INTRODUCTION

This article aims at introducing the reader to the local art of archery as an ancestral resource management tool currently threatened by the constant pressure of modernity. The use of archery tends to be left behind in today’s Vanuatuan households, and this study seeks to provide vital information on the training techniques used by the population and its ancestors. This article also aims at describing for educational purposes the ancestral methods of fabrication in order to promote the use of this particular knowledge, which tends to slowly disappear, as well as to reconcile tradition and modernity. As natural, animal, terrestrial, and marine resources are increasingly diminished, they are reaching, in some cases, the point of permanent extinction because of climate change, human development, and their consequences. It is, therefore, very much logical to take a look back...
in time to extract the ancient knowledge and techniques used and to apply them to appraisal of upcoming changes for the future. In this way, the Vanuatuan population shall be able to face the challenges involved with the current worldwide, regional, and national cultural erosion. Doing so requires understanding and identifying the threats, analyzing the traditional and cultural responses developed through the ages by the country’s ancestors, and designing and promoting responses that fit best to tackle issues generated by challenges such as climate change and modernity.

The use of bows, spears, and traps to meet their alimentation needs led Vanuatu’s ancestral populations to develop significant knowledge from generation to generation. The postmodern era, however, has seen drastic changes in the perception local people have in such tools, which are becoming scarce today. As Vanuatuan tradition trends toward slowly disappearing, it is the population’s responsibility to preserve such knowledge and propose alternative means of transmission for future generations to come. As our traditions tend to disappear, it is Vanuatu’s duty to transmit such vital information of the traditional archery to the future generation as well as to address its use for managing natural resources and, more particularly, its use on Malekula Island, one of the biggest islands in Vanuatu. This article will focus on the initiation into and training in the art of archery and the basic notions to create and construct bows and arrows. Moreover, the article will also propose approaches on how to cope with sustainable development, highlighting local traditional values in relation to the concerned traditional practice and providing alternatives to revitalize this cultural asset.
BOWS AND ARROWS IN MANAGING LOCAL TRADITIONAL RESOURCES: AN ENDANGERED CULTURAL PRACTICE

An Adapted Animal Resource Management Tool

Bows are not only fierce weapons but also highly efficient fishing and hunting tools that greatly contribute to local resource management in day-to-day Melanesian life. They constitute a means of extracting the strict minimum to respond to the needs of the local population. When the sun sets, bows are used to hunt down flying foxes commonly consumed in local meals. Even during the day, as local people wander towards their respective gardens, bows become useful to catch pigeons and other bird species. Today, bows are rarely used to kill domestic pigs or chickens while, on the other hand, populations settled close to the reefs continue to use the bows as the tide rises to catch fish depending on the time of day, the season, and the taste of the fishermen. Sometimes the fishermen attract their prey by throwing in food such as papaya, ripe banana, coconuts, and worms. Bows constitute perfect tools to catch fish such as mullet fish, parrot fish, mackerel, picot fish, sole fish, and many other species. The time usually spent for such exercise is no more than an hour. As time goes on and tide comes in, the water depth is too important and the fish are spread over an area that becomes too big for the fishermen to efficiently cover, but at this stage the fishermen still can seek bigger catches using their spears. Spears are also used to hunt terrestrial animals such as wild pigs and bullocks.

Traditional Archery: An Endangered Cultural Practice

Bows and arrows reached Vanuatuan shores via the first human groups settling in the regions. For each clan and family of the country, these weapons were among the principal tools enabling these populations to survive until today, despite the fact that Europeans and the first Western settlers in the modern era took prohibitive measures against these weapons. In 1980, bows and arrows were the only arms and weapons used by Santo Nagriamel rebels, who were opposed to Vanuatu taking its independence under the circumstances of the time. In response to the movement,
the first government of the Republic of Vanuatu called for Papua New Guinea’s assistance, and a PNG Mobile Forces regiment was deployed to face the threat represented by these rebels. From then on, modernity and the constant social mutations have negatively impacted archery throughout Vanuatu, leading to bows and arrows becoming obsolete for the new generations.

Indeed it has become much easier and more fashionable to hunt with brand new muskets or to fish with brand new lines and hooks using modern lures or fishing nets to catch a greater amount of fish. This is how Vanuatu’s halieutic resources have become victims of overfishing today and how some bird species have come close to extinction. As a consequence of these recent events, archery has slowly been abandoned by the population in general.

The Consequences of Abandoning Local Archery

The postmodern era has seen traditional practices left abandoned and neglected due to the loss of cultural benchmarks. The practice of archery is becoming rare even in rural areas. The ancestral know-how and the cultural competencies linked with archery have become devalued. People are no longer able to identify the appropriate type of wood used to build bows, arrows, or other traditional tools used in everyday life. Such types of knowledge and identification have

1. Local archery and many other intangible heritage elements that were neglected could not escape the effects of modernity and its homogenizing policies, which are a constant threat to local cultures. Although it is located away from the Western world, since Queirós’ discovery of the archipelago in 1606, the archipelago has been influenced by the hegemonic effects of Western civilization, which has transformed the local customary structures.
further-reaching implications in terms of biodiversity heritage. In this regard, medicinal plants and trees used to construct houses and their identification also become valueless to an important part of the local population who are now accustomed to a Western and modern way of life. The main consequence is the total inefficiency and ineffectiveness to properly manage natural resources that are so important to preserving good living standards and such valuable assets to locals.

INITIATION TO LOCAL TRADITIONAL ARCHERY

Playful Learning of Archery

Once a child is able to walk, his parents and close relatives start his initiation into archery education in a playfully designed manner with small bows built with either coconut leaf nerves, bamboo, or wooden sticks cut from branches. Children then train themselves with small-sized arrows by shooting small targets such as lizards, insects, or crustaceans like crabs or shrimp. With more efficient equipment, they will start hunting fish and small birds in their direct environment.

Customary Initiation in the Nakamal

Following customary rules, the initiation to traditional archery is in direct relation with a rite of passage from childhood to the teenage years and thereon adulthood for young males in a nakamal. Such initiation is widely practiced in Melanesian culture and known as the “circumcision.” Apart from the other activities performed in nakamals, the main one focusing on warlike education is local archery. The youngsters first watch their tutors constructing their bows and arrows. As these youngsters use their own bows, arrows eventually get lost.

2. A sacred house reserved for men where rites of passage take place.
in nature, so tutors constantly remain at their sides to cut some new ones for their protégés. Quite naturally, as the young archers gain experience, they seek more enhanced and better performing tools. Thus, they take over the making of their own bows and arrows and specialize themselves in the art of building such equipment.

**Bows and Bow Manufacturing in Nakamals**

Bows are carved from different kinds of local wood selected for their quality, flexibility, resistance, and capacity to propel projectiles with the maximum velocity over the farthest distance possible. The roots of mangrove trees are also used as well as Gaïac wood (acacia, *Acacia spirorbis*), known for being the hardest wood in Vanuatu. Wood selected to be used as bows is never straight as a ruler. It is often already curved. Mangrove trees and acacia roots naturally have geometrically curved forms, which brings even more complexity to the carver since he cannot carve the wood from the inner part but only from the outer part. When carving a bow, one must take into account the size, meaning the height and strength of the potential user. Some expect the size of the bow to be identical to their own height while others prefer it to be shorter.

First of all, the structural work involves the trimming of the specimen by using a machete to shape the bow. Then the craftsman planes the wood with a sharp knife. Once the bow reaches its optimum flexibility, the carver tests it by bending both extremities to check the quality and effectiveness of his work and to ensure no more additional planning is required. This step is crucial to assess the harmony and propelling forces balanced between the upper and lower side of the bow, which determine the accuracy of the bow to reach its target.

The next step involves the bending of the bow, where the bow is wrapped in leaves and steam-cooked for more or less ten minutes. The bow is turned regularly to avoid it catching fire. It is then removed from the fire for bending. Once done, the bow is drawn with a wire to perform the last tests. For more security, the bow can be cooked in green bamboo, especially if the bow is made of dry acacia roots. Finally, the last step consists of sanding the wood with ceremonial pig tusk ivory.
Wiring/Rope Preparation

The bow wire is made of Burao (wild hibiscus) fibers or out of young Banyan root fibers. One must choose young Burao shoots, which are straight and healthy. Burao and Banyan fibers are extracted the same way by using a simple knife. Preparing the ropes or wires can be done in two different manners. For Burao roots, the fiber must be sun-dried for four hours minimum. Then the rope is fabricated by rubbing it against the thigh as Vanuatuan ancestors practiced ages ago.

Arrow Fabrication

Cane stems are often used to make arrows, along with twine and giant heart fern or iron spikes. Generally, cane stems are first fire-heated, straightened, cleaned, and prepared with a knife. If one receives an arrow for fishing, many spikes are affixed at the tip of the cane and fastened with twine. For birds, the spikes are replaced by an anvil-shaped extension aiming to knock the birds out.
Bows and Symbolism

Bows represent the perfect symbol for masculinity or the protective strength an adult man is supposed to show in order to preserve his family’s interests, security and safety. In the past, every man had to build his own bow and had to be able to use it efficiently to ensure his family’s survival. One who does not have the sufficient competence and is not capable of building and using it is considered to be a woman or worth nothing. On Malekula Island, this tool bears an important meaning in the eyes of its population. In the southeastern part of the island, on the Mewun land, bows are subject to an ancestral cult. Their decorations and the association made with the valorous ancestors resting in the underworld show the extent to which this tool is of great significance for the people of this area.

THE VALUE, TRANSMISSION, AND PRESERVATION OF TRADITIONAL KNOWLEDGE ASSOCIATED WITH TRADITIONAL ARCHERY

Traditional Knowledge, Once Devalued

With the arrival of Europeans to the Pacific, customary land was plundered and local cultures undermined to the extent that they were denigrated by sailors, adventurers, and European missionaries, who believed all traditional practices led directly to hell. During colonial times, French language policies and Anglicization were implemented, almost leading to the death of local languages and cultures. Fortunately, the tides turned, and the country’s independence has allowed us to reappropriate our cultural identity.
Independent Education Politics

With the successive waves of globalization still breaking on our shores, our local cultures are still endangered insofar as modernity leads to the loss of cultural landmarks since the Vanuatuan education system has not allocated a budget to transmit local traditional activities. However, at the same time, despite being aware of the richness and diversity of local culture, the educational system has not sought to develop curricula to transmit this cultural information through the perspective of sustainable development. Aside from the independence leaders who sought to give Vanuatu a new cultural identity soon after independence, no other politicians have had the courage to state publicly that our traditions and customs are in danger and that our area is going through a cultural tsunami, which, if it continues, may take our souls to the depths of the abyss. Consequently, no one knows where to turn to safeguard our traditions.

Blinded by the windfall gains that were dangled in front of us, we took a lot of time to recognize that cultures and traditions are the soul of our Melanesian nation. An attempt at a local archery project was implemented in 2007 as part of the Year of Customary Economy at the Teachers Training Institute of Vanuatu. It was intended for current and future teachers of the archipelago as a personal training module and staff development activity focused on indigenous knowledge and skills that all teachers should integrate to better fulfill their task of transmitting culture. Participants explored the local archery theme throughout the 2007 school year, and the project ultimately led to a fishing archery competition on Retoka Island. The project was the subject of a documentary produced by Television Blong Vanuatu. The participants have said that the project was beneficial to them in that the training enabled them to

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10 Target at Freshwater Field during a local archery show, Children’s Day, 2007. © Patrick Rory
11 Patrick Rory, VITE trainer, offering a bow and an arrow to Chief Kalkot Murmur of Mangaliliu during a bow and arrow fishing competition, Constitution Day, 2007. © Patrick Rory
acquire knowledge, skills, and values associated with local archery and protecting the environment. Unfortunately, there has been no outside response to this project.

A Prosperous Socio-political Frame Despite Certain Structural Weaknesses

Global education reform has been at work since the beginning of the twenty-first century. Traditional activities and values are now being framed in a context of unification by harmonizing the education system inherited from the Franco-British Condominium that dates back to 2010. Politicians, scientists, Malvatumaori chiefs, educators, and all people in charge must now think ethically and take into account the cultural identity of Vanuatuan youth to offer a comprehensive education that includes a school space redesigned to accommodate indigenous cultural activities.

But the local archery appreciation and transmission project implemented in schools is at risk of failing once again as we tend to put the cart before the horse. As of now, no training program exists for teachers in charge of teaching language and culture, even if the “National Vanuatu Curriculum Referential” has been teaching culture and tradition in schools since 2010. Despite these precarious circumstances, the LAB high school has decided to integrate the transmission of local traditional knowledge in its academic program using a societal context, which is a step in the right direction. We hope that this academic establishment will rekindle interest in local archery in a durable way that encourages identity and socio-cultural development.

VITE trainees posing in front of a fire on Naguswai Beach during a field trip in 2007. © Patrick Rory
VITE trainees posing in front of a fire on Mangaliliu Beach during a field trip in 2007. © Patrick Rory
CONCLUSION

This study has allowed us to define traditional use of the bow and arrow as a fishing and hunting tool inherited from the first ancestors of Vanuatu—a tool of endangered species resource management that is as important as the archipelago’s local languages. This has allowed us to direct our attention to the appreciation and transmission of traditional knowledge associated with local archery. At the village and clan level, it is necessary to encourage the continuation of initiation to ancestral archery methods as this favors the transmission of a lot of knowledge and skills as well as related traditional values that contribute to the identity and socio-cultural development of youth. We have also envisaged the inclusion of local archery in schools as a cultural and sporting activity in a transmission and cultural appreciation context. Practitioner educational authorities must now work together to facilitate teaching. As of yet, teachers are not specially informed in the instruction of local cultural activities as they are trained in an exogenous culture.
REFERENCES


