SOCIAL CHANGE AND SOCIAL VALUES IN MITIGATING BUSHMEAT COMMERCE.

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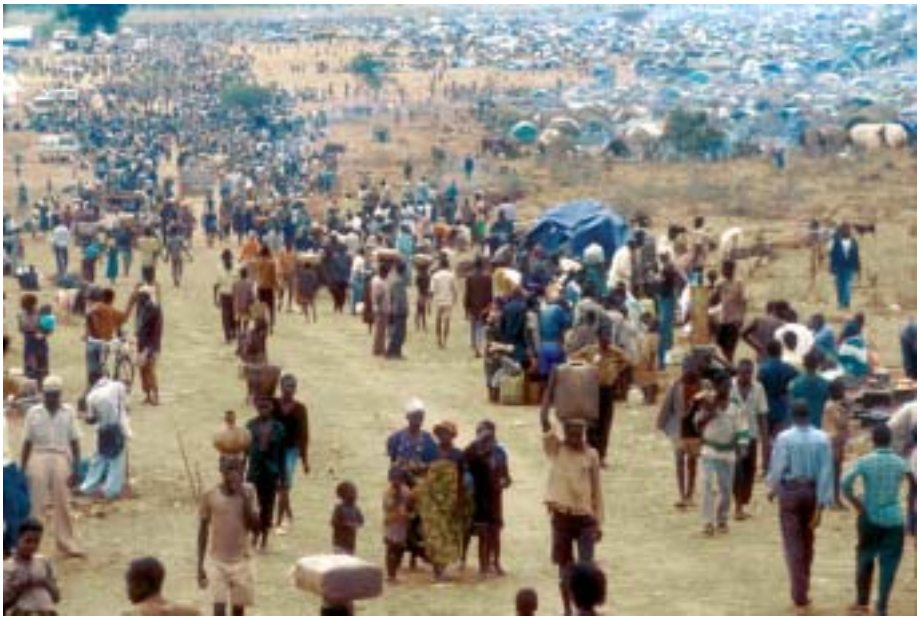

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Introduction

It has long been argued that consensus to act in conservation research and development must include all stakeholders. On one political level, this has come to mean "when planning for Africa, include Africans." This expansion is necessary, but not sufficient. We must step back to ask *who* is planning – which Africans, which internationals? What are their values, their biases, their levels of expertise and competence? Whom and what do they represent? And, as stakeholders, what is their *stake* in this?

Professionals in applied science who have a stake in the endeavors and disciplines required to confront the bushmeat crisis reach far beyond those now eminent in the field. Leadership in the wildlife conservation movement has spread from naturalists and wildlife biologists to include ecologists, anthropologists, and, more recently, economists and political scientists. Still, this widened spectrum does not cover many important disciplines and fields of endeavor. I have argued that a broad inclusiveness is imperative to underpin conservation planning (Rose, 1996a, 1998b). Now, in the face of burgeoning commerce in wildlife meat, that call for broadbased professional and personal collaboration is doubly important. In this chapter , I attempt to sketch a theoretical blueprint for understanding and effecting lasting social change in the bushmeat arena.

Social Change Governs Commercial Exchange

Social values and social change capacities have not been studied adequately, if at all, in the context of bushmeat commerce. In part, this is due to politicians and professionals only recently acknowledging that the commercial trade in wildlife for meat is big business and that its control is crucial to the conservation of nature on this planet (ACP-EU, 1996; Bowen-Jones, 1998). But the disregard for social phenomena among conservationists precedes the bushmeat crisis. The global conservation movement began and remains focused on solving biodiversity problems, not understanding and influencing the human factors that create those problems (Ludwig *et al*., 1993).

More recently, due largely to their conflicts over the right to work in common wild areas, conservationists and developers have been attempting collaboration. The marriage of professionals who care about flora and fauna with profiteers who covet wood and meat is not an easy one. Occasionally they work together in a domain both grasp intuitively – economics. Thus, there has been a strong bias towards consideration of economic factors in the creation of Integrated Conservation Development Projects (regarding ICDPs, see Cleaver *et al*., 1992; Brandon and Wells, 1992). Science and business have made their mark in this world by their ability to manage measurables. Money counts in large part because it is so easy *to* count.

A respected French timber executive in Cameroon compared bushmeat to "found money" and suggested that poor Africans cannot resist hunting any more than they can leave a hundred franc note lying on the forest floor (Incha, 1996). This view of financial greed as overriding human values for honesty, community, and compassion is a perceptual framework that came to Africa with the people who imported common cash economy – the traders and developers of the middle east and Europe. The fact that this economic value structure has served the outsiders more than the Africans is accepted. The possibility of controlling this destructive penchant for commerce *uber alas* has been largely ignored.

But it is not francs and dollars that cut trees or kill gorillas. The rational constructs of supply and demand are not capable of wielding chain saws and firing shotguns. It is people who destroy forests and wildlife. Individual loggers and hunters are manipulated by specific timber managers and bushmeat traders who have, in turn, been seduced into exploitative enterprise by the exigencies of their personal situations in a region plagued with societal turmoil and rife with anarchic scrambles for selfsurvival and private profit.

Juste *et al*. (1995) crystallised the essence of the process: "With the advent of modern firearms and improved communications and transport, subsistence hunting has given way to anarchic exploitation of wildlife to supply the rapidly growing cities with game." The key word here is anarchic. Horta (1993) wrote that "... almost all the companies in the forestry sector are 'outside the law.' Despite good legislation, there is no effective overseeing of actual operations."

Recently, I wrote (Rose, 1999a): "It is imperative that international political and financial pressures and incentives be brought to bear on these uncontrolled business activities and the resultant social anarchy. At the same time, work must begin in earnest to expand African people's values beyond the imported view of wildlife and wilderness as an exploitable natural resource."

This treatise will therefore attempt to expand applied biodiversity science and its search for conservation solutions beyond the clutches of resourcism to the fundamental investigation of what we humans perceive and how we behave. As Lorenz (1985) advised those who would undertake the study of living beings, we begin by examining the observing apparatus – the scientist's mind.

Scientist Know Thyself: A Call for Self-Examination

Ask a professional what s/he learned at the University, and you will know how s/he will perceive the bushmeat crisis, or any major issue in conservation for that matter. Then examine the person's experience in the field, and her/his approach to solutions will become predictable. Educational discipline and personal experience effect our biases in relation to science and conservation (Rose, 1996a). In the context of social systems that opportune selfactualization, a person's psychological strengths will influence her/his professional path, values, and behavior.

MATRIX OF APPROACHES TO WILDLIFE

CONTROL

Extract **Steward**

EXPLOIT <<<<<<<<**KNOW**>>>>>>>>> **REVERE**

Domesticate **Preserve**

COMMUNE

Endeavors:	Business	Politics & Law	Life & Social Sciences	Arts & Humanities	Theology
Life Science:	Medicine	Agriculture	Biology & Zoology	Conservation	Ecology
Social Science:	Economics	Political Science	Psychology	Sociology	Anthropology

Differential capacity to think, feel, sense, and intuit characterize an individual's persona and delimit one's attitudes and behaviors (Jung, 1958). A *Matrix of Approaches to Wildlife* constructed along these psychological dimensions seems to fit the distinction of professional fields of endeavor, as well as disciplines within the natural and social sciences (Rose, 1999b). A fundamental step towards creation of an applied biodiversity science must be to understand and expand the baseline values that influence perceptions and decisions of the people who are constructing the science.

As implied in this Matrix, persons who work in business, medicine, and economics are typically biased towards the **exploitation** of biodiversity. They want to know about wildlife in order to use it as a resource for personal and human gain. Professionals in politics and law, agriculture, and political science also tend to approach wildlife from the standpoint of **extraction** and **domestication** of products for human use. Of course there are utilitarians everywhere, since sensory focus on empirical (material/visible) phenomena is crucial to human survival and to making a living. Nonetheless, it does appear that resource exploitation is the prime driving force in some arenas and not in others.

On the opposite end of the Matrix, practitioners in theology, ecology, and physical anthropology are perhaps the least likely to ask questions like "what can biodiversity do for people?" Persons in these areas are typically biased towards asserting **reverence** or respect for wildlife. They want to know about wildlife in order to appreciate it as an intrinsically valuable element of nature. Professionals in the arts and humanities, along with conservationists and sociologists, also tend to approach wildlife from the standpoint of **stewardship** and **preservation**. Still, there are naturalists everywhere, as intuitive experience of metaphysical (abstract, spiritual) phenomena is crucial to psychological well-being and to the quality of life.

As suggested in the Matrix, professionals in the life and social sciences seem to take a middle ground between exploitative businessmen and reverential theologians. Biologists, zoologists, and psychologists seem similarly centrist in their respective values in that they focus neither on the domestication nor preservation of wildlife. This is not to say that these disciplines are more "objective" than the others. Rather, it suggests that their members are more often ambivalent or afraid to relate the subject matter of their choice to the controversial meta-issue of humankind's involvement with wildlife, and with non-human animals in general.

To synthesize, the division of professional fields and endeavors seems to separate the sensitive seeker of a way to *make a living* from the intuitive seeker of a *quality life*. It has been accepted in organizational psychology for decades that effective leadership must integrate these dichotomous character types and contrasting pursuits if corporate, community, and individual goals are to be achieved (Kroeger, 1992; Rose, 1975). Conservation leaders, workers, and programs, whether *in situ* or *ex situ*, are not exempt from this need for psychological integrity.

If one's proclivity towards *Sensing* or *Intuiting* seems to define the disparity of perceptions and relationships to wildlife among diverse fields and disciplines, then the duality of *Thinking* and *Feeling* appears to effect intervention choices taken within these professional bailiwicks (Myers and Briggs, 1993). Heavily rationalized persons are likely to opt to control wildlife, while more emotionally directed individuals will elect to commune with it.

For the conservationist driven by intellectual **control** needs, hands-off **preservation** of biodiversity seems to be preferred. On the other hand, emotionally oriented persons in conservation seeking to **commune** with wildlife, will select **stewardship** and care-taking so as to relate to wildlife more directly. These distinctions are not fixed, however. Affective personalities can become reactive and take rigid, irrational postures against direct involvement with wildlife, sometimes to protect themselves and the animals with which they identify from emotional adversity. Conversely, intellect is ubiquitous and can produce decisions which require others to connect and commune with wildlife in ways that the policy maker would never attempt.

The policy planner in agriculture may find it easier to construct schemes for **extraction** of wildlife resources. Intellectual reasoning provides a sense of righteousness for those who design methods to "harvest forest protein resources to meet human population demands in a sustainable manner." Clearly these designs would be less popular, if they were presented as plans to shoot and kill thousands of apes, elephants, and other endangered and defenseless animals in order to feed expensive game meat to rich

men and their families. Emotionally driven agriculturists may prefer to **domesticate** non-charismatic wildlife such as grasscutters which do not evoke so much human empathy. From the standpoint of the affective persons in agribusiness, hands-on game ranching is likely to be more satisfying than management of wildlife culling programs.

To summarize, it is clear that psychologically based biases influence our perceptions and decisions to act on an ongoing basis. When we call together a team of professionals to analyze research findings and set science and conservation priorities, it is absolutely necessary to include a broad and balanced mix of individuals with the full panoply of values and biases. Otherwise, our data base and our decision making will be skewed, incomplete, and misinterpreted.

Granted, this is not an easy imperative to implement. Beyond incorporating experts from new disciplines and endeavors,it will mean ensuring that all professionals are aware of and are forthcoming about their personal biases so that their respective inputs can be balanced and amalgamated into a fully representative consensus. And, of course, the process of expanding and building the professional team will require careful facilitation. To create an applied biodiversity science that pertains to the complex human forces which fuel and direct the wildlife bushmeat crisis, we must begin with the art and science of human development.

Implications for Addressing the Bushmeat Crisis: Expand and Build the Professional Team

If it is given that professional input must be expanded according to values/biases and disciplines,then we must first construct a more complete and valid *Matrix of Approaches to Wildlife*. Second, we must assess the values/biases of the professionals already involved in this initiative and array them on the Matrix. Third, we must identify missing enterprises and disciplines, and find professionals within them who can be assessed to determine how their values/biases and competencies fit in the Matrix. Fourth, the full complement of professionals committed to working on the bushmeat issue must be organized and molded into collaborative, interdependent teams.

The list of professional types that could be added to this effort is enormous. To fill in each cell of the *Matrix of Approaches to Wildlife* with one African specialist and an international counterpart will require careful analysis. Some of the new fields that may need to be represented at this startup stage are:

community development, cross-cultural relations, ethics and applied theology,
entrepreneurial agribusiness, small business finance, food marketing,
environmental conflict management, peacemaking, law enforcement,
environmental justice systems, rural and urban ecology, advertising media,
organization development, applied social psychology, and social anthropology

Only with comprehensive and cohesive professional involvement can we expect to create a solutions framework which will be grounded in enough domains to be effective in the long term.

The Social Values of Bushmeat to Key Non-Professional Stakeholders and Communities

As the array of professionals involved in planning this Bushmeat Initiative is expanded, description and analysis of social values of key stakeholders in west and central African bushmeat commerce will also need to expand. Data available regarding west and central African social values towards wildlife, bushmeat, and environment is mostly anecdotal, theoretical, or outdated. Thus I must step back from the search for empirical findings, and develop theory and hypotheses related to the key

areas where social values research is needed and where interventions that influence social change capacity in critical stakeholder groups would best affect bushmeat commerce control. Based on my own observations, ideas, and reading of the scholarly/scientific materials available, I have created a schema differentiating the operational driving forces for certain key social factors in wilderness, rural, and urban populations in African bushmeat territories. Before we review this construction, however, certain scientific and strategic factors warrant discussion.

Theory Guides Applied Science. Like those who study biodiversity and economics in the bushmeat realm, I will be making broad generalizations from a disparate sample of inputs. In most cases, given the scarcity of data, I will be theorizing more than reporting. But that may be best at this stage call a hypothesis a hypothesis. We all know that what is reported in Cameroon or Cote d'Ivoire regarding specific preferences and taboos can not be expected to hold in Ghana or Nigeria. What is said by certain Akan, Ewe, Baoule, or Bantu people may only partially reflect their own situations, let alone the situations of others, near or far (Mitchell, 1987). Interviewer and informant relationships, agenda, gender, language, and crosscultural competence all affect survey and observation results none of these factors is adequately described in the studies I have read.

If experimenter bias was recorded in past research, we still would need to test these artifacts in each new study to determine how to correct for them. Most critical, the situations examined in the past are changing so fast that we cannot be confident that what we read in the academic or popular literature is more than a snapshot of vanished history. In these milieus of extreme multi-vector change, applied science requires strong theory to make up for weak data.

Social Variability Reigns in Africa. In fact, I would hypothesize that the plasticity of social phenomena in west and central Africa is significantly greater than in Europe, North America, or Asia. The global economic community labels "developing countries" in terms of their potential for business and financial interventions. The other kind of development, social and organizational, appears to be more extensive and erratic than the commercial. Social change is the rule almost everywhere in this region of Africa. Social stability is the exception.

This provides challenges – impediments and opportunities. Scientists who study social attitudes in stable populations will fail without radical modification of their methods. Social change professionals, on the other hand, will find fertile ground for intervention. Anthropologists may see few, pure cultural forms to examine. But students of cultural transformation will discover countless case studies worth undertaking. With so much change ongoing, one must assume that even the most seemingly noninvasive project will have an effect on local people's attitudes, behavior, and ways of life (Webb *et al*., 1966). We can not operate as neutral observers and insulated experimenters. It is imperative to take a clear and proactive strategic position regarding the kinds of influence we do and don't want, and monitor our intended and accidental impacts.

Interactives Override Dichotomies. Conservation strategy has been dichotomized in recent decades. Some strategists attempt to protect biodiversity from people. Others try to help the people use biodiversity sustainably. Both these strategies are unidirectional in their methods and objectives. The first directs its science and concern towards non-human nature. The second aims to study and satisfy human needs. There is clearly a need for a paradigm shift which will affirm the overriding importance of interchange among key elements of humanity and nature (Rose, 1998b).

We need to focus our science, our strategic planning, and our innovative interventions and developments on the relationships among human and non-human factors. The ultimate aim is to understand and to influence ***biosynergy*** – the collaborative and mutually beneficial interaction of all living elements within regional ecosystems which leads to individual, social, and ecological stability, longevity,

and enrichment. With commitment to *mutual benefit* for all stakeholders, human and non-human, we stand on the highest ground of global ethics and ideal.

Will we achieve this ideal for all interactive elements? Perhaps not; but we must strive for it, expose failures and attempt to correct them, and identify successes and try to replicate them. We must begin to look for synergistic relationships as the main datum, with polarized outcomes being the secondary foci. Such a paradigm shift will be difficult, in that it will require new methods, measures, and modes of operation. The construction of a biosynergy focused science must be done in parallel with the standard unidirectional applications and tested against them with the goal to replace dichotomies with interactives.

Big Crisis Demands Big Change. Is all this too much to ask? Can we really define our professional and personal biases, expand our numbers to include a raft of new professionals, accept the theoretical and unverified nature of our understanding, recognize social change as the prevailing dynamic, and convert from measuring dichotomous impact to managing interactive synergy? How else can we hope to arrest the growing multi-billion dollar annual trade in bushmeat and its consequent social, ecological, and economic collapse across west and central Africa?

More of the same will not work. The art and science of conservation must change in big ways to face this big crisis. Individuals and organizations struggling in isolation and in competition for conservation resources will not work either. We must collaborate in partnership programs grounded in goodwill, teamwork, and competence. The future of African societies, wildlife, ecosystems, and human health depends on it.

Driving Forces and Key Social Factors in African Bushmeat Territories

With these positions stated, I can now present the schema of operational driving forces for key social factors in wilderness, rural, and urban populations within the African bushmeat territories. There are 10 continua in this schema. Surely not all social phenomena worth consideration are represented; but perhaps most of the crucial ones related to wildlife commerce are here. The five marked with bold print are the critical research areas where I believe the most gain will be made to expand the art and science in this relational domain and to enable conservation of natural and human heritage in west and central Africa.

OPERATIONAL DRIVING FORCES IN BUSHMEAT TERRITORIES

Location:	**Wilderness**	**Rural**	**Urban**
Social Group:	Family	Community	Organization
Constitution:	**Myth**	**Precept**	**Law**
Legislation:	Ritual	Custom	Regulation
Management:	**Kinship**	**Consensus**	**Contract**
Adjudication:	Elders	Leaders	Enforcers
Identification:	**Nature**	**Society**	**Individual**
Theistic Power:	Intrinsic Deities	Spirit Presence	Distant God
Commerce:	**Hunt**	**Trade**	**Market**
Situation:	Environment	Affiliation	Employment
Wildlife Values:	**Theistic**	**Conflicted**	**Utilitarian**

Common differentiation between wilderness, rural, and urban locations are made according to relative densities of humans and their developments on the one hand, and nature on the other. For this treatise I will try to define these terms in accord with social and biosynergistic factors.

Wilderness environments are those where non-human communities and ecosystems govern most ongoing life processes, with human-nature interaction being predominantly synergistic or nature dominant. Rural environments are co-governed by humans and nature, with varied ratios of biosynergy, nature dominance, and human dominance prevailing. Urban environments are those constructed and governed by human communities where human dominance over non-human nature prevails. It is important to note that the buffers between these environments – namely, mixed environments and transit corridors – are often the most critical territories for social control.

The terms in the left column label the 10 continua. The next three columns present concepts which seem to characterize the human social characteristics of wilderness, rural, and urban environments on each of the continua. Those continua which are in bold print are the ones I will discuss in this paper in some detail.

The Constitution Continuum: Myth -- Precept -- Law

The complexity of rural African values for wildlife comes from a robust and varied history infused and influenced by myths, rituals, taboos, and totems. Wild animals were once imbued by most people with theistic power, and seen as relatively inviolable. To offend or manipulate wildlife would risk the wrath of deities; thus, a view that people could not and should not attempt to alter nature prevailed. In places where spiritual myth and ritual still influence community attitudes and behaviors, the establishment of pervasive conservation values could be quick and long-lasting.

Vabi and Allo (1998) detailed the workings of community myth and ritual practices in relation to commercial bushmeat hunting in eastern Cameroon. In brief, they described the replacement of effective, internalized myth-based social controls with ineffective, external law-based administrative mechanisms. Individuals whose community and clan share common belief in the intrinsic theistic value and power of wildlife and wilderness can be expected to relate in predictable, synergistic ways to the ecosystems in which they live. Transgressions are punished and proprieties are rewarded by personal selfassessment and public comment, automatically and reliably. Daily and continual reinforcement of the myth/belief system carries through in ritual practice and helps to maintain the community's institutional framework, which remains uncontested through succeeding generations. Where certain animals are totems, their habitat is protected, and their hunting is strictly controlled and typically performed in sustainable, traditional ways. Taboo wildlife and ecosystems are avoided because strong personal and communal sanctions insist on it. On the face of it, this kind of system in isolation seems perfect for maintaining human-nature synergy.

But as outside factors impinge, myth-based community conservation practices unravel and collapse along with other social systems and controls. Introduction of foreign technology, economics, affiliation, and religion undercut and transform indigenous society. Any hunter in the African bush with a gun is operating as a quasi Euro-African who has turned away from traditional norms. To study gun hunters as if they are traditional people (eg.: Alvard, 1993) is absurd. More ubiquitous and important -- any bushmeat trader, marketer, or consumer using governmentissued money to sell and buy bushmeat transported on Europeanstyle trucks and roads is also basically modern. The assertion of traditional social control on commercial bushmeat traders can become psychosocially ineffectual. This is especially true in urban centers, where the over-arching social and religious influence is modern, individualistic, external, and legalistic.

In the rural areas, the mix of community precept and central law gives more latitude for normative influence. Villages and small towns in particular are enclaves of traditional community and clan practice. One might consider village chiefs as mediators between the legalists and the theists – between law and myth. To the extent that local people accept the chief as empowered by their deities and ancestors and as working within their community myth/ritual system, his precepts may be honored and community conservation may emerge on traditional footing that is both strong and lasting.

But intrusion by foreign exploiters and conservationists can undercut the mediating power of village and community or clan leaders. Whether it is the logger paying a chief for the right to cut trees or a scientist paying him for the right to study apes, both are substituting money incentive for the traditional theistic and community empowerment. More subtle and important, though, is that a community leader's affiliation with foreign emissaries of any kind alters status structures in the community and risks offending mythic tradition. Of critical concern is the transfer of northern individualistic norms onto leaders, so that social affiliation isolates the chief and clan leader, making him an individual operative and no longer an arm of gods, ancestors, and the community.

The most direct destruction of community conservation myth comes from foreign religion. Key to this adverse effect is the externalization of deities, which strips wildlife of theistic power and renders once sacred ground empty of spirit and open for total material conquest. Ironically, a movement is afoot in North American religious institutions advocating ecological justice through "care for the creation." This could become a huge source of funding and energy needed to make conservation work in the bushmeat arena. But just as scientific reductionism can defeat African community conservation by denying the existence of god-spirit in forest and wildlife, so can religious externalization of deities reduce the effectiveness of this positive movement in Africa.

Solutions are available. There are many examples of foreign religious missionaries enabling the coexistence of local and global religious myth. A very openminded, innovative approach to the support of local myth in the context of modern religious and spiritual concern for the living creation seems to me to be the most promising untried area for research and development. Without the capacity or will to create a financially endowed and socially supported enforcement/judicial system spreading from urban to rural and wilderness areas, the best and only answer to social control of unsustainable bushmeat commerce will be the reconstruction and institution of spiritual myth that supports the synergistic interchange of human community and biodiversity.

The Management Continuum: Kinship -- Consensus -- Contract

Authority and power to manage social behavior is vested more in relationships than in individuals. Elders need youth, leaders need followers, employers need workers. But these social compounds vary from location to location. Social management in wilderness dwellers is empowered primarily by kinship relationships. Rural villagers often transcend family and clan, seeking to unify management at a community level. The rural community's operational dynamics are primarily consensus systems. Urban societies have a preponderance of nonhistoric and temporary relationships to manage; they do so by individualized contract.

Urbanites who are transplanted into rural and wilderness settings attempt to install the management processes they know best. The difficulty obtaining contract compliance with people adapted to management through rural-consensus and wilderness-kinship systems has led to the proliferation of urban-migrant contract workers in rural and wilderness development projects. All but the smallest scale conservation projects are invariably run by outside contractual managers. To the extent that villagers are obligated to follow community consensus, contractual agreements with them will be countermanded.

Similarly, the requirements of kin in wilderness settings can be expected to override most agreements that forest dwellers may make with outsiders. Rural villagers have overcome this authority conflict in certain situations by forming kinship relations with forest dwellers through marriage. Immigrant-urban hunters who rely on forest dwellers for their livelihood have taken similar paths to secure their positions.

Community development projects, whether extractive or conservative, are increasingly built on consensual models imported from Euro-America. Participatory rural development does play on the rural consensus capacity in building agreement. Problems of size, inter-community conflict, and stakeholder non-participation make these efforts difficult. Consensus systems require sophisticated management when dealing with more than 50 to 60 people, or more than 4 or 5 subgroups. Villages with contiguous territories often manage their borders through tenuous competitive relationships that are not amenable to simple facilitation.

Most troublesome, wilderness dwelling people are generally unskilled in urban-style consensus building and avoid conflict resolution processes. Thus the human stakeholders with the most to lose often have no voice in decision-making. The absence or dysfunction of a crucial stakeholder group renders participatory consensus invalid. It is common knowledge that indigenous forest people have been left out of conservation and development planning, and suffered thereby . This must be remedied in any projects seeking to address the bushmeat crisis.

There are other stakeholders, however, with more to lose and less voice in development planning – the flora and fauna. Since these stakeholders cannot function at the planning table, humans try to talk for them. Conservation scientists present their "findings and mitigations" in attempts to influence the structuring of contracts between financiers, developers, and urban and rural governments. Occasionally wildlife biologists and foresters argue for statistical sustainability of animals and trees in rural appraisals and other participatory programs. But these outsiders rarely speak in ways that reflect the relationship of rural or wilderness people to wildlife and habitat. The input of forest dwellers speaking on behalf of their totem animals would be vital to determining ways to manage selective wildlife protection. Rural hunting subcultures are a valuable source of information on community management of sustainable hunting systems. Both rural consensus and wilderness kinship processes for managing human-nature linked cultural subsystems must be integrated into contractual and consensual plans and actions.

The Identification Continuum: Nature -- Society -- Individual

The development of psychological identity, or ego, is as diverse as the cultures in which people grow and live. Modern power societies encourage a kind of egocentric identity which allows social institutions (schools, businesses, governments) to manipulate and manage individuals for their corporate benefit through person-focused incentive systems. This kind of individualistic identity pattern appears to prevail among the affluent and educated residents of African cities, as it does in Europe and North America. Urbanites tend to see wildlife as a resource for their individual use as private means and ends in pursuit of personal goals.

In contrast to urban selfishness, traditional people who live in wilderness areas tend to view themselves as elements of nature, asserting eco-centric identity. Being part of nature, one identifies ecological health and stability with one's own well-being. Adding the human-wildlife totem relationship deepens nature-connected identity. When a forest dwelling human says "I," s/he can be speaking about a panoply of interlaced human and non-human identities. Likewise,"we" may refer to any or all flora and fauna who coinhabit the natural world, not merely human family or community.

Again in a pivotal position, rural villagers appear to identify themselves anthropocentrically as members of human society with proscribed social responsibility and privilege relative to the natural environment. It is the shift from identification with nature to identification with human society that marks

the loss of ecological sensitivities. Living and working in human constructed habitat on human social tasks erodes the sense of self as animal in nature. Although rural people are in closer contact with the wild than are urban dwellers, their identity is more often shaped by the "man against nature" frontier ethos. On the psychosocial level, the rural ego which identifies totally with humanity may be less able to evoke concern for non-humanity than the individualfocused urban ego.

This suggests that education about and empathy for endangered animals will develop differently in urban and rural settings. Urban individualists may respond to personal instruction and one-to-one bonding with apes and other wildlife in sanctuary settings, for example. Rural socialists might be better convinced to protect wildlife through interventions that link nature to the satisfaction of community needs which are central to the person's communal identity.

The Commerce Continuum: Hunt -- Trade -- Market

At the bottom of the hierarchy of human needs is survival, and we usually associate food needs at that level (Maslow, 1971). One must have a fairly full stomach, as well as food for the next meal, in order to be influenced by the higher order needs for security, ego, status, and actualization.

Food preferences, however, are only partly related to hunger and nourishment. Whether in the rain forest or the metropolis, the foods we gather, trade, sell, and buy are determined by myriad social factors. Wilderness dwellers prefer smoked porcupine to fresh chicken because it lasts longer and better satisfies food security needs. Young men in rural villages agree to take a gun and hunt larger game to satisfy ego needs in a shifting cultural milieu. Village chiefs and Provincial governors enhance their status serving ceremonial meals with expensive wild game meat. Affluent urban citizens may actualize their personal sense of power and potential with traditional foods and medicines from the rain forest.

All these underlying needs drive behavior, which, in turn, becomes habit. At that stage, consumers typically report "I buy bushmeat because I like it better – chicken and beef don't taste as good." It seems frivolous to eat endangered gorillas and protected elephants for the taste sensation. But the taste familiarity itself provides a sense of food security which is profound in all cultures. And like the holiday turkey that serves as an icon for "the good life" in North America, special bushmeat on the platter in many African homes signals the celebration of community. Our nervous systems are hardwired to accept familiar flavors and aromas which have proven safe, and to reject unusual tastes. Ritual feasts rely on visual and culinary consistency. Perceptual adaptation levels develop rather quickly, and are slow to change. Thus, once communities and families begin to include newly available game meats in their diets and ceremonies, it will be difficult to reduce the demand.

This is why we must be especially concerned about the spread of bushmeat supply from wilderness and rural areas to the cities. Reducing the taste for game meat in smaller rural populations is a formidable challenge. Reversing bushmeat demand in high density urban areas will become even more difficult, due to the individualistic and multicultural complexity of social factors and human needs. Already in some quarters of major west and central African cities, bushmeat has become a habitual and expected part of the diet. This demand will give incentive for opening new sources and routes of supply, and supply will expand demand.

Urban demand and rural supply are interactive. Social factors mediate the two-way relationship between supply and demand. Bushmeat hunted in wilderness, traded in rural areas, and marketed in cities will satisfy human social needs, support new consummatory habits, and stimulate an accelerating demand for bushmeat products. To reverse these trends *ad hoc* will be more difficult than to prevent them. But prevention is a multi-locus and multi-factorial proposition.

Our colleagues who study economic variables have advanced the understanding of the interactive effects of price, household income, production and availability of bushmeat and substitutes, and market trends (Wilkie and Carpenter, 1999). While there are relatively stable theoretical models for these interactions, their effectiveness in predicting and controlling bushmeat supply and demand in real-life settings will be drastically reduced without also studying the powerful impacts of social variables on economic interactions. It will be very exciting to undertake collaborative focus on this complex set of processes and variables to produce models that are inclusive of all the applied social sciences.

The Wildlife Values Continuum: Theistic -- Conflicted -- Utilitarian

Studies of the ways humans value wildlife by Kellert (1996) have set a standard for social science modeling. Unfortunately, this tome of work was focused on northerners in industrial society. Application of Kellert's rigorous attitude scales in African settings will therefore require adaptation.

Nonetheless, work by Mordi (1991) provided attitude survey data regarding wildlife values in Botswana, which Kellert (1996) used to expand his theory to "non-industrial societies" and to "hunter-gatherer" society. Building on this work and on some of my own research (Rose, 1994), I have constructed a theory of the values revolution which underpins bushmeat commerce (Rose, 1998b):

> "Bushmeat commerce grows conjointly with the progress of extractive industry that has overlaid the economic and moral values of international resourcism on the varied cultures of the region. People who manifested spiritual reverence and care for the natural world have been manipulated into treating wildlife as a material resource. When we see an animal as little more than meat, we will hunt, butcher, and eat it with impunity (Cartmill, 1993). Russ Mittermeier (1987) warned of the pervasive global threat of primate hunting over a decade ago. The human values and attitudes that support bushmeat commerce come in large part from mal-adaptation of old-style colonial world-views.
>
> "In much of central Africa "a general pattern of apathy, fatalism, and materialism towards nature and wildlife" prevails (Kellert, 1996). Most contemporary Africans have lost their traditional "theistic" reverence for wildlife and many have taken on the harshest utilitarian view (Mordi, 1991). With the advent and spread of cash economy, colonial religion, and urbanized central government, "tribal values of conserving and protecting nonhuman life are rendered spiritually inoperable, while new ecological and ethical foundations for sustaining nature have not emerged" (Kellert, 1996).

This composite theory underpins the differentiation of wildlife values for humans living in wilderness (theistic) and urban (utilitarian) environments. It appears that the prevailing wildlife values in some rural settings are a conflicted mix of traditional and modern. Mordi reports that, except for a few favored species, most wildlife and natural environments are viewed by Botswanans negativistically. "These people tend to view most wild animals with indifference and often fear and hostility" (Kellert, 1996). While indifference towards wild animals might be expected among urban dwellers who do not interact with them, rural people who are affected by cropraiding animals and are educated to stay out of dangerous nearby forests may be expected to report anti-wildlife values. This will be especially true where imported religious training has stripped the theistic value from wild animals, leaving them to be viewed as little more than pests, thieves, and thugs (Lawrence, 1993). On the other hand, reliance on bushmeat for protein in many rural African settings strengthens the utilitarian value of wildlife. Thus, hunters and hunting subcultures link positively with animals.

The practical question "which values can best be developed in rural and urban populations so as to reduce demand for bushmeat?" will require specific study of the diverse and changing human subgroups. Short term manipulation of values through passive economic incentives to not hunt, active incentives to protect wildlife, and social/legal disincentives such as fines and incarceration are typically proposed as valid interventions.

While these approaches can work, the fact that such tactics rely on external material values renders them risky, especially if linked to a cash economy. To simply reinforce the pursuit of money can backfire whenever the money source vanishes, or when economic need or desire rises. Without other influential values at play, a purely utilitarian wildlife protector, for example, can be bought off by a patron offering more money to hunt for bushmeat. This is why the social values held by candidates for jobs as field assistants and tourist guides become crucial to the hiring decisions of scientists and conservationists (eg.: Fossey, 1983; Owens and Owens, 1992). Hence, expert assessment of these non-utilitarian social values by applied social scientists will optimize staffing of bushmeat control programs.

Recommendations for Social Research and Intervention

There are many more questions in the domain of bushmeat commerce than there are answers. At the onset, we must select a set of targets for innovative intervention which our theory and experience suggest will best enable control and reduction of bushmeat commerce. After selecting those targets, we must create research programs to test crucial hypotheses and provide critical information that will cumulatively optimize our interventions. The long term action-research model (LTAR) is most effective in the ongoing improvement of social change and management programs in large and complex commercial service systems (Stebbins *et al.*, 1982). A fundamental difference between the LTAR model and traditional basic science is the explicit and continual pursuit of social problems and solutions. Success in LTAR is defined as 1) uncovering mistakes and making corrections, and 2) identifying achievements and sustaining them. Finding out why things happen is subordinated to making things happen. The implementers of LTAR programs must be multidisciplinary teams of professionals with process and content expertise in the social system being treated. Members of the social system are partnered with outsiders to develop the strategic intervention targets and design and implement social change projects. The best LTAR program builds capacity within the social system for self improvement, so that, over a period of years, the action-research programs and processes are internalized.

It should be noted that although this sounds like Participatory Rural Development (PRD) (Chambers, 1994), there are major differences. LTAR is a process directed at supporting self-directed change in large, complex social systems. PRD is a procedure for changing rural communities. The social systems connected with bushmeat commerce stretch from African forests and savannas to corporate boardrooms in Europe, Asia, and North America. This far-flung "informal organization" requires far-flung, formally organized processes to effect the changes that will keep it from destroying the remaining natural and cultural heritage of equatorial Africa.

There are three strategic intervention targets that seem ripe for immediate action-research intervention. They fit into generic categories which are interactive, but distinguishable –supply control, demand reduction, and alternative development.

Bushmeat Supply Control

Many European and North American wildlife advocates and their public supporters argue for focusing first on bushmeat control for endangered species. The direct approach from the urban armchair says interdict, arrest, fine, and jail poachers, traders, and marketers of endangered bushmeat.

Conservation biologists often argue further that this should be limited to parks and reserves. A social science perspective that accounts for driving forces and key social factors shows why these prescriptions backfire and how they might be improved.

The law enforcement approach adds yet another urban social dynamic to the conflicted rural community. It signals that conservationists and central governments, along with their international supporters, do not respect the commons, (Rose: this is the 'commons' – the territory held in common by all who live in and near it) nor the community ethos. This approach typically ignores rural precepts, subordinates local leaders, undermines the consensus power of the village, displaces customary social control systems, asserts individual identity over society, resorts to distant gods and their emissaries, elevates the importance of utilitarian wildlife values, and reinforces the preeminence of the market over trading systems.

The affront of outside enforcement and judgment to wilderness dwellers can be more potent than that to rural communities. Direct legalistic intervention to interdict forest dwellers who support commercial bushmeat hunters can devastate whole families and clans. Indirect effects can be similarly destructive to social cohesion, as urban-style intervention interferes with kinship relationships between wilderness dwellers and rural peoples. Common understanding of this extreme adversity explains why outside enforcers rarely attempt to arrest wilderness dwellers.

Vabi and Allo (1998) suggested that control measures must "emerge from careful location-specific and culturespecific analysis. ... greater emphasis should be placed on an understanding of the normative and social practices at the grassroots level of society." They were correct in one crucial regard. Control interventions must rebuild the power of the rural community to construct contemporary customs and precepts through societal consensus based on amalgamated myths and rituals, which will re-instill theistic values for nature and its conservation. This kind of effort will require a cadre of social change agents trained to work behind the scenes facilitating societal redevelopment. First choice locations for pilot projects would be those where commercial bushmeat hunting is about to encroach, and rural communities are still relatively intact. Each village and clan would develop its own community control mechanisms to prevent the influx of hunters and market traders and thus protect local wildlife and their own society and people.

What Vabi and Allo failed to address is the location and culturespecific action research that is required to develop effective self control and management systems in the immigrant populations that enter rural and wilderness areas for temporary and longer term exploitation and development. Evidence is clear that major interlopers such as loggers and miners do not have the capacity to manage and control the urban workers and families they attract and hire to live and work in their concessions. Programs must be designed, funded, implemented, and monitored to develop the organizations, managers, supervisors, and performance systems that will control and replace bushmeat commerce in all settings where urban societies have been transplanted into rural and wilderness environments. As mentioned above, these would be LTAR programs codeveloped by outside professionals and inside managers, staff, and other interlopers.

The interface between urban interlopers and rural and wilderness societies
is critical. (Rose: how's that?) EDITOR'S NOTE: I do not understand/cannot parse the meaning of the first sentence in this paragraph. I believe that it needs to be edited somehow…but I'm at a loss as to how.) Ultimately, the rural and wilderness social control systems need to be protected and strengthened so they can maintain their own selfmanagement and keep their hunting community-focused and noncommercial. A key is to keep rural and wilderness men and women from being enticed into the cash-economy of bushmeat commerce. This requires the presence of people with allegiance to maintaining and distinguishing diverse processes -- neutral facilitators.

The parallel links between the three cohabiting societies are vital, and must be facilitated by full-time independent outsiders skilled both in inter-group crosscultural relations and in monitoring and maintaining social systems. This imperative will be resisted most by the individualistic urban and kinship-based wilderness factions. Rural communities are more likely to recognize the value of outside consensus managers. Practitioners of communitybased conservation projects have reported time and again how wellrunning efforts unravel into inter-group disputes and ultimate failure when outside conservationists leave the scene. The solution, then, is not to leave without first assigning a replacement who has already successfully moved into the community relations management function.

Yet, here we see the irony. We cannot tell the local people or the interlopers what to do from our urban armchairs. But at the same time we must find outsiders (or streams of them) willing to leave their armchairs and live as neutral facilitators in situations where "what to do" is complex and often unknown. To control bushmeat supply will be the challenge of a true innovator.

Bushmeat Demand Reduction

To reduce bushmeat demand appears to be a marketer's nightmare. On the one hand we may need to re-ignite theistic reverence for wildlife and draw on indigenous totem beliefs to foster human-animal kinship which will preclude secular consumption of endangered species. On the other hand we may choose to evoke negativistic avoidance of wildlife and draw on individual fears to foster human-animal repulsion to halt the consumption of endangered species.

As an example, let's consider the highprofile issue of great ape bushmeat. We may find ourselves encouraging wilderness dwellers and interlopers to respect apes because they are kin, and to avoid them because they carry dangerous diseases. And we may build empathy in the cities for our ape cousins by exposing urbanites in educational settings to the human-like qualities of apes, while also insisting that wild apes must be shielded from human contact in order to survive. The messages will be mixed; as mixed as the cultural overlays on and interactions within Africa itself, which arguably cover the widest range of any in the world. I suspect this mixing will make sense to most of the people most of the time though, so long as we outsiders live by the same codes and values as we ask of Africans.

The modes of influence for reducing bushmeat demand are many. Perhaps the most far-reaching medium is radio. Popular formats such as docudramas and talk shows can provide entertaining opportunities for many publics to explore issues of health, human welfare, cultural change, environmental safety, and nature conservation. To stimulate discussion and thought is crucial, and radio allows many voices to be heard at once, across all societies from urban to wilderness. I have sat in forest hunting camps and heard the battery operated radio blast music and news through the air at the end of the day. Everyone listened. But because everyone does listen, it will be critical in such programming to assure that an ethos of tolerance for different cultural norms is ever-present. Listeners must have experiences that reflect their own beliefs foremost, yet at the same time have experiences that put them in a larger and fuller context. From that expanded base, public service advertising can follow.

Although radio messages can create a climate for change, physical interventions will be needed at key nodes of the bushmeat commerce to modify behavior. Three critical nodes come to mind – the market, the restaurant, and the home kitchen. To convince restaurateurs to forego the attraction and profit gleaned from bushmeat based specialties will be difficult and very important. So long as the urban gentry continues to celebrate in public with game meat, the aspiring classes and generations will be enticed to follow suit whenever they can afford it. Furthermore, the implication is that the rich celebrate in private by consuming endangered species. Whether this is true or not, the perception that elite eat illegal meat

can undercut arguments against the illegal trade. Perhaps proactive public campaigns in which restaurants and respected leaders declare "we serve grasscutters, not gorillas" would be one way to make a difference.

To address this issue, marketing and advertising experts should be brought to the table with applied social scientists and representatives from African urban, rural, and wilderness societies. With the necessary data about individual and community preferences, taboos, and aspirations, a keen market professional can figure out how to turn people away from one product (bushmeat) and towards another (such as beef or chicken). Negative advertising risks audience backlash but can turn the audience's focus towards positive alternatives. Many people concerned about the bushmeat crisis assume that chicken and pork preparations that simulate game meat, along with game ranch/farm products, would reduce bushmeat demand. Market promotions of domestic meat that include recipes and onthespot samples can shift housekeepers' choices in urban supermarkets. Similar, but idiosyncratic, culture-specific programs may work as well in rural areas.

Bushmeat Alternative Development

Alternative meat and protein products that look and taste like bushmeat seem to be a promising way to reduce bushmeat market share. With sufficient financial and developmental support, domestic game products could be subsidized and promoted as mid- and lowpriced African food-lines across the continent. Nearly every treatise on bushmeat commerce points to alternative protein development as a solution (Rose, 1999a; Wilkie and Carpenter, 1999). Why then don't we see major players in global food markets being solicited to underwrite and organize such ventures?

There seems to be an unspoken resistance to taking this tack, perhaps because of the "upside risk" inherent in this kind of venture. If profitability becomes the driving force, rather than capturing the greater market share from that of bushmeat, the success of such ventures could whet public appetite for "the real thing" and stimulate corporate food marketers to enter the bushmeat business. All evidence suggests that commercial harvesting of wildlife devastates species and ecosystems, provides "boom and bust" profiteering, and is ultimately not sustainable. What we don't need is more organized and efficient bushmeat marketing in Africa. The growing market in wildlife products for meat, fur, and medicine in Asia is already so well organized that many conservationists believe there is no hope for most endangered and preferred species there (A. Eudey, pers. comm.). The urban market logic which holds that wildlife species can be conserved only when they are given value in the marketplace appears to be dead wrong. Promoting markets for ranched bush pigs and grasscutters may actually be adding customers for wild game to the consumer force.

This leads me to a bothersome and controversial line of thinking. The use of any type of market economy to replace wildlife values could be a mistake. Making a community celebration around the killing of an elephant by a rich foreigner does more than present a dangerous double message to local people. It insinuates cash and other marketdriven benefits into rural communities which undercut the local society's communal ways of life. This seems like double trouble for the community based wildlife protection program in the long term. What is even more worrisome is that this may not be very different from any touristic scheme. The record of tourism in Africa is boom or bust, with bust coming when civil unrest and conflagration erupt. We may be correct to say that social disruption reduces tourism. But we must inversely consider the ways in which tourism itself stimulates social disruption by asserting conflictinducing values (Guha, 1997).

It seems sensible to believe that putting a cash value on keeping wildlife alive will *keep* them alive. But if putting cash into rural and wilderness economies disrupts these societies, what can we expect in the longer term? Some would declare that it is time for all Africans to enter the modern marketdriven, utilitarian world. At best, they argue, small islands of native peoples and parks can remain as reminders

of what once was. Others suggest that without strengthening the rich human social and cultural heritage, African people and African wildlife will vanish altogether, leaving an impoverished social and natural landscape, and furthering the already accelerated decline of diversity and quality of life on earth**.**

The conservationists' choice must be to save and restore the largest possible expanse of social and natural wonder on this planet by renewing the synergy of humanity and nature. It is hoped that this treatise will initiate further theory and research, and will stimulate development of the crucial social capacities and processes required to achieve these goals in the face of Africa's expanding bushmeat crisis.

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