrations to ‘uphold the socialist path’.

Might the relative success enjoyed by Chinese family planning programmes constitute a counter argument? Propaganda to convince young couples of the virtue of stopping at one is ubiquitous in China. However, the history of family planning programmes in China argues *against* the effectiveness of propaganda, and rather *for* the effectiveness of economic incentives and institutional arrangements to alter social behaviour. Propaganda notwithstanding, preferred family size continues to be substantially higher than sanctioned family size.⁷⁰ Family planning policy has been markedly less successful in rural areas than in the big cities,⁷¹ and this is due not to differences in levels of propaganda, but rather to the degree of control that local governments have over people in the two areas. Family planning policy is backed up by stiff economic sanctions on violators; parents may incur substantial tax penalties or even lose their jobs, while extra children are denied the social benefits essential in Chinese society.⁷² In cities, where most people work for a central work unit (*danwei*), these economic sanctions are relatively easily enforced. In rural areas, where farmers – substantially freed by the responsibility system – are more self-sufficient, it is easier to find ways around these penalties.

To summarise, one can hardly argue against the benefits of ‘education’. As Chinese society changes, attitudes and values will also, no doubt, evolve in parallel. But Westerners are naive to believe that education alone will save species currently under threat.

3. ECONOMIC STRATEGIES

Economic incentives are not to be equated here with simple reliance on market forces. In fact, unrestrained market forces are often destructive of natural resources in whatever country they operate in,⁷³ and one should have no illusions that, operating on their own, they do any differently in China. Some economists have argued that, in an ideal state, markets can act to conserve natural resources, but even they have acknowledged the frequent occurrence of market failure in natural resource management. Market failure, very briefly, is the failure of the commodity exchange system to accurately measure the true value of a resource, or the failure of accurate information regarding its value to percolate through the system. Market failures occur with great regularity in Western economies with their relatively sophisticated web of oversight and regulatory functions,⁷⁴ so it strains credulity to believe that market failure doesn’t also happen in China, which is struggling with markets after four decades of state control.

Thus I distinguish a very broad category of ‘economic’ strategies from Ross’ ‘market exchange implementation’. The latter would ‘... reaffirm the basic superiority of a system under which self-interested individuals strive for a

maximum return'.⁷⁵ Under such a strategy, 'Prices ... serve the same communication function for the environment as they do for raw materials, energy or labour'. While not denying the pervasiveness of self-interest or the potential for pricing to drive conservation, I would submit that wildlife can rarely be privatised, and even private-property mimicking structures can be difficult to arrange. Rather, my intention in delineating economic strategies of wildlife conservation is to emphasise the importance of integrating wildlife into daily material life in its various forms. Such economic use may involve markets and prices, but may also involve subsistence use, religious use, etc. An 'economic' value for wildlife is that it be seen as part of the family household, rather than set apart, because it will be conserved most effectively when it is most integral to the lives of the people on whose survival it depends.

The quest for economic improvement currently pervades all aspects of Chinese life.⁷⁶ Economic motives for conservation, in the broadest sense but not excluding market exchange mechanisms, are thus coincident with the daily lives of most Chinese people and likely to find favour with little need of disrupting other agendas. Further, while Chinese public policies calls for protection of wildlife, governments allocate precious little funding to implement them⁷⁷. Programmes that can provide economic incentives, that perhaps make money rather than cost money, will have the best chance to be taken seriously by Chinese government officials.

However, even to bring up economics is to raise a red flag (pun notwithstanding) for much of the Western environmental movement. The patron saint of the American conservation movement, Aldo Leopold, cautioned against using economics as a rationale for conservation, arguing that it can never serve as a substitute for a land ethic.⁷⁸ While Leopold's argument is persuasive when applied in our culture, it may not be elsewhere. Below, I outline four potential, economically-based vehicles through which wildlife conservation might be more effectively realised in China, and a caveat underlying them all.

Generating foreign currency through ecotourism.

Nature tourism, or 'ecotourism' has often been touted as an effective way to make the protection of an area's natural resources economically attractive.⁷⁹ Such tourism is in its infancy in China, although each year sees more and more trips oriented toward scenic and cultural attractions. Little of this effort has gone toward promoting wildlife per se as a tourist attraction.⁸⁰

Nature tourism no doubt has potential to make a greater contribution to wildlife conservation in China than it currently does. However, it's likely that its contribution will be limited, for a number of reasons. First, it is important to make sure that when we speak of ecotourism we are speaking clearly about the situation as it pertains in today's China, with the opportunities for wildlife viewing and photography as they actually are. Too often the only models for international nature travel are those of Kenya, Thailand, or Costa Rica, which

have made a success of drawing in foreigners to national parks.⁸¹ But even other countries in Africa and Central America have been unable to emulate the success of Kenya or Costa Rica in this regard, and many areas in China that could benefit from tourist revenues have neither the spectacular wildlife and ability to withstand the large numbers of people that characterise Kenyan parks, nor the relative accessibility to foreigners of Thai or Costa Rican parks.

A second problem with ecotourism is that the link between attracting tourists and wildlife protection is often blurred. For example, Qinghai province currently has one wildlife-oriented tourism attraction, Qinghai Lake's Bird Island (*niao dao*), an island long known for its rookery for geese, gulls, cormorants, and other waterfowl and shorebirds. Tourism has been promoted here for years, but thus far the income derived has been underwhelming, not even paying for the upkeep of the small hotel that has been built to accommodate the few tourists who do arrive. Further, it's not clear that whatever economic incentives thus far produced have resulted in effective conservation. Domestic livestock continues to trespass in the reserve (despite, of course, legal prohibitions), and water levels in Qinghai Lake decline yearly – probably due to nearby agricultural practices – thus potentially threatening the security of the birds' nesting areas by turning Bird Island into a bird peninsula.⁸² The forces behind this threat have nothing to do with tourism, of course, but nor has the economic power of tourism had any effect in reversing the course of this environmental change.

Further, it is fairly well documented that most money generated by foreign tourism stays in the county of origin, and relatively little is available for use in the destination.⁸³ To obtain some data on the potential for nature tourism to contribute economically to conservation of Yeniugou, I conducted a survey of North American nature tourism operators offering nature tours in Asia, asking them to indicate the disposition of funds received for their tours. Results suggested that only a relatively small amount was available for direct conservation activities.⁸⁴

It may be that, in a perfect market, simply raising the value of a pristine landscape or of the survival of a species is enough to ensure its perpetuation. But such a simple linkage is made at one's peril in China, where cost, value, and resulting actions often have little to do with one another. Thus, in addition to simply 'making the resource valuable' in a generic, undefined sense, one must generate specifically earmarked funds for well-designed conservation activities. Only then would such a programme make significant local contributions to wildlife conservation.

Generating foreign currency through international hunting

The mere mention of trophy hunting usually produces an audible gasp among many concerned with wildlife conservation. One study found that 80% of Americans surveyed disapproved of trophy hunting.⁸⁵ As well, current trends in

environmental conservation emphasise biodiversity, as differentiated from the single-species management implied by trophy hunting programmes.⁸⁶

But whether or not we approve on moral grounds, it is difficult to deny that enthusiasm can often be generated for the conservation of wildlife, both on the part of local people and – perhaps equally importantly – local officials, from this, perhaps somewhat mercenary, activity.⁸⁷ Such hunting may potentially have the ability to provide funding not just for low-wage jobs, but for vehicles and gasoline for guards, direct compensation payments for habitat protection, and even what the Chinese call '*xiao fei*', (literally 'small fee', more prosaically 'bribe') for local administrators, which might also be built in to keep their enthusiasm high.⁸⁸ Under trophy hunting schemes, harvest rates are kept low; typically to about 1 or 2% of the population.⁸⁹ It is therefore unlikely for such activity, by itself, to cause population declines.

Of course, trophy hunting contributes only additional mortality if its presence does not create an incentive for better conservation. However, there exists conceptual, in addition to empirical reason for believing that trophy hunting programmes often do provide a basis for precisely this incentive. In a system premised on maintaining a huntable number of older animals, the link between the health of the habitat producing them and the profit earned by harvesting them should be clear. Particularly in arid western China, in which most of the limited opportunities for trophy hunting remain, pastoralists are intimately familiar with the basic concepts of sustained yield. They know that killing too many causes long-term loss and that healthy habitats are ultimately the source of production. Few of them retain a pure subsistence economy, however; most use money and enjoy having more of it. Thus, international hunting, rather than merely recreation for wealthy foreigners, can legitimately be viewed as the basis for an incentive-based conservation system.

Subsistence hunting.

Western conservation groups often support a policy of reducing the dependence of local people on nearby wild resources,⁹⁰ and this fits well with Chinese paradigms of development that view progress and urbanisation as virtually synonymous. Yet it is reasonable to question whether attempts to abolish, rather than to reform, bush-meat traditions are productive in the long-term. Outside of nature reserves, lands that can support wildlife are under great pressure for conversion to higher efficiency uses, and it will be increasingly difficult to thwart this tide if the bush meat produced by them is no longer valued. Thus I would argue for a policy of supporting, rather than suppressing, bush-meat traditions, but additionally, for assisting in the necessary transition toward effective means of monitoring and control in the face of increased populations and more efficient weaponry.

Using local demand: cottage industries

In many cases, wildlife can provide the basis of a successful cottage industry to enhance the living standards of relatively poor rural people. Chinese already do this with many species,⁹¹ albeit with essentially no monitoring or control, but tend to run afoul of international sensitivities when export of such wildlife products are considered. In some cases, a financial connection might be enough to tip the balance away from an open-access mentality in favour of habitat protection and harvest control. For example, Tibetan villagers living in Baizha might be more successful in fending off the incursions of outsiders who poach local musk deer if they themselves were allowed to use the deer for local use or sale. These villagers appeared to possess the requisite social feedback mechanisms to be able to use, rather than abuse, a renewable resource such as musk.⁹²

There are, of course, stumbling blocks to the expansion of these types of cottage industries. As in any economic enterprise, the profit earned must be worth the effort, and more than competing enterprises might earn for a similar amount of effort. Some of the Baizha pastoralists already participate in a small cottage industry based on the white-lipped deer. A factory in Germany that makes speciality buttons for clothing buys the dried and shed antlers of the deer, thus creating a market for them. Theoretically, this provides an incentive for live over dead deer, because live deer produce a new crop of shed and dried antlers each year. In actual fact, it is unclear how well the incentive is working. In 1990, shed hard antlers could be sold to the local government store for 80 yuan/kg; velvet antlers of the same species (but from animals poached during spring) would fetch up to 2,000 yuan/kg on the black market.⁹³

LOCAL CONTROL OF RESOURCES: THE CRITICAL CAVEAT

The larger obstacle to any economic strategy however, be it ecotourism, international hunting, subsistence hunting, or some form of cottage industry, is that to succeed, local people must have secure access and control of the resource. For local activities involving 'key' species to become established and expand, higher government sanction of local autonomy is ultimately required. For example, in Zimbabwe, the acclaimed CAMPFIRE programme was made possible only after the central government passed a statute specifically devolving power to local councils, deliberately limiting its own power to control these resources.⁹⁴ Zimbabwean officials have gone so far as to formally embrace a policy of benefits from wildlife '... *biased* towards the communities and areas that generate them'.⁹⁵

Issues of local control are often particularly cloudy in rural, western China, where local people are usually different ethnically, linguistically, religiously, and even racially from the dominant Han majority. One can hardly begin to deal

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seriously with local control issues without asking sensitive questions that bear on Han chauvinism at best, and racism at worst. As well, a history of oppression and civil war have often uprooted local people, and political events have sometimes caused wholesale movements of ethnic groups. For example, Yeniugou has changed hands twice during the past 40 years, from Tibetans, to Kazakhs, and then to Mongols.⁹⁶ It is difficult to promote local control as an effective conservation policy when it's not clear who the local people are.

But even more problematic is that underlying any such discussion of allocation of benefits is the assumption that groups of people will naturally differ in their views, and often have competing claims to wildlife. This is a particularly difficult issue in China, where the traditional Confucian view of society, reinforced by the Maoist legacy of exhortations to 'unity' (*tuanjie*), is that society is fundamentally harmonious, and that conflicts arise only from lack of education (in the Confucian view), or from exploitation of the ruling classes (in the Communist view).⁹⁷ Even to admit that there exist competing claims requiring adjudication is to question this underlying philosophy.

CONCLUSION: AN APPROACH FOR WESTERNERS

I have argued from two premises: (i) that the prevailing view of Chinese toward wildlife is utilitarian, and (ii) that numerous characteristics of contemporary Chinese society make implementation of agreed-upon social goals, such as conservation of wildlife, particularly difficult. These forces, together with increasing population and resource demands spurred by greater affluence, have reduced wildlife populations even in the relatively sparsely populated western part of the country, and threaten to cause additional extinctions. Given these premises, and the additional one that further reductions in wildlife populations are undesirable, it seems that one can propose changes along one of two lines: one can attack the utilitarian attitude and press for a transition to more humanistic, ecologicistic, or other attitudes that would reduce demand for wildlife; or, alternatively, one can encourage the development and fostering of social institutions which can cope effectively with the increased demand.

Neither strategy would be easy to implement. But, I submit that while the second strategy would be daunting, the first qualifies as nearly impossible. There is little reason to believe that fundamental values toward wildlife, formed and kept over millennia, can change quickly enough to avert the loss of many species. Admittedly, China will also find it difficult to develop rapidly social institutions that can more effectively conserve wildlife. However, the mechanistic requirements of doing so are more in keeping with current Chinese realities than are the philosophical requirements of a wholesale change in environmental values. As well, among the largely non-Han communities of rural western China, there already exist social institutions (in the form of religious or traditional strictures,

communal use of land, village-based taboos) that, with appropriate adjustments to new markets and increased access, could be mobilised to deal with the modern threats to wildlife.

Yet many Western observers have been unable to overcome an aversion to wildlife use, seemingly insisting not only that China conserve its wildlife, but that it do so for the correct reasons. The recent citation of China under the U.S. government's Pelly Amendment, and near invocation of trade sanctions, dealt nominally with the issue of Chinese trade in endangered species originating in other countries. However, lurking not far from the surface were issues of values: Not merely was China subverting CITES, but what were those old-fashioned Chinese doing consuming tiger and rhinoceros products in the first place?⁹⁸

Some writers seem to have recommended that Chinese simply alter their way of valuing wildlife. For example, Shen and colleagues⁹⁹ write that 'The single most important factor *hampering* wildlife conservation in China is the traditional use of wild animals for medicinal purposes, meat and skins' (emphasis added). A later report¹⁰⁰ commissioned by a prominent nature conservation organisation, referring specifically to bears, concluded that 'No campaign to slow or stop the bear trade will ever succeed without *understanding* Asian attitudes ...', but later suggested that 'educational efforts should *promote the value* of bears as wild animals and *important members of the world's ecological community*' (emphasis added). The authors thus legitimately suggest that we (presumably non-Asians) better understand Asian attitudes, but then seem to propose that we do so in order to show them the error of their ways.

Yet there is no inherent reason that utilitarianism cannot be consistent with conservation, at least as narrowly defined. If members of society use and value a renewable resource, they generally have reason to conserve it so as to be able to continue using it. Some westerners argue that the utilitarian view of wildlife makes it more valuable dead than alive. But a similar argument could be made about the wildlife conservation system for many species in western North America, where the premise is largely that a broad constituency, much of which values wildlife primarily for food or sport, nevertheless provides the political muscle to conserve that wildlife's natural habitat. Such a system has not resulted in, for example, deer being worth more dead than alive.

The rub, of course, comes in institutionalising incentives for players at all levels of the system to prioritise long-term benefits over short-term profits. It is worth pondering if this is possible in a society with so little tradition of power coming from the bottom, spread reasonably evenly over individuals assumed to be equal in prerogatives and responsibilities. Yet such does not seem totally unrealistic if management units are focused on local rural areas sufficiently small that they retain an internal sense of '*guanxi*', and particularly if management policy attempts to harmonise with the tradition of viewing wildlife primarily in terms of its material value. This challenge, in any case, is the real one facing China's vulnerable wildlife. But what has the West done? Although the Pelly

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confrontation (and Chinese response) resulted in some limited offers of official U.S. government training assistance to Chinese law enforcement, the greater need for outside technical help in developing local institutions that encourage sustainability of wildlife use remains unmet, having been virtually ignored by Western governments and NGO's alike.

Our view of Chinese attitudes toward wildlife suggest the strategies we will embrace. While advocating economic strategies, I am not arguing that legal and educational strategies be abandoned, if for no other reason than there will continue to exist conservation problems for which economic strategies, no matter how broadly interpreted, offer no solution.¹⁰¹ Some species can be saved only by a commitment by Chinese society to restrain destructive behaviours, codified in laws and maintained by supportive attitudes. For another, even in China, attitudes do change, and in time, it may be appropriate to focus on those wildlife values currently more in vogue in the West.

However, laws and education are not synonymous with conservation. Discouraging wildlife use is likely to have the effect of further alienating local, rural people – already partly disenfranchised under the current system – from the wildlife whose fate lies in their hands. There are in China, as in Africa, ‘many paths to wildlife conservation’.¹⁰² It is important that we in the West look realistically at those paths that might work in present-day China. We may not feel totally comfortable with the ethic implied by Deng's ‘doesn't-matter-what-kind-of-cat’ sentiment, but that may be a small price to pay for ensuring that the ‘mice’ in China – mice that are slowly but steadily destroying its priceless natural heritage – are not allowed free reign simply because we weren't satisfied with the colour of the cat supplied to control them.

NOTES

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³ There exists no Chinese term that carries with it the flavour of the word ‘conservation’ as I use it here, i.e., benevolent use, or limitations of use patterns by current, in favour of future, generations.

The most often seen term is simply *baohu*, which translates more nearly to the considerably more restrictive ‘protection’. Occasionally, one also encounters *baohu* followed by *guanli* (‘management’), which seems to imply that protection and use are not mutually exclusive.

⁴ Bell, R. H.V. 1984a.

⁵ To which I would add 'cultural' events.

⁶ For general reviews of the status of Chinese wildlife in English (which vary considerably in outlook), the reader is referred to Greer and Doughty 1976, Qu 1982, Schaller 1990, Schaller 1993, Rowell 1983, Shen and Xiao 1982, Wang 1988, Li and Zhao 1989, and Xu and Giles 1995. More general treatments of China's environmental problems, which tend to focus little attention on conservation of native flora and fauna, include Boxer 1989, He 1991, and Smil 1993.

⁷ Nash, 1973.

⁸ Nash, 1973: 9. Nash (Ibid: 20) also contrasted this attitude with what he believed to be a more positive one on the part of traditional 'Eastern' cultures, including China's. However, others (see, for example, Guha 1989) have argued that Nash, and other similar thinkers, have used a selective reading of Eastern religions in their attempts to show that a biocentric view of nature is universal and has precedent.

⁹ *Sensu* Kellert, 1980.

¹⁰ Here, and throughout, I use the 10-category typology of non-exclusive attitudes toward wildlife, developed by S.R. Kellert. These are termed 'Naturalistic' (interest in wildlife and the outdoors), 'Ecologicistic' (interest in systems and interrelationships), 'Humanistic' (interest in individual animals, primarily pets), 'Moralistic' (concern for animal welfare), 'Scientistic' (interest in biological functioning of animals), 'Aesthetic' (interest in artistic or symbolic qualities), 'Utilitarian' (concern for practical, material value of animals), 'Dominionistic' (interest in mastery and control), 'Negativistic' (avoidance or dislike of animals), and 'Neutralistic' (indifference). See Kellert 1980.

¹¹ Greer and Doughty 1976.

¹² Shen et al. 1982.

¹³ Sheng, H.L. 1988.

¹⁴ Examples include Sheng et al. 1990, and Yang et al. 1990.

¹⁵ Qin and Qin 1985.

¹⁶ Qin and Qin 1985.

¹⁷ Qin and Qin 1985.

¹⁸ Schafer 1968.

¹⁹ Here I use only material published originally in English to avoid any biases that might arise from my own translations.

²⁰ see Harris 1991.

²¹ Zhu 1987.

²² Li 1990.

²³ Li and Zhao 1989.

²⁴ Kellert 1991.

²⁵ Li and Zhao 1989.

²⁶ Wang et al. 1989.

²⁷ Kellert 1980.

²⁸ Kellert and Westervelt, 1982.

²⁹ Kellert and Westervelt 1982: 656.

³⁰ In addition to the published examples previously cited, personal observations include a researcher who killed a snake upon finding it – even though he knew it to be a harmless species – because he didn't 'like snakes', and a mammalian taxonomist who, while acknowledging the near extinction of tigers in China, allowed that he would himself use tiger bone for medicinal purposes, given the chance.

³¹ Kellert 1980. See also Kellert 1983.

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³² See, for example, Wade 1992.

³³ See, for example, Begley 1993.

³⁴ Begley 1993.

³⁵ Schaller 1990, 1993.

³⁶ On this, as well as on the erroneous viewpoint of some westerners that Chinese environmental actions were traditionally in accord with Taoist or Buddhist teaching, see Tuan 1968.

³⁷ This description of Han civilisation can be contrasted with the largely pastoral societies living to the north and west. While far too much is often made of these distinctions, particularly in the case of Tibet, which is usually (and erroneously) taken to be a culture in which absolutely no use of wildlife occurs (see, e.g., Rowell 1990), there is a fundamental difference. In the pastoral society, a livelihood is made by the use and husbandry of a naturally occurring resource, i.e., native vegetation. Wholesale modification is impossible; instead, pastoralists must adjust their use patterns to biological constraints (e.g., productivity, yearly fluctuations in water availability). Pastoralism thus provides a closer analogy to Western notions of 'responsible wildlife use' than does intensive cultivation of crops.

³⁸ Schaller (1993) provides a vivid description of this with regard to conservation of the giant panda.

³⁹ See, for example, Howard 1988.

⁴⁰ I use these as anecdotal examples; all come from personal observation. A driver, hired on contract for a research team I accompanied, once had to be hauled from a women's lavatory late one night after having fallen asleep there in drunken stupor, yet he was rehired the subsequent year; I was told of a provincial-level biologist (who shall remain anonymous) who was at least 2 years tardy in reporting on surveys conducted with Central government appropriated funds by an official of the Ministry of Forestry; for law-enforcement anecdotes, see later text.

⁴¹ In all the literature with which I am familiar, I've found only a single work that treats systems and incentives directly (Ju and Jiang 1992), that exception tending to prove the rule that such issues are not generally considered by Chinese authors.

⁴² Poaching (in Chinese, *toulie*, literally 'hunting by stealing'), is routinely referred to in print as *luan bu lan lie*, literally 'chaotically trap, wantonly hunt', the colourful language suggesting that there couldn't possibly be rationality underlying such behaviour.

⁴³ The Tibetan forest guard in Baizha (who poached wildlife) was generally held in contempt by my Chinese colleagues; a Han guard in Gaoligongshan Nature Reserve in Yunnan who rarely patrolled his area was similarly viewed as lazy by a different set of Chinese colleagues.

⁴⁴ There are attempts to institutionalise these kinds of incentives in China through formalised international hunting areas (see for example, Liu 1995), although most remain embryonic. However, I am also familiar with instances in which individual Westerners were granted permission to hunt otherwise protected species on a one-time basis, in areas with no such systems in place or planned. In these cases, it is difficult to imagine how incentives to maintain habitat or curb poaching could be created, there being no prospect of a future benefit stream.

⁴⁵ Cohen 1968.

⁴⁶ Bodde and Morris 1967.

⁴⁷ The fact that recent reformers have argued for strengthening the role of law in more nearly its modern Western sense, only serves to underline how peripheral law has

traditionally been. After Mao's death in 1976, some leaders who survived the Cultural Revolution attempted to explain its excesses in terms of weaknesses created by relying too much on the rule of men (*renzhi*), as contrasted with the rule of law (*fazhi*). Their efforts to reestablish order, and at the same time promote reform, were justified by a resort to laws which would provide a check on further misuses of power. See for example, numerous short essays in Chapter 8, Section 5, of Wang 1979.

⁴⁸ Laws protecting rights for individuals may be seen as goals, not as present day realities, both by China's leaders and by the public. Andrew Nathan has termed these 'programmatic' rights, to be enjoyed at some later date when conditions allow. See Nathan 1985.

⁴⁹ For additional insight on conflicts in China between *fazhi* and *renzhi*, see Kristoff and WuDunn (1994: 96).

⁵⁰ Ross 1988.

⁵¹ Ross 1988.

⁵² Most of the extant legal protection for wildlife nationally is condensed into a single piece of legislation, termed simply the 'National Wildlife Law' (1988, *yeshengdongwu baohu fa*), which has been published in Chinese by *Zhongguo linye chubanshe* (China Forestry Publishing House), Beijing. The main import of the law is to identify species of concern and/or interest, and to classify them as 'key' species of either 1st or 2nd class. The principal difference between these two classes is that permits to take specimens of 1st class species must be obtained directly from central government representatives in Beijing, whereas permits for 2nd class species are issued by respective provincial authorities. In both cases, permits are to be issued only for limited scientific and educational reasons, and are never given to local people for subsistence or sport hunting (although they are occasionally issued to foreigners participating in sanctioned hunts). In effect, permits are reserved for those few with ability to deal with the bureaucracy in central cities; for rural people, all 'key species' are effectively 'endangered species'. Species not listed as 'key' are not treated in any way. Provinces generally have parallel legislation, sometimes including additional areas specified as off-limits to hunting, and similarly ignoring species not listed as 'key'.

⁵³ The exact number is difficult to determine, in part because it changes yearly, and in part because sources differ in what they include under the definition of a nature reserve. Wang et al. (1989) list 514 reserves, but a recently updated database at the Kunming Institute of Zoology (Chinese Academy of Sciences) includes 786 areas (Zhu Jianguo, personal communication, 1994).

⁵⁴ See, for example, Yan 1989, Zhu 1989, and Xu and Giles 1995.

⁵⁵ Harris 1991.

⁵⁶ See note 52; also Qinghai Province 1988.

⁵⁷ This particular poaching incident may have set a record for the greatest number of simultaneous infractions: A fully protected species was killed by a forest guard in a no-hunting area with an illegal (military) weapon during a time-of-year in which no hunting of any kind was allowed even outside the no-hunting zone.

⁵⁸ Pu 1990.

⁵⁹ I acknowledge that resistance to the full flowering of Tibetan Buddhism, both official and unofficial, still exists in China, and that the religion is nowhere near the powerful force it was prior to the 1950s. In particular, the large monasteries near Lhasa house only a fraction of their historic numbers of monks. As well, Chinese writing on the issue of Tibet continues to be strongly influenced by political concerns, and Tibetans generally suffer from oppressive practices. However, the popularly accepted Western notion that

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rehabilitated monasteries are merely facades to mislead tourists does not hold in Qinghai, where tourists are virtually absent. Pu's (1989) account of monasteries in Qinghai appears accurate, based on the evidence that his descriptions match my own observations for every one of the 8 monasteries I visited, 7 of them located in areas closed to tourists.

⁶⁰ Meaning 'living Buddha', or *houfo*, in Chinese.

⁶¹ Harris, 1993; Harris and Miller (1995). Species included wild yak (*Poephagus mutus*), as the name suggests, but also Tibetan gazelle (*Procapra picticaudata*), Tibetan antelope (*Pantholops hodgsoni*), Tibetan wild ass (*Equus kiang*), white-lipped deer (*Cervus albirostris*), blue sheep (*Pseudois nayaur*), argali (*Ovis ammon*), wolves (*Canis lupus*) and brown bear (*Ursus arctos*).

⁶² Yunnan Linyeting 1992.

⁶³ Ma et al., 1995.

⁶⁴ Ma et al., 1995.

⁶⁵ An admission of falling elementary school enrollment rates in Tibetan areas of Qinghai is found in Zhang 1984.

⁶⁶ An illustration is provided by comments made to me by a junior-high teacher in Kunming, Yunnan, while attending a training session on implementing an innovative environmental-education curriculum originally developed by a Western-based conservation organisation. After about two weeks of enthusiastically participating in the session, I asked her for her reaction to the new ideas. She responded that she liked the concepts very much and was enjoying the training. However, she added that she didn't see how any of it could actually be incorporated in the city school system, because none of it related to standardised tests that were the focus of both teachers' and students' attention. She had not yet brought this to the attention of the Western trainers, and did not intend to.

⁶⁷ On this point in a different context, see also West 1992.

⁶⁸ Harris and Ma (in press).

⁶⁹ Qin and Qin 1985.

⁷⁰ Whyte and Gu 1987.

⁷¹ Conley and Camp 1992.

⁷² Conley and Camp (1992) report that 'Rewards for couples who adhere to official policy can reportedly be substantial in the wealthier communities' ... while 'small fines may be imposed for failure to use a contraceptive. Steeper financial penalties, denial of free social services, demotion and other administrative punishments may be administered for continuing an unapproved pregnancy.'

⁷³ See, for example, Clark 1973.

⁷⁴ Rasker et al. 1992.

⁷⁵ Ross 1988:4.

⁷⁶ See Schell 1988; Link 1994; Kristof and WuDunn 1994.

⁷⁷ Unpublished data, interviews with regional staff at Gaoligongshan, Tongbiguan, and Niaodao Natures Reserves, and forestry officials in Yunnan and Qinghai.

⁷⁸ Leopold 1966.

⁷⁹ Whelan 1992.

⁸⁰ Harris 1993.

⁸¹ Dixon and Sherman 1990; Wells and Brandon, 1992.

⁸² Bian 1990.

⁸³ Lindberg 1991.

⁸⁴ Harris 1995.

⁸⁵ In contrast, 82% approved of traditional, native subsistence hunting, and 85% approved

of hunting for meat; Kellert 1980.

⁸⁶ For a critique of the single-species approach to conservation, see Hutto et al. 1987. A counter-argument (Swanson 1992) is that highly-priced species may act as proxies for others whose value cannot be appropriated, and thus foster incentives to invest in natural habitats needed by both.

⁸⁷ The Chinese Wildlife Conservation Association (CWCA), a quasi-governmental arm of the Ministry of Forestry, now devotes the majority of its time and efforts to the fledgling international hunting programme (Wang Wei, CWCA, Beijing, personal communication, 1993).

⁸⁸ The notion that hunting-based money-making schemes can raise consciousness about conservation was given additional support when an American businessman, operating completely independently of our research, arrived in Qinghai, suggesting a business proposition to expand international trophy hunting. Within a few weeks, the local authorities, who had heretofore shown only perfunctory interest in our wildlife research, were in high gear, eager to see our results. While their official mandate calls for protection of wildlife, they had no funds, no personnel, and most importantly, no great interest in doing so. Now, given the chance to provide funding to their agency (and perhaps themselves) through the proposed venture, they quickly became enthusiastic about the subject.

⁸⁹ Bell 1984b, Child 1990.

⁹⁰ A European adviser to a survey team working among hill-tribesmen in Yunnan, representing a large international conservation organisation, objected to his Chinese colleagues collecting specimens for scientific purposes, on the grounds that it provided a poor model for the local residents. In his report back to the organisation's headquarters, he wrote that killing animals was 'the very behaviour we're trying to halt'.

⁹¹ Sheng 1988.

⁹² Harris 1991.

⁹³ Harris 1991: 356.

⁹⁴ Zimbabwe Trust 1990.

⁹⁵ Zimbabwe Trust 1990. Emphasis added.

⁹⁶ Harris 1993.

⁹⁷ See Nathan (1985) for an explanation of Chinese concepts of 'democracy'. Democracy in traditional Chinese thought is viewed as a means to use more efficiently the ideas and talents of people who are assumed to fundamentally agree with one another. By contrast, the Western conception of democracy is as a means by which policy can be made in the face of conflicts of interest that are assumed to characterise society.

⁹⁸ Although the petition to invoke the Pelly Amendment over CITES infractions involving tiger and rhinoceros (species China had already nearly or completely extirpated) became widely publicised, it was soon followed by a pair of less-publicised requests to invoke Pelly with respect to species that China both possesses, and views as useful resources: musk deer, and a collection of species including bears, leopards, and pangolins. It seems, therefore, that some groups were attempting to use Pelly not merely to pressure Chinese compliance with CITES, but to censure domestic use of these species as well. I don't argue that China has managed any of these species well: quite to the contrary. However, while CITES itself takes no position on the ethics of consumptive use of any species, it seems that Pelly certification provided credibility to attempts to use CITES as a ruse to batter China on its environmental ethics, in addition to its enforcement of trade laws.

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⁹⁹ Shen et al. 1982.

¹⁰⁰ Mills and Servheen 1991.

¹⁰¹ For example, it is difficult to imagine their application to such species as tigers (*Panthera tigris*) and giant pandas (*Ailuropoda melanoleuca*), whose populations and rates of reproduction are too low to allow consumptive use, and which are nearly impossible to view or photograph in the wild.

¹⁰² Caro 1986.

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