"Starvation Taught Me Art": Tree Poaching, Gender and Cultural Shifts in Wood Curio Carving in Zimbabwe

Maria Fadiman

Research

Abstract

This study looks at wood curio carving in Victoria Falls, Zimbabwe, Africa. Although the local people, Ndebele and Shona, have always carved, they now face a weakened economy, due in large part to land reforms in 2000. Thus, more people sculpt wood as a form of livelihood. As one man said "Starvation taught me art". As a result, gender roles are shifting as men and women begin to enter realms previously reserved for the other. Environmentally, carvers poaching trees deforests the woodlands. As more individuals turn to making crafts sustainability deteriorates. However, people are looking into more sustainable practices. Ndebele and Shona are experimenting with carving smaller items so as to be able to earn more profit from less wood, and to use branches instead of heartwood. Carvers are also using scrap wood from Forest Stewardship Council (FSC) lumber mills to lessen dependence on live trees.

Introduction

Ethnobotanists have long been interested in understanding the balance between humans using plants while maintaining a healthy ecosystem (e.g., Balée 1994, Bennett 1992, Duchelle 2007, Morton 2007, Peters *et al*. 1986). This study explores the environmental and cultural shifts that occur as part of the wood curio carving industry in Victoria Falls, Zimbabwe, Africa. The research focuses specifically on gender and societal shifts, the environmental impact of selective deforestation and specific options to protect forest biodiversity while addressing the needs of local people.

Although numerous people depend on forest resources, the woodlands are particularly important for rural citizens (Kowero & Mabugu 2006). Woodcarving contributes substantially to the economy in numerous developing nations (Cambell *et al*. 2005, Christian 2007, López & Shanley 2004). Zimbabwe has long been a renowned center for producing high quality wood carvings, with the center of this activity being based out of Victoria Falls (Christian 2007). In the 1980s, when Zimbabwe first experienced independence, trade liberalization and de-regulation opened up tourism opportunities, especially in Victoria Falls. The increased tourism created a larger market for wood carvings (Matose 2006), and vending locations went from 5-200 between 1980 and 1999 (Christian 2007).

The economic situation in Zimbabwe has since shifted, which in turn has affected woodcarving for both the consumer and the producer. In 1990, due to agricultural failures resulting from a severe drought, more people began to enter the woodcarving industry as an alternative livelihood (Matose 2006). Contributing to the economic decline was the controversial land reform policy enacted in 2000. Large privately owned 'commercial farms' were acquisitioned and redistributed to smallholders (Wolmer *et al*. 2004). After this event, there was both social and economic restructuring, and international tourism declined by 40% (Manwa 2003).

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Until recently, Victoria Falls was in many ways less affected by these occurrences, because the waterfalls still managed to draw tourists. The administration recognized this area as an important provider of economic revenue for the country, and thus Victoria Falls was spared much of the violent governmental policies. However, as the country has continued to become more politically unstable, tourists increasingly are choosing to see the falls from the Zambian side instead of the Zimbabwe side. Furthermore, in 2006, the regime burned shacks and selling stalls within Victoria Falls itself, both scaring off the remaining tourism flow, and increasing the unemployment of a group who was already employed in the informal sector. The formal economy was already not providing enough jobs and national levels of unemployment in 2006 were 60%. People have become so desperate for any kind of income that many have become waste harvesters, searching for items to sell, use and eat from the dump (Masocha 2006).

As the informal sector eclipsed the formal sector (Masocha 2006), and most enter the informal economy not by choice but because of external pressures forcing them to enter "survivalist activities" (Trebilock 2005), woodcarving has emerged as a popular informal sector job. The fall in tourism further reduced work opportunities, and also the number of potential curio buyers. Despite the shrinking market, as Zimbabwe became more economically and politically unstable, the number of people entering woodcarving increased (Frost *et al*. 2007, Manwa 2007). Using woodland resources had often served as a "safety net" to support livelihoods in times of drought or other economic difficulties. It is now becoming a main form of survival (Frost *et al*. 2007, Matose 2006). For many people woodcarving has become a full time occupation, whereas before, people would usually carve during winter, just when the agricultural work was lighter (Belcher *et al*. 2005, Christian 2007, Owomoyel 2002).

Numerous countries in Africa suffer from deforestation (Wolmer *et al.* 2004). In Southern Africa, deforestation threatens the livelihood of forest dependent people (Belcher *et al*. 2007). Wood carving is contributing to this problem, worrying environmentalists and government institutions (Braedt & Campbell 2001). Natural resource decline from forest based goods has been documented for other regions (Harris 1988, Nepstad *et al*. 1992), and in looking at Africa, Zimbabwe suffers from forest depletion from carvers (Standa-Gunda *et al*. 2007) as does Kenya (Braedt & Standa-Gunda 2000). Deforestation threatens not only a healthy ecosystem in terms of the environment, but a lack of woody material also has a direct effect on the people. As one man in Kenya phrased it: "no wood means no work" (Chonga 1999). The situation requires the protection of natural resources and also the protection of the people who live from these resources.

Carvers obtain their wood from state owned parks and communal property (Mapedza 2003). No permit is needed when cutting from one's own field. However, a carver does need permission from the village head when cutting trees from communal grazing lands. These village heads often see the need for wood carving in terms of immediate survival, so often the village head does give permission to remove trees. In state or nationally protected areas, the Forestry Commission practices stricter law enforcement (Matose 2006). Previously, the Forestry Commission allowed locals to remove dead wood from the forest. However, because carvers have poached to such an extent, rarely are people allowed to legally extract any kind of wood now. However, despite regulations, poaching continues. There are numerous instances in which poachers and park guards arrive at agreements though collusion and/or the recognition that this is the only livelihood opportunity for people (Braedt & Cambell 2001, Mapedza et al. 2003, Matose 2006). This in depth case study adds to the body of literature looking at resource use in the Victoria Falls area, with an emphasis on the previously understudied aspects of gender and environmental solutions.

Study Area

Victoria Falls is located in northwestern Zimbabwe in the province of Matabeleland (Figure 1). The town is most famous for the water falls, Victoria Falls. The Zambezi River forms the falls, and they are one of the Seven Natural Wonders of the World and have been named a UNESCO World Heritage Site (Manwa 2007). The falls are located between the countries of Zambia and Zimbabwe, located at -17.925292 latitude and 25.857611 longitude.

The government has created two National Parks in the area, the 54,000 ha Zambezi National Park, and the 1900 ha Victoria Falls National Park. The Town of Victoria Falls has an estimated 31,000 people and is the fastest growing urban centre in Zimbabwe, with tourism being the main industry (Masocha 2006). Outside the town limits lies rural Africa where subsistence farming and small scale cattle raising are the dominant forms of livelihood (Braedt & Standa-Gunda 2000, Wolmer *et al.* 2004). Woodland savanna is the major ecosystem, with smaller areas of scrubland savanna. Rainfall is seasonal and the wettest months are from November to March, with about 632 mm annual mean precipitation. The mean annual temperature is 20.3 degrees with the hottest month being October, and the coldest July (Childes & Walker 1987).

The two main ethnic groups who live in the region are Ndebele and Shona. The Ndebele are a group who split off from the Zulus in the early 1800s. The Shona tribe is separate from, although related to, the Ndebele. Shona is the name for a large group of people, over 20 million, many of whom speak different dialects but are collectively called and speak Shona, a Bantu language. Both the Shona and Ndebele dedicate themselves to agriculture, growing beans, peanuts, pumpkins, sweet potatoes and corn. Cattle also plays an important role in their livelihood,

Figure 1. Map of Zimbabwe with the town of Victoria Falls highlighted (Map created by Bryson Bedell).

in terms of milk production, prestige, stored value, and dowry payments. Men traditionally play a powerful role in families. For both groups, descent, succession and inheritance is through the male line. Furthermore, if the man has enough resources, polygamy is permitted (Berliner 1993, Dodds 1998, Ndhlovu 2006).

Methods

The purpose of the research is to provide a better understanding of the ways in which wood carving affects culture and environment, and to explore solutions that maintain ecosystem and human well being. The research took place from June-July 2004, July 2005 and June 2006. Interviews were conducted with 37 carvers and roadside sellers, five shop owners, two airport vendors in Johannesburg and one in Zambia, one rural carver and seller with a curio business out of his home, and one Forest Stewardship Certification (FSC) certified sawmill and furniture factory owner. Sculpting interviewees were those who carved and sold either in Victoria Falls town, or in the main market in the outskirts along the road into town. Some of the informants were interviewed in their homes in the village of Monde, as the majority of the sellers at the roadside stand are from this village. Selection of interviewees was purposefully nonrandom. I chose households in which lived at least one skilled carver. The key informants were chosen by status within the community and their knowledge about the topic, as recommended by Denscombe (2003). Each discussion began with outlining the objectives and procedures of the interview, as rec-

ommended by Alexiades & Wood (1996), Bernard (2005), Martin (2004) and Fraser *et al*. (2006), and all interviews were conducted with informed consent.

Most interviews were semiformal, with each informant being asked a similar set of questions in a conversation format that did not involve a structured set of questions, as defined by Bernard (2005). The benefit of this method is that discussion could follow the lines of thinking introduced by the informant, and some of the questions were then influenced according to the interest and expertise of the person being interviewed, as discussed by Ferguson and Messier (1997) and Fraser *et al*. (2006). Therefore, although the general topic was introduced by the interviewer, the detailed research categories came from the informants themselves (Huntington 2000, Mackinson 2001, Telfer & Garde, 2006). This qualitative method does not lend itself to statistical analysis, because not all informants received the exact same questions. With each informant, the amount of time listed below is a generalization of how much time was spent with each kind of informant until the knowledge of the topic of that particular person was exhausted. Some of the interviews took a little more or less time than listed for their group, depending on the individual. Initial interviews with carvers and informal and formal sellers lasted from one to two hours, and follow up interviews for most informants lasted an hour. For the key family of informants who gathered wood, carved and sold, the researcher lived in their home and thus questions were asked and answers recorded through the period of months during the two field seasons spent in the area. With the airport vendors, these interviews were carried out once for about an hour with each one. The researcher spent a week with the sawmill owner doing informal interviewing throughout the seven days time, and interviewed his managers for about one hour each, with one follow up interview for about a half hour. The Zambian shop owners were interviewed in the Zimbabwe market place for about a half hour and the shop owner in Fort Lauderdale was interviewed initially over the phone, and then a second interview followed with the researcher spending an afternoon with him in his shop discussing his end of the curio process. Through the repeated in-depth interviews carried out over a lengthy period of time, collective views emerge from which patterns and results could be gleaned, a method discussed by O' Brien (2006). Topics covered included: why they carve, what tree species they use and the hierarchy of species preference, wood accessibility, limitations to obtaining carving material, details about carving tools, how much income is generated, how the forest is changing in relation to carving use and needs, how culture and art form are shifting and what can be done to improve the ecological and economic situation of the people and forests in Victoria Falls.

Interviews were complemented by observation as the researcher accompanied carvers while they gathered wood, carved curios, sanded, stained, and sold their items. Criteria for choosing Victoria Falls and the nearby markets are that the area is famous for wood carvings, and is in the unique situation of being previously prosperous, while now in economic and social decline. Additionally, the land that has been set aside for government parks, especially Victoria Falls National Park, is now in particular danger because of the economic situation pushing people into woodcarving, and thus, tree poaching.

Results

The results are gleaned from the data trends that emerged from the repeated oral interviews of 51 informants as described in detail in the methodology section of this paper. In order to understood the many facets of the curio process, these informants were those who gather the wood, carve, sell informally, vend in local shops, export and buy within Africa, sell in the United States, and work in a local sawmill. Adding further depth and understanding to the information gathered from the interviews, the researcher observed the activities described in the interviews and lived with the family of one key informant. Wood carvers throughout the outskirts of Victoria Falls have become ubiquitous. Walking along almost any road, one comes across people sitting under trees carving curios (Figure 2). Curios are wood carvings that can be masks, bowl, statues, and/or animals. The majority of the people living in this area are Nedeble and Shona. Although carving has always been a part of these cultures, previously skilled individuals in the village were considered specialists, and there were family lineages to whom this art was normally restricted. However, a few talented individuals from non-carving families would sometimes be allowed to enter the group of carvers (Owomoyela 2002). More casual artisans, would carve only during the colder months, when agricultural duties were less demanding. Increasingly, more and more people are carving, and the people who do so now, no longer consider themselves specialists. Many people who had other occupations now carve wood as their sole livelihood. When asked from whom they learn, and how they learn, one man summed it up by saying: "Starvation taught me art". The majority now learn how to carve, because they need to do something to earn a living.

Market

Sellers organize themselves into three basic units: roadside stand producers and vendors, open market sellers in town, and indoor store owners. The majority of sellers come together in the communal stands at the side of the road grouping into their own formal clubs. Each carver lays out their items on roughly one square meter, with sellers on either side. Although each square belongs to an individual seller, people sell items for each other, giving the money to the person to whom it belongs. There is a sense of camaraderie and support amongst the sellers. The markets in which I interviewed, sellers have set up wooden poles with mismatched plastic covers for roof and

Figure 2. Man carving along rural road near to Victoria Falls (Photo by M. Fadiman).

walls. Around Victoria Falls these were permanent structures. However, in South Africa similar structures had to be taken down each night, and reconstructed each morning (Christian 2007).

In looking at how people purchase items, in part because of culture, and also because of the rapid inflation rate of the Zimbabwe dollar, people often prefer to trade or barter instead of selling for cash. I wore a dirty baseball cap from a second hand store while interviewing, and this was such a coveted item that I was eventually persuaded to trade it for a carved statue. There are no posted prices, and people will accept different prices depending on the season.

Since the market depends mostly on foreign tourists, sales are seasonal in conjunction with travel schedules (Matose 2006, Shackleton & Shackleton 2003). The tourist seasons are mostly during the winter holidays, and Easter week in the spring. Exact income is difficult to determine, given people's lack of formal records, varying prices and reluctance to disclose specific income amounts. However, they did agree that although there are some months when they do well, there are often months in the low season when they earn nothing at all.

For the larger items, such as the tall giraffes, most buyers are South African tourists, because they can drive their large purchases home (Matose 2006). In an effort to be less dependent on tourists coming to Zimbabwe, people are looking to sell outside of the country. Within Africa, this includes the border countries of Zambia and Botswana. Hotels and other bulk buyers from Zambia drive over the border to purchase Zimbabwe carvings. As one buyer said to me "It is cheap on this side of the border". Also, carvers sell to wealthier countries such as South Africa. Some of the higher priced items are now being sold outside of Africa to the United States and Europe. One of the most famous items is the giraffe (Figure 3). These are tall carvings utilizing an entire tree. People sell them on the side of the road for $1-200 dollars, and can be sold in the United States for prices as high as $750.00-$1,000. In Fort Lauderdale a giraffe was being sold for $800.00 (Figure 4).

Art and Gender

The type of figures people carve is shifting, as the trade increasingly gears itself towards tourism. Men dominate the carving occupation (Owomoyela 2002), traditionally carving religious and ceremonial figures (Dewey 1986). As one man said to me, the traditional totems were made "to

speak", representing clans and gods. Spirit mediums and healers used carved objects themselves, and would require clients to have articles made as part of their patient's cure. Thus a steady internal market existed for woodcarvers. Artistry, especially for the Shona, is not about being original, but about skillfully carving traditionally accepted formats. In the 1960s, with the resurgence of traditional religion, and then again in the 1970's, with the war of liberation, people turned back to spirit mediums and there was a resurgence in artistry (Dewey 1986). Now, in Victoria Falls, items cater to tourists' tastes. Thus, figurines of animals that people see on Safari are now quite common, such as elephants, hippopotami, zebras, giraffes and buffalos. Traditional utilitarian items such as bowls still occupy the markets.

Not only have the forms changed, but the tools as well. In the past stone or bone would be made into carving implements. Today, given the lack of resources, people use creative tools made from modern materials. Some examples include a piece of discarded metal put into an old umbrella handle to serve as a chisel (Figure 5). Another is a piece

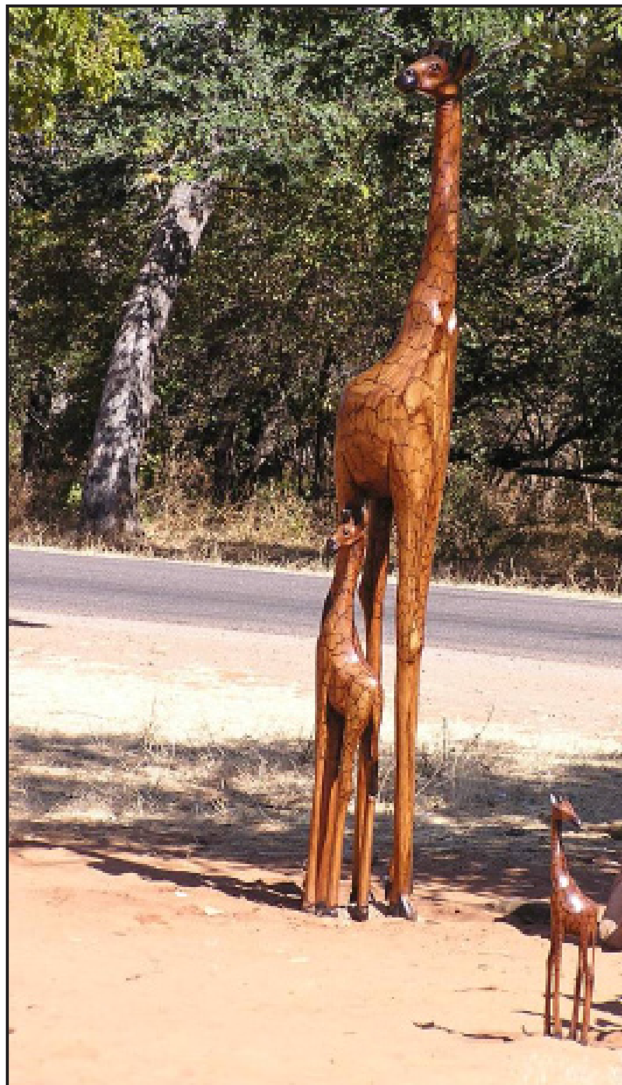

Figure 3. (Above) Carved Giraffe at roadside selling stall along main road to Victoria Falls (Photo by M. Fadiman).

Figure 4. (Left) Carved Giraffe from Zimbabwe in Fort Lauderdale, FL store with store owner (Photo by M. Fadiman).

Figure 5. Chisel made out of scrap metal and an umbrella handle (Photo by M. Fadiman).

Figure 6. Car part used to carve hair on wooden figures (Photo by M. Fadiman).

of a car that was already notched, and is used to carve hair (Figure 6).

A notable result of how the woodcarving industry is reflecting societal change is in terms of gender roles. Traditionally, while men carved the spiritual items, women carved only kitchen pieces, such as plates, bowls and utensils (Dewey 1986). As is found worldwide, wood carving and trade is mostly male dominated (Shackleton & Shackleton 2003). Coinciding with the findings of Matose (2006) in Zimbabwe, and Christian (2007) in South Africa, almost all informants male and female, made a point to tell me that "women don't carve". Women do help sand and stain. However, as more and more people enter this craft out of desperation, gender roles are beginning to shift. Differing from previously published studies, I met a woman, who was carving under a tree, and it was not an item for the kitchen, but an animal to sell (Figure 7). She is a widow, and she explained that this is the only way she can earn money to feed her children. She told me that "there are other women too" but would not elaborate. I did observe a few younger women carving behind the roadside stand. With the increase in HIV/AIDS in Zimbabwe, the number of widows and orphans is increasing (Taylor 2007), and thus more non-traditional carvers may emerge. When talking to the men of the village, there was no ill will about this woman entering a previously male dominated realm.

Gender and societal roles are shifting from both sides. Not only can one find women beginning to carve, men are entering one of the traditional female spheres. Young men between the ages of 20-35 have been the traditional cohort who carves. Although the majority of the people I saw carving fall into this category, contradicting these previous researchers, it was not uncommon for me to see older men sitting under trees or outside of a hut carving as well. They responded that "they too needed money" and so they had entered the carving trade.

As new village-like settlements arise around the communal selling areas, they are comprised predominantly of men. In the past, there were more numerous smaller markets, and people could walk from their village to the market each day. However, due to a lack of tourists, many markets have consolidated to the most frequented areas on the road leading into Victoria Falls. In this camp, it is common to see groups of young men cooking sadsa (corn meal porridge), and cleaning up for each other (Figure 8).

For men to cook is distinct from their normal activities in the traditional family unit. In the homes, women do the cooking and cleaning. However, since these young men do not return home each night, they are now creating new social units in which gender specific activities are less distinct.

Poaching

More carving increases the pressure on the woodlands (Frost *et al*. 2007). Not only does this have ecological implications, but it reduces the accessibility of material for carving and firewood. As people's desperation for wood increases villagers are poaching trees not just inside pro-

Figure 7. Woman carving a hippopotamus to sell in Victoria Falls (Photo by M. Fadiman).

tected areas, but government owned roadside trees as well (Figure 9).

A Ndeble man, who now works for an anti-poaching unit, revealed to me that he and his friends used to poach wood. They would sneak into Victoria Falls National Park, or the communal lands without permission and remove wood. They carved in the evenings, selling the items for extra money. Wood poaching has now increased to the extent that people have depleted much of the available first choice species, and now take and deplete, second choice species. Braedt and Standa-Gunda (2000) found that this, although to a lesser extent, has been happening since 2000. Studies show that people become less selective as resources become scarcer (Mapedza 2003). Two of the most favored species are *Combretum imberbe* Wawra and *Baikiaea plurijuga* Harms. The most common second choices, which are also being depleted, are *Pterocarpus angolensis* DC, *Afzelia quanzensis* Welw., and *Kirkia acuminata* Oliv. Matose (2006) also found popular species for carving are *Schinziophyton rautanenii* (Schinz) Radcl.-Sm., *Dalbergia melanoxylon* Guill. & Perr., *Guibourtia coleosperma* J. Léonard and *Sclercarrya birrea* (A. Rich.) Hochst. The selective use of certain trees for carving in Zimbabwe, is likely to drive certain species to local extinction (Braedt & Standa-Gunda 2000, Frost *et al*. 2007). *D. melanoxylon*, *B. huillensis* and *A. quanzensis*, are now on the verge of extinction (Christian 2007).

Some government agencies that ban the collection of live trees, will grant permission to remove a certain amount of dead wood from woodland areas. However, these permits are becoming harder to obtain. Many people showed me their outdated permits as validating their own wood removal activities, despite the fact that the documents have expired. Dead wood can come from trees that die for a variety of reasons, including ones that elephants have felled. However, in order to comply with dead wood policies, people will sometimes cut the bark around the circumference of the tree, so that it later dies “naturally” and they are allowed to remove the wood (Matose 2006).

Discussion and Conclusions

The curio carving situation in Zimbabwe affects both the environment and the local culture. As was made evident through the interviews and observations, as more people enter into the carving industry as a way to make a living, tree poaching increases. Thus, conservationists, governments and human interest groups are looking for ways to provide wood while maintaining environmental stability. As was explained to me by various individuals and

Figure 8. Young man at roadside selling stall preparing to wash a cooking pot (Photo by M. Fadiman).

Figure 9. Roadside tree felled for carving (Photo by M. Fadiman).

Figure 10. Carvers displaying small curios as part of the effort to use less wood (Photo by M. Fadiman).

groups, one idea that carvers are exploring is to carve a larger number of smaller items from each tree (Figure 10). Thus, they can eventually earn more profit from fewer trees. Additionally, as carvers shift their craft towards making smaller items, they can use tree branches instead of tree trunks. Collecting branches, if not over harvested, can be a sustainable way to continue to earn a profit from the forest without cutting it down.

In response to the poaching problem and the market situation as outlined in the results, a local forestry, sawmill, and furniture company, is Forest Stewardship Council (FSC) certified. In their forestry practices they are already growing and harvesting trees in an ecological and socially responsible manner, as outlined in the FSC guidelines (FSC 2008). Neil Rix, the owner of the Mukusi sawmill, is looking into what he can do with discarded pieces of wood. He is exploring how to give away scrap pieces and branches that are cut away from the tree when made into boards. Not only would people receive wood from trees that were to be cut down anyway, but with proper marketing, these items could be sold at a higher price. More money could be asked for each curio, since the items would be coming from FSC certified wood, and thus a more "green" product. Potentially, people on ecologically oriented safaris would be willing to pay the higher price. Thus, the profit margin would increase, and the curio industry could shift towards earning higher profit from lower volume production.

For successful sustainability, not only do shifts need to be made on the production side, but on the market aspect as well. As the market situation is described in the results, given the economic situation and the decrease in tourism, even if items are made smaller and from left over FSC certified wood, the main market is still going to be external. Thus, these foreign purchasers need to be made more aware of the destruction involved in creating the most prized item, the giraffe. If the price of a giraffe, which requires an entire tree, remains high, then people will continue to find ways to procure those trees.

In terms of gender roles that we see from the results, some of the forced movement of men and women into each other's realms, although less traditional, could potentially benefit individuals and the community. If rural women are now entering the part of the work force in which they will earn their own money, they can increase their social capitol. If they increase their social capitol, this then translates into a more empowered situation for them within the home, family and community. And, as men partake of some of women's work when they are in the selling "villages" more awareness of the work that women do in the home can potentially be brought back to their villages when the men return to the traditional family home.

Future research exploring the role of men and women as the carving industry progresses can yield important results for understanding cultural changes in terms of how they are connected to plant utilization. Additional studies over the next ten years to asses the success of smaller carvings, FSC certified scrap wood, and utilizing branches to see if they do indeed improve the balance between the carvers and the forest, could have an important effect on future forestry policy.

Literature cited

Alexiades, M. & J. Wood. 1996. *Selected Guidelines for Ethnobotanical Research: A field manual.* New York Botanical Garden Press, Bronx, NY.

Balée, W. 1994. *Footprints of The Forest.* Columbia University Press, New York, NY.

Bennett, B. 1992. Plants and people of the Amazonian rainforests: The role of ethnobotany in sustainable development. *Bioscience* 42:599-607.

Bernard, H.R. 2005. *Research Methods in Anthropology: Qualitative and quantitative approaches.* 4th Edition, Altamira press, Walnut Creek, CA.

Braedt, O. & B.M. Campbell. 2001. NTFP commercialization in Zimbabwe. *European Tropical Forest Research News* 32:42-44

Braedt, O. & W. Standa-Gunda. 2000. The Miombo woodlands-a resource base for the woodcraft industry in southern Zimbabwe. *International Tree Crops Journal* 10(4):367-384.

Belcher, B., A. Cunningham & B. Cambell. 2005. Carving out a future. Pp.1-9 in *Carving Out a Future: Forests, livelihoods and the international woodcarving trade*. Edited by A. Cunningham, B. Cambell & A. Belcher. Earthscan Publications Ltd., London, UK.

Berliner, P. 1993. *The Soul of Mbira: Music and traditions of the Shona people of Zimbabwe*. University of Chicago Press, Chicago, IL.

Cambell, B., A. Cunningham & B. Belcher. 2005. Planning for woodcarving in the 21st century. Pp.20-41 in *Carving Out a Future: Forests, livelihoods and the international woodcarving trade*. Edited by A. Cunningham, B. Cambell & A. Belcher. Earthscan Publications Ltd., London, UK.

Childes, S.L. & B.H. Walkers. 1987. Ecology and dynamics of the woody vegetation on the Kalahari sands in Hwange National Park, Zimbabwe. *Vegetation* 72:111-128.

Christian, M. 2007. *Livelihood and income generation from the woodcarving trade in the Cape Town area of Western Cape Province, South Africa*. MS Thesis in Forestry Sciences, University of Stellenbosch, South Africa.

Chonga, C. 1999. *Chonga Good Wood News*. Issue 4. World Wildlife Fund Eastern Africa Regional Programme Office, Nairobi, Kenya.

Denscombe, M. 2007. *The Good Research Guide: For small-scale social research projects.* 3rd edition. Open University Press, Berkshire, U.K.

Dewey, W. 1986. Shona male and female artistry. *African Arts* 19(3):64-84.

Dodds, G.L. 1998. *The Zulus and the Matabele, Warrior Nations*. Arms and Armour, London, UK.

Duchelle, A. 2007. Observations on natural resource use and conservation by the Shuar in Ecuador’s Cordillera del Cóndor. *Ethnobotany Research & Applications* 5:5-23.

Ferguson, M.A.D. & F. Messier 1997. Collection and analysis of traditional ecological knowledge about a population of Arctic tundra caribou. *Arctic* 50:17-28.

Fraser, D., T. Coon, M.R. Prince, R. Dion & L. Bernatchez. 2006. Integrating traditional and evolutionary knowledge in biodiversity conservation: A population level case study. *Ecology and Society* 11(2):4-14.

Forest Stewardship Council (FSC). 2008. www.fscus.org/standards_criteria/ Accessed June 19 2008.

Frost, P., B. Cambell, M. Luckert, M. Mutamba, A. Mandondo & W. Kozayni. 2007. In search of improved rural livelihoods in semi-arid regions through local management of natural resources: Lessons from case studies in Zimbabwe. *World Development* 35(11):1961-1974.

Harris, R. 1998. A political ecology of picking: Non-timber forest products in the Pacific Northwest. *Human Ecology* 26:67-88.

Huntington, H.P. 2000. Using traditional ecological knowledge in science: Methods and applications. *Ecological Applications* 10:1270-1274.

Kowero, G & R. Mabugu. 2006. Macroeconomics policies and industrial wood processing and trade in Zimbabwe. *Forest Policy and Economics* 8:22-34.

López, C. & P. Shanley. 2004. *Riches of the Forest: For health, life and spirit in Africa*. Center for International Forestry Research, Bogor, Indonesia.

Mackinson, S. 2001. Integrating local and scientific knowledge: An example in fisheries science. *Environmental Management* 27:533-545.

Manwa, H.S. 2007. Is Zimbabwe ready to venture into the cultural tourism market? *Development Southern Africa* 24(3):465-474.

Manwa, H.S. 2003. Wildlife-based tourism, ecology, and sustainability: A tug-of-war among competing interests in Zimbabwe. *Journal of Tourism Studies* 14(2):45.

Mapedza, E., J. Wright & R. Fawcett. 2003. An investigation of land cover change in Mafungautsi forest, Zimbabwe, using GIS and participatory mapping. *Applied Geography* 23:1-21.

Martin, G. 2004. *Ethnobotany: A methods manual.* Earthscan, London, UK.

Masocha, M. 2006. Informal waste harvesting in Victoria Falls town, Zimbabwe: Socio-economic benefits. *Habitat International* 30:838-848.

Matose, F. 2006. Access mapping and chains: The woodcraft curio market around Victoria Falls, Zimbabwe. Presented at *Survival of the Commons: Mounting challenges and new realities*. The Eleventh Conference of the International Association for the Study of Common Property, Bali, Indonesia, June 19-23, 2006. http://dlc.dlib.indiana.edu/archive/00001963/00/matose_frank.pdf.

Morton, J. 2007. Fuelwood consumption and woody biomass accumulation in Mali, West Africa. *Ethnobotany Research & Applications* 5:37-44.

Nepstad, D., I. Brown, L. Luz, A. Alechandre & A.Viana. 1992. Biotic impoverishment of Amazonian forests by rubber tappers, loggers, and cattle ranchers. *Advances in Economic Botany* 9:1-14.

Ndhlovu, F. 2006. Gramsci, Doke and the marginalization of the Ndebele Language in Zimbabwe. *Journal of Multilingual and Multicultural Development* 27(4):305-318.

O’Brien, E. 2006. A questions of value: What do trees and forests mean to people in Vermont? *Landscape Research* 31(3):257-275.

Owomoyela, O. 2002. *Culture and Customs of Zimbabwe.* Greenwood Press, Oxford, UK.

Peters, C.M., A.H. Gentry & R.O. Mendelsohn. 1989. Valuation of an Amazonian rainforest. *Nature* 399: 655-666.

Shackleton, C. & S. Shackleton. 2003. Value of non-timber forest products and rural safety nets in South Africa. Paper presented at the International Conference on Rural Livelihoods, Forests and Biodiversity, May 19-23, Bonn, Germany. www.cifor.cgiar.org/publications/corporate/cd-roms/bonn-proc/pdfs/papers/T2_FINAL_Shackleton.pdf.

Standa-Gunda, W., I. Bond, B. Campbell & L. Petheram. 2007. Exploring woodcarving markets to determine the potential of fiscal instruments for improving woodland management: The case of woodcarving in southern Zimbabwe. *Forests, Trees and Livelihoods* 17:61-73.

Telfer, W.R. & M.J. Garde. 2006. Indigenous knowledge of rock kangaroo ecology in western Arnhem Land, Australia. *Human Ecology* 34(3):379-406.

Trebilock, A. 2005. *Decent Work and the Informal Economy*. The Expert Group Development Issues (EGDI) and United Nationas University-WORLD Institute Development Economics Research (UNU-WIDER). 2005, Discussion Paper 2005/04.

Taylor, T.N. 2007. “A place of trouble”: the political ecology of HIV/AIDS in Chipinge, Zimbabwe. *Safundi* 8(2):223-256.

Wolmer, W., J. Chaumba & I. Scoones. 2004. Wildlife management and land reform in southeastern Zimbabwe: a compatible pairing or a contradiction in terms? *Geoforum* 35:87-98.