

Integrating Traditional Ecological Knowledge for Sustainable Environmental Management: An Eco-linguistic Analysis of Selected Kenyan Folklore

Jacquiline Ondimu, Prisca Simotwo*

Department of Literature, Linguistics, Foreign Languages & Film Studies, Moi University, Kenya

*Corresponding Author

Abstract

The current global concerns around the environment have raised the importance of finding sustainable solutions to mitigate the impacts of climate change on the environment and human beings. Environmental management practices have for long relied on science-based knowledge and western models, neglecting the vast wealth of environmental knowledge and practices embedded in Traditional Ecological Knowledge (TEK). This study employs an ecolinguistic approach to examine how TEK, as represented in selected folklore, can be incorporated into sustainable environmental management practices. The study analysed a narrative and a song purposively selected from the Kalenjin and Abagusii communities in Kenya. Ecological discourse analysis was used to identify linguistic structures that construct the communities' system of knowledge, values, and beliefs related to the environment. The findings indicate that linguistic structures such as declarative sentences, verbs, agency, emotive coercion, and lexical choices are used in the narrative and song to pass the communities' TEK. The paper concludes that the language used has the potential to shape the community's perceptions and influence their attitudes towards the environment, including forest protection, land use, and biodiversity protection. Consequently, incorporating TEK into environmental management practices can promote sustainability, conservation, and community participation in decision-making. The study recommends that environmental managers and policy makers should recognize the value of TEK, ensure its documentation, and incorporate it into environmental planning and decision-making processes in a complementary manner with science-based knowledge. This study contributes to the growing body of knowledge on integrating TEK into environmental conservation efforts and offers insights into the potential of ecolinguistic approaches for promoting sustainability in environmental management practices.

Keywords: Ecolinguistics, environmental conservation, folklore, linguistic structures, traditional ecological knowledge

Introduction

Environmental conservation has attracted global attention over the years. Concerns have been raised on ways of finding sustainable solutions to mitigate the effects of climate change on the environment, animals, and human beings. Most of the environmental conservation efforts currently in place make use of science-based knowledge and western knowledge. This has brought challenges in the conservation efforts as Guto (2020, p. 66) argues that the modern scientific knowledge which is considered 'prestigious, specialized, centralized and systematic' is most times

at odds with the social structures and practices of indigenous communities. This paper, through an ecolinguistic perspective, argues for a complementary approach in the use of traditional ecological knowledge (TEK) and science-based knowledge in environmental conservation management policies. The paper begins by giving a brief background on TEK, folklore and ecolinguistics.

TEK embodies a vast knowledge of ideas that can be incorporated into sustainable environmental conservation. TEK can be described as the knowledge base that is acquired by indigenous and local people over many years through direct contact with the environment (Berkes, 2012). It includes an intimate and detailed knowledge of local plants and animals together with their natural history and natural phenomena, the development and use of appropriate methods for hunting, fishing, trapping, agriculture, and forestry, and a holistic knowledge which parallels the scientific discipline of ecology. TEK is part of traditional knowledge and is similar in meaning with Indigenous ecological knowledge (IEK).

Traditionally, communities had practices they used in managing complex natural systems and the indigenous knowledge offered a holistic perspective of the natural world (Guto, 2020). This knowledge includes not only a deep understanding of the natural world, but also cultural, social, and spiritual values and beliefs that shape the relationship between humans and nature. In Kenya, many communities have relied on TEK to sustainably manage their natural resources for centuries. Ayaa and Waswa (2016) acknowledge the role of indigenous knowledge systems (IKS) as a significant resource which can contribute to an increase in environmental conservation in areas pertaining to food security, human and animal related and natural resource management. Similarly, Muhando (2005) in a study of sacred sites and environmental conservation, shows that the management of some of the sacred sites still remaining in Kenya is governed by the traditional rules passed down to generations through folklore.

Folklore has been recognized as a rich repository of TEK, reflecting the accumulated knowledge, beliefs and practices related to the environment within a given culture (Dasgupta, 2023; Mago & Anand, 2020; Saikia, 2008; Selim, 2019). Abrahams (1980) defines folklore as a means by which groups of people instruct and entertain each other. He further notes that folklore includes everyday expressions such as proverbs, jokes, riddles, narratives, superstitions, testimonials and rites that emerge during casual and ceremonial occasions. Consequently, TEK represents the ecological cultural ideas while folklore is the platform which supports the transmission of the ideas.

Amlor and Alidza (2016) point out that folklore have a didactic function since they serve in setting standards that regulate the behaviour and activities of members of a community as they interact with their environment and natural resources. This essentially means a study on folklore can bring to the fore a community's worldview on the issues addressed therein. As Khasandi-Telewa (2016) notes, folklore can be used to reshape a community's values thus helping in maintaining what is good and doing away with what does not currently benefit the society. Based on the Sapir-Whorf hypothesis on the relationship between language and culture, it is crucial to analyse the language used in folklore to understand the TEK expressed. An ecolinguistic approach that focuses on analysing the linguistic structures used in folklore, can reveal the underlying values, beliefs, and knowledge systems that shape communities' relationship with nature.

Ecolinguistics is an approach that seeks to understand the relationship between language and the environment and how they mutually influence each other (Stibbe, 2015). Ecolinguistics recognises the fact that human societies are embedded in larger natural systems-the complex interactions of humans, plants, animals, and the physical environment (Stibbe, 2015). It further emphasises that relations of humans with other species and the physical environment are very

important, since the continuity of life is dependent on these ecological relationships. The approach is thus about the impact that discourses have on the systems which support life.

There are two major approaches to the study of ecolinguistics; the Haugenian approach also known as ‘language ecology’ which looks at the effect of the environment on language and the Hallidayan approach also referred to as ‘ecological linguistics’ that studies the effect of language on the environment (Fill, 2001). This paper lends to the Hallidayan perspective, which highlights the importance of examining the linguistic structures used in the construction of the community's systems of knowledge, values, and beliefs about the environment. This will in turn provide a means of establishing the role of TEK in promoting positive perceptions of the environment which has been less explored from an Ecolinguistic perspective.

Despite the potential of TEK to inform and enhance sustainable environmental management practices, its incorporation into mainstream conservation efforts has been limited. This is partly due to the perceived lack of scientific rigor and the dominance of Western scientific paradigms in environmental decision-making. Using the ecological discourse analysis (EDA) framework, this study explored the ecolinguistic dimensions of TEK as represented in Kenyan folklore and its potential for incorporation into sustainable environmental management practices. Specifically, it examined the linguistic structures as used in a folk narrative and a song, examples of folklore, to convey complex ecological concepts and the TEK embedded therein.

The study contributes to the field of ecolinguistics by exploring the linguistic encoding of ecological concepts and values in the selected folklore. It is also significant as it contributes to a more inclusive and equitable approach to sustainable environmental development in Kenya and beyond through highlighting the importance of an ecolinguistic analysis in uncovering the hidden wisdom in traditional stories and the potential of TEK to inform and enhance sustainable environmental management practices. The findings of this paper will contribute to the debates around the incorporation of insights from TEK into mainstream environmental conservation policies.

Related Literature on TEK, Folklore and Environmental Management

There have been recent debates about the positive effects that folklore and TEK of indigenous cultures can have on ecological conservation. Some scholars have argued that the problem facing the world currently in relation to the protection of natural resources has been brought about by lack of information on how environmental resources were sustained through TEK in the past (Osemeobo, 1994). Mago and Anand (2022) also argue that the western idea of development has led to environmental degradation. They state that the solution lies in the population changing in line with the TEK as contained in folklore. They further state that folklore has rich cultural practices that propagate ecological values, ideas and environmental ethics which can help steer environmental conservation efforts. The UN convention on desertification, through the Intergovernmental Forum on Forests (IFF) acknowledges that there are traditional related practices that can be adopted into sustainable environmental mitigation and adaptation strategies. This shows that TEK is an important component in the conversations around environmental conservation. It is therefore important to first establish the relationship between folklore and TEK.

Scholars and researchers agree that folklore play an important role in bringing to the fore man's attitude towards ecology by illuminating the relationship between man and nature. For instance, Mago and Anand (2022) bring out the crucial relationship between nature and folklore stating that traditionally all measures to conserve the environment relied on folklore. Similarly, Saikia (2008) observes that folklore offers an accumulation of traditional knowledge that can offer

significant perspectives towards understanding ecology even in this era of technology. TEK is made up of belief systems which are crucial in getting to understand the underlying values of a culture. It is thus important to understand the belief systems of a community since they have a considerable effect on environmental attitudes, which in turn can play a major role in environmental conservational efforts (Schmonskey, 2012). This makes folklore a good source of data for this study when dealing with issues related to TEK and environmental conservation.

Kenyan folklore which encompasses narratives, proverbs, songs, riddles, and other cultural expressions is a reservoir of TEK which can be valuable in environmental conservation efforts. For example, Khasandi-Telewa (2016), in her study of folklore and environmental conservation, concludes that Swahili and Luhya proverbs are used to pass environmental conservation messages as part of the communities' daily activities. Similarly, Monanti et al. (2013) argue for the use of oral poetry in the form of songs as one of the ways of enhancing already existing environmental conservation efforts. This study takes a different approach in looking at the role of TEK, embedded in folklore, in environmental conservation by doing an ecolinguistic analysis. The analysis will identify the kinds of linguistic structures and strategies used in folklore that can help promote conservation efforts.

There are studies in Kenya that have explored different types of folklore from a variety of ecolinguistic perspectives (Khasandi-Telewa 2023a; 2023b, Simotwo 2019). Khasandi-Telewa, (2023b) gives an analysis of the ecofeminism and ecocentrism ecosophies in Luhya narratives, whereas Khasandi-Telewa, (2023a) and Simotwo (2019) use the critical discourse analysis (CDA) approach to examine stories from the Bukusu and Kalenjin communities respectively. This paper is different from the mentioned studies as it has used EDA which is a framework that analyses ecological discourses from a linguistic perspective. The emphasis is on the linguistic features in the discourse which help bring out an ecological orientation.

Ecological Discourse Analysis, Key Concepts and its Application in Ecolinguistic Research

Ecological Discourse Analysis (EDA) is a framework developed by He et al. (2021) from the Hallidayan approach. It is a paradigm that analyses ecological discourse based on an ecosophy from a linguistic perspective (Cheng, 2022). The theory builds on functional oriented linguistics, systemic functional linguistics (SFL), to establish the effects of language use on the environment. As Cheng (2022, p. 189) notes; 'it is designed to expose the effects of language use on the environment—eco-beneficial, eco-destructive, and eco-ambivalent—to enhance people's ecological awareness, improve their ecological behaviours, and finally promote the harmonious development of the ecosystem'.

Based on the ecosophy 'Diversity and Harmony, Interaction and co-existence', EDA extends the ideational, interpersonal, and textual metafunctions of the SFL framework using ecolinguistics perspectives. The theoretical systems of EDA are constructed from the ecolinguistic perspectives such as the transitivity, mood, appraisal, theme, cohesion and coherence and logical systems. EDA provides what Cheng (2022) terms as an ecological grammar that is general and applicable for the analysis of ecological texts.

Using an ecolinguistic procedure like what Stibbe (2015) suggests, EDA proposes a three-step analytical procedure which begins with choosing an analytical framework guided by the ecosophy, which combines with a linguistic theory. An ecosophy 'is the criterion for judgement of the ecological property and orientation of discourse' (Cheng 2022, P. 190). The second step is to identify the linguistic features in the discourse to find out the ecological orientation. As Cheng (2022) states, the criterion for judging the orientation is based on the relationship between the

ecosophy and the ecological characteristics of the discourse. When the ecological properties are in line with the ecosophy, then the discourse is said to be eco-beneficial; when contrary to the ecosophy, then it is eco-destructive; and when it has both aspects that align and those that oppose it, it is eco-ambivalent. They also add a neutral orientation when the properties neither follow nor violate the ecosophy. The final step involves considering the ecological measures in the discourse that can lead to the promotion of a balanced ecosystem.

Method of Data Collection

Data for this study was sourced from two Kenyan communities. A narrative from the Kalenjin community and a song from the Abagusii community were purposively selected to form the data set. The texts were chosen because they represented various cultural and ecological contents from within the two targeted communities. The folk narrative was collected through document analysis by examining the story as is told in the book *Oral Literature of the Kalenjin* by Chesaina (1991). The analysis in this paper is based on the English translated version in the book.

The data on the song was obtained through researcher recollection supplemented by interviews with two selected Abagusii resource persons. Researcher recollection is a method used to collect folklore through the researcher recalling childhood memories as illustrated by Khasandi-Telewa (2023a; 2023b). One of the authors recalled the song as one of the most popular songs from the community and had been performed severally at music and cultural festivals. Though with different renditions at the different occasions, the words of the song remain the same. The two resource persons also categorized the song among the top three songs from the community. Additionally, they confirmed the data as an accurate production from the community.

The song, collected in Ekegusii was translated into English taking care to preserve the original linguistic features as much as possible. A native speaker believed to be knowledgeable in the community's cultural matters and involved in translations of texts to and from English and Ekegusii was purposively identified to corroborate the translations to maintain a balance between the literal translations and culturally appropriate interpretations.

Analysis of Data

The analysis followed the three-step analytical procedure as proposed by EDA. We began by choosing an ecosophy to guide our study, which is 'Variety and Mutuality, Existence and Cooperation'. To analyse the data in a systematic manner, each data sample was analysed individually. We then categorized the data based on the ecosystem type presented in the folklore as either natural or social. We further analysed the texts based on the experiential and interpersonal metafunctions from an ecolinguistic perspective as proposed in the EDA framework.

The experiential metafunction, from an ecolinguistic perspective within EDA, is concerned with the relationships between nature and human, society and human and the relationships among the elements within nature and within society (Cheng, 2022). A transitivity analysis was used to judge the experiential meaning in the folklore. We used the transitivity system combined with the context and culture to examine if the process type, participant role and circumstantial role matched with our ecosophy as well as the four ecosophy maxims of quantity, quality, diversity, and interaction. This helped in finding out the ecological orientation of the folklore as being eco-beneficial, eco-ambivalent or eco-destructive.

The interpersonal metafunction was determined by analysing the mood system and appraisal system. EDA presents an ecolinguistic perspective of the metafunction which can be used to represent the identity, status, relationship, attitude, and judgement of the speech roles in

the ecosystem. To analyse the mood system in the folklore, we considered the speech roles, motivations and target based on our ecosophy. The data was examined for the declarative, interrogative, and imperative mood system.

Finally, we interpreted the analyses based on our ecosophy and categorised the data into; those that follow the ecosophy, those that both follow and violate it, and those that violate it. This categorization helped to inform the ecological orientation of each folklore as being eco-beneficial, eco-ambivalent or eco-destructive. The next section presents the findings and discussions.

The Narrative and the Song

The sampled folk narrative *Korket nyi kiyip Kapkwomjit gaa* (The woman who took the ogre home) and the song *Obori bwa baba* (Grandmother's finger millet), share a common theme of the relationship between humans and nature in the natural ecosystem. They both address environmental concerns and highlight the interdependence between human activities and the natural world. The original and translated versions of the narrative and song are presented below. The data is numbered for ease of illustration and interpretation in the discussion section.

Korket nyi kiyip Kapkwomjit gaa

¹Kimite keny kapkwomjit nyikimenye ²uiyet nyikinekite yipe nakamet. ³Kiwechekei tionyi yomechei kwam chito. ⁴Pesiet akenge kuwechekei kwek beindo. ⁵Nde kas korket nyi kisperisise, ⁶Kosot kini ndes beindo man. ⁷Konom borowet nyi tandan akurat benyito akwip ka. ⁸Kingete mono kini kiyeku kapkwomjit benyito. ⁹kobundo ka kukur nekoki tukun kubwa ko ¹⁰akimwoji kusion semenet piko kini mi chi gaa. ¹¹Kukar kurket akona mata kubene benyi chemoket. ¹²Ndei mi kotioche beindo kusuiti ma, kuran chitake. ¹³Kuwo kurkat akukatsa. Purio kakas chi. Njam kotie subak benyito. ¹⁴Ndei meche kusuiti ma kukas ranet subak kubunune wonipebeindo. ¹⁵Kuinda beindo ako potanik. ¹⁶Njam kuwek beindo kwek kapkwomjit ¹⁷akwam korket ako nekoki tukun.

Translation

The woman who took the ogre home

¹Long ago there was an ogre ²which lived in a forest near a mountain. ³It used to change itself whenever it wanted to eat people. ⁴One day it actually changed into meat ⁵when it heard the woman who was weeding. ⁶She thought it was real meat. ⁷She took a thin rope and tied the meat and took it to her home. ⁸She never knew the ogre had changed to meat. ⁹When she arrived home, she called her children into the house ¹⁰and told them to be silent so that nobody could know they were home. ¹¹She closed the door and lit the fire in order to roast the meat. ¹²While she was untying the meat to put it on the fire, she heard a man cough. ¹³She went to the door to check but there was nobody. It was the meat. ¹⁴When she wanted to place the meat on the fire, she heard a cough again from the meat. ¹⁵She dropped the meat trembling. ¹⁶The meat turned into an ogre and ¹⁷ate the woman together with all her children.

In its context, this folk narrative was used to discourage selfishness and teach the importance of generosity, mindfulness, and respect for the community's set practice of sharing and always cooperating with others.

Obori bwa Baba

¹Ekebwe ngiakura Manga inse
²Ee Manga inse ekebwe ngiakura
³Ekebwe ngiakura Manga inse

Grandmother's Finger Millet

A fox wailed down the Manga escarpment.
Indeed down the Manga escarpment a fox wailed.
A fox wailed down the Manga escarpment.

- ⁴*Ee Manga inse* Indeed down the Manga escarpment.
⁵*Baba motengera enyangweso ndindindi!* Grandmother dances for the locusts ndindindi!
- ⁶*Obori bwa baba keande* Grandmother's finger millet is healthy/good.
⁷*Ee keande obori bwa baba* Indeed healthy is grandmother's finger millet.
⁸*Obori bwa baba keande* Grandmother's finger millet is healthy/good.
⁹*Ee keande* Indeed healthy/good.
¹⁰*Baba motengera enyangweso ndindindi!* Grandmother dances for the locusts ndindindi!
- ¹¹*Amaemba a baba amatagoro* Grandmother's sorghum is big and healthy.
¹²*Ee amatagoro amemba ba baba* Indeed big and healthy is grandmother's sorghum.
¹³*Amaemba a baba amatagoro* Grandmother's sorghum is big and healthy.
¹⁴*Ee matagoro* Indeed big and healthy.
¹⁵*Baba motengera enyangweso ndindindi!* Grandmother dances for the locusts ndindindi!
- ¹⁶*Enyangweso yacha yaboriaa* Locusts came and devoured it.
¹⁷*Ee yaboria enyangweso* Indeed locusts devoured it.
¹⁸*Enyangweso yacha yaboriaa* Locusts came and devoured it.
¹⁹*Ee yaboria* Indeed devoured it.
²⁰*Baba motengera enyangweso ndindindi!* Grandmother dances for the locusts ndindindi!
- ²¹*Seri enyangweso teboria* Chase away the locusts so they don't devour it.
²²*Ee teboria seri enyangweso* Indeed they don't devour it chase away the locusts.
²³*Seri enyangweso teboria* Chase away the locusts so they don't devour it.
²⁴*Eh teboria* Indeed they don't devour it.
²⁵*Baba motengera enyangweso ndindindi!* Grandmother dances for the locusts ndindindi!

Note: 'Ndindindi' Is an expression illustrating the sound produced by the leg and ankle bells worn by Abagusii women as they dance.

In its context, the song was sung as a work song to remind the community about the historical locust invasion in Gusii land that destroyed a promising harvest leading to a disastrous famine. Whereas the story and song have limited explicit reference to environmental conservation, we could infer some TEK related to environmental conservation based on the linguistic features, context and themes present. An analysis of the linguistic features in the narrative and song can help unearth some of the TEK embedded therein.

Linguistic Features Employed in the Narrative and the Song

Linguistic features employed in the narrative and the song will include discussions on declarative sentences; verbs, agency, emotive coercion; and lexical choices.

1 Declarative Sentences

In the folk narrative, the speaker uses declarative sentences to inform the listeners about the unfolding events and present the argument that anyone who destroys forests is severely punished. The statements are objective and convey straightforward information about the events in the folk narrative. The introduction of the ogre in (1), the very first sentence of the story, highlights the narrative's objective, which is the punishment of an offender. From intertextual knowledge, Chesaina (1991) indicates that amongst the Kalenjin, the ogre was used as a cane for punishing

disobedient members of the community. In (2) of the story, we learn that the ogre lived in a forest near a mountain, the same place where the woman went to weed. This representation is important as it later gives us the reason to believe that the woman receives the punishment because of weeding, an act that presupposes clearing of land and digging. The narrator in (3) tells us about the ogre's habit of disguising itself whenever it wanted to eat up people. This is the composer's way of controlling events to ensure the inevitable punishment for the woman who was weeding in a forest.

Similarly, declarative sentences are also in the song. For example, in line 6, '*Grandmother's finger millet is healthy/good*' and line 11, '*Grandmother's sorghum is big and healthy*' the declarative sentences are used to show the perfect state of the crops. Additionally, in the declarative sentence in line 16, '*Locusts came and devoured it*' shows the damage done to the crop. These sentences are used to inform the listener about the natural ecological problem of insects destroying human crops. Furthermore, the singer who is the information giver has a strong subjective initiative signalling the community's view about the locusts. The song demonstrates the community's awareness of the presence and impact of locusts on their crops, which suggests a level of ecological knowledge about local pest dynamics. The speaker gives information to the listener in a positive manner thus representing the plague of locusts as a natural phenomenon since most of the time they arrived unexpectedly and were known to leave a devastating trail of destruction.

The song also uses a declarative sentence to show the community's ecological knowledge. In line 1, the singer states '*a fox wailed down the Manga escarpment*', a statement which can be interpreted as carrying an ecological message. As Monanti et al. (2013) point out, in the Abagusii community, a fox wailing was considered prelude of bad news, and in this case, the news concerned the destruction of the crops and the impending famine. The motivation of the speech is to encourage those whose plants are destroyed by migratory insects such as locusts. The community has no control over the invasion and can do little to protect their crops because the locusts are part of the natural environment. The insects anchor their survival on plants and from time immemorial, they have been known to create plagues and once they attack, nothing can be done. The only way out is controlling their breeding through understanding the weather conditions that favour their growth (Shower, 2013). This view, therefore, marks eco-beneficial mood elements. It conforms to our ecosophy '*Variety and mutuality*', '*Existence and cooperation*'.

2 Verbs, Agency, Emotive Coercion

Both the folk narrative and song use verbs to convey the actions taking place. In the folk narrative, the speaker marks process types, which are mainly action processes. They are concrete actions that have consequences. The action processes illustrated in (3) '*eat people*' by the ogre and in (5) '*was weeding*' by the woman reveal what the woman does and the consequences of that action hence showing the community's disapproval of harmful actions by human beings towards forests near mountains. There are also material processes such as illustrated in (17) '*and ate up the woman and all her children*'. In this example, the doer is the ogre while the circumstance or location is the woman and her children. Eating up all the family members leads to a concrete action of making the family extinct. This is a severe punishment which indicates that engaging in the act of cultivating forested areas near mountains, which by extension is an act of forest destruction, is punishable by death. We note that the speaker interprets events to advocate for environmental protection.

There is also the use of agentive language in speaking of the actions of both the woman and the ogre. Foregrounding agency emphasizes the power and responsibility individuals possess. For instance, in (5) agency for weeding in the forest near a mountain is attributed to the woman. Digging in the said location may lead to environmental destruction because forests are water catchment areas which must be protected. In addition, the action destroys the vegetation that is a habitat for other living organisms. Foregrounding of the agent allows the speaker to reveal the woman's destructive actions setting grounds for her to be punished. Similarly, in (16) and (17), the agency for eating up the woman and her family is attributed to the ogre; an abstract being considered as a rod of punishment.

In the song, we note the use of the active voice thus pointing out the subject who performs the action. In line 16, the locusts are the agents responsible for the action process of devouring, grandmother the action of dancing as repeatedly shown in lines 5, 10, 15, 20 and 25 while in line 1, the fox performs the action of wailing. All these actions and their agents are important in passing some ecological message. On the surface, there seems to be a contradiction when grandmother dances for the locusts despite the destruction they cause to her finger millet. However, ecologically this can be interpreted as an understanding of the locust invasion as a natural phenomenon and that very little could be done once the locusts attacked the crops.

We further note an emotive mental process in the narrative. The power of the composer of the folk narrative to determine the information presented and how it transforms is seen through acting coercively. From (12) through to (15), the composer presents obstacles to ensure the woman does not roast the meat and instead makes it turn to an ogre who eats up the woman and her children in (16) and (17). Consequently, the animator influences the representations of reality that the listeners hold: if one digs in a forest near a mountain, they will be punished. This can be termed as emotive coercion in what Hart (2010) describes as an intention to affect the beliefs, emotions, and behaviours of others in a way that suits one's interests. The animator exerts some influence over the listeners and their actions to compel them to protect forests by making the ogre eat up the agents of destruction, that is, the woman and her whole family. Emotive coercion can thus be used to tap into the audience's emotions, fostering a personal connection and inspiring them to take concrete steps toward environmental conservation.

3 *Lexical Choices*

In the song and narrative, appropriate lexical choices are used in line with the ecological message being passed. For example, in the narrative we have the use of the word 'meat' in (4) which is a type of meal considered a delicacy in most communities. The composer turns the ogre into meat to make it tempting for the woman. In the Kalenjin community, meat was a meal to be shared with neighbours yet the woman decided to close the door and instruct her children to be silent demonstrating her selfishness. Additionally, we have the use of the word 'ate' at (17) when describing what the ogre did to the woman and her family. This shows the ogre did not just kill but it made the whole family extinct since no bodies would be found. This illustrates the punishment meted on the woman, something that any other member of the community would dread consequently discouraging digging in forested areas.

Similarly, the lexical items used in the song aid in passing the message. For instance, in lines 6 and 11 the words 'healthy', 'good' and 'big' are used to describe the state of the finger millet and sorghum in the farm. These words positively appraise the crop and insinuate a promising bumper harvest. Later, in lines 16, 17 and 18, the verb 'devour' is used to describe the actions of the locusts consequently bringing out the extensive damage done to the crops. The song also uses

the word 'dances' in lines 5, 10, 15, 20 and 15 to describe grandmother's reaction to the invasion on her crops. This is used to demonstrate the community's ecological knowledge about locust invasion. Grandmother's reaction of dancing to wade off the locusts instead of going for insecticides demonstrates an ecocentric attitude.

Ecocentrism emphasizes the intrinsic value of all living and non-living things and their natural environment while de-emphasizing human importance. By choosing to preserve the environment through letting the locusts be, at the expense of losing the healthy crop meant for human consumption grandmother can be said to have aligned to the ecocentrism philosophy. The narrative and song thus conform to our ecosophy 'Variety and mutuality, Existence and cooperation'. It is therefore eco-beneficial as it arouses people's consciousness of environmental protection.

TEK Embedded in the Narrative and Song

In traditional communities, folklores were repositories of a large accumulation of traditional values, beliefs, attitudes, knowledge, and experiences about the environment that the communities acquired from contact with their environment. In the narrative, we note the TEK of preserving forests and water catchment areas through severe punishment of those who engage in unacceptable practices. Farming in the forests was discouraged through the belief that those were special sites and creatures such as ogres, which were considered as rods of punishment and were to be feared by human beings, inhabited the forests. This belief helped prevent human encroachment and human activities in the forests, consequently helping in the preservation of the trees, plants and animal species that existed there.

The community also had values and beliefs in relation to designated areas for human activity. The community required people not to farm in forested areas and mountains, as supported by Snell (2005, p. 46), who states that '*mbar* as the cultivated land was called, was supposed to be adjacent to people's homes or was to be the *kokwet* (allotments) which were farmed according to what may be described as 'a primitive system of group farming'. These, he states, were about one to two kilometres from the homesteads. So, it can be said that cultivation in a forest or near a mountain was considered an act of disobeying the set practices and thus punished severely through extinction. This belief helped deter such practices as no family wished to be extinct. In the end, the traditions aided in the conservation of the forests consequently having a positive impact on the environment.

The song embeds TEK about the existence of various players in the natural environment. It has a mention of human beings, plants, insects, and animals. They all have a role to play and a right to exist. Locusts anchor their survival on plants and despite their destructive actions on crops meant to feed human beings, man is supposed to get a natural way of eliminating them. The community seems to have the knowledge that once a locust attack happens, man has very little to do, and that explains why grandmother simply dances. This is in line with the scientific argument that preventive and pro-active methods that have as little as possible disruptions to the environment are the ideal methods for locust control (Shower, 2013). Shower does not advocate for anti-locust insecticides which he states negatively affect the human handlers and the environment.

Traditionally communities also recognized the role of animals in passing ecological messages. For instance, in the song, the wailing of the fox is mentioned because the community considered the fox as a carrier of bad news as earlier mentioned. They could predict seasons as in this case where the fox can be said to have predicted a season of famine. In this way, animals assisted in solving human problems by communicating important information that helped them

find coping mechanisms. It was through such communication, facilitated by their good knowledge of the land, that indigenous people noticed a change in the quality of the environment as soon as it occurred.

There is also traditional knowledge on the existence of different seasons whether bountiful or meagre. The Abagusii demonstrate an understanding of different seasons and the cyclical nature of resources, which sometimes resulted in poor harvests such as when locust attacks occurred. The main actor's reaction in the song shows the acknowledgement and acceptance of the natural phenomenon. This knowledge helped reinforce the importance of sustainable resource management to ensure long-term food security. Such knowledge can help the community practice proper utilization of available resources.

The folk narrative and song carry TEK that emphasizes the intrinsic value and interconnectedness of all elements within the ecosystem. The communities recognize that every living and non-living thing, regardless of its utility to humans, is an integral part of the ecosystem with an inherent worth thus deserving of respect and protection. These biocentric (recognizing value of all living things) and ecocentric (value of both living and non-living things) worldview acknowledges the immense value of biodiversity that can lead to environmental protection. The folk narrative and song discourage the anthropocentric attitude whereby humans put their interests first at the expense of other living organisms.

Conclusion and Recommendation

Whereas the folk narrative and song under analysis were generally meant to entertain, warn and teach certain virtues, their ecolinguistic analysis indicates further lessons on protection of the environment. The analysis aided by the EDA framework shows that verbs represented the doing action processes and declarative sentences were used to represent the speaker's identity as an environmental conservationist, and modality which commits the speaker to the truthfulness of the statements used to promote the protection of the environment. Additionally, foregrounding of agency ensured that the agents of destructive practices are identified and punished to curtail the bad deeds. Further, emotive coercion was used to influence the listeners' representations of reality about the environment. In this way, the community's teachings contained values and social beliefs that promote an ecocentric view in relation to the environment. It emphasizes the need to move away from what Fill (2000, p. 49) calls the 'anthropocentric and mechanistic worldview, which perpetuates the separation of humans from the rest of the creation and the embracing of the biocentric and ecocentric worldview'.

The study concludes that the linguistic structures used in folklore have the potential to shape the community's perceptions of the environment, influence their attitudes towards the environment and be used to promote sustainable environmental practices. The findings further indicate that narratives and songs embed TEK which can promote sustainable environmental practices such as forest and biodiversity protection. Thus, folklore can be used to raise people's ecological awareness and improve their behaviours towards the environment making it possible for human beings to mutually co-exist with other organisms in the environment.

This study, therefore, recommends that environmental managers and policy makers should recognize the value of TEK, ensure its documentation, and incorporate it into environmental planning and decision-making processes in a complementary manner with science-based knowledge. We take a stand similar to Maweu (2011) who argues that despite modern western ecological knowledge and TEK being conceptually different, none should be regarded as superior to the other and instead they should be applied in a complementary manner since they are premised

on two different worldviews. Considering that there is a substantial amount of TEK embedded in folklore, educationists should endeavour to use different categories of folklore to transmit these ecological values to the younger generation through incorporating them into class texts and other learning and teaching materials. In this way, we can bring up a generation that has a high ecological awareness consequently playing a part in promoting sustainable environmental practices.

References

- Abrahams, R. (1980). Folklore. In S. Thernstrom (Ed.), *Harvard encyclopedia of American ethnic groups*. Belknap Press of Harvard University.
- Amlor, M. Q., & Alidza, M. Q. (2016). Indigenous education in environmental management and conservation in Ghana: The role of folklore. *Journal of Environment and Ecology*, 7(1), 37. <https://doi.org/10.5296/jee.v7i1.9705>
- Ayaa, D., & Waswa, F. (2016). Role of indigenous knowledge systems in the conservation of the bio-physical environment among the Teso community in Busia County-Kenya. *African Journal of Environmental Science and Technology*, 10(12), 467-475. <https://doi.org/10.5897/AJEST2016.2182>
- Berkes, F. (2012). *Sacred Ecology*. Routledge.
- Cheng, M. (2022). Theoretical framework for ecological discourse analysis: A summary of new developments of ecological discourse analysis. *Journal of World Languages*, 8(1), 188–226. <https://doi.org/10.1515/jwl-2021-0030>
- Chesaina, C. (1991). *Oral literature of the Kalenjin*. Heinemann Kenya.
- Dasgupta, A. (2023). Can folklore play a role in environmental conservation? | IDR. *India Development Review*. <https://idronline.org/article/climate-emergency/can-folklore-play-a-role-in-environmental-conservation/>
- Fill, A. (2001). Ecolinguistics: States of the art 1998. In Alwin Fill & Peter Mühlhausler (Eds.) *The Ecolinguistics reader: Language, ecology and environment*, 43-53. Continuum.
- Guto, R. (2020). A meta-analytical review of the role of indigenous knowledge on environmental conservation and climate change in Kenya. *Regional Journal of Information & Knowledge Management* 5(2), 65-84.
- Hart, C. (2010). *Critical discourse analysis and cognitive science: New perspectives on immigration discourse*. Palgrave Macmillan.
- He, W., Ran G., & Jiahuan, L. (2021). *Shengtai huayu fenxi xinfazhan yanjiu [New developments of ecological discourse analysis]*. Tsinghua University Press.
- Khasandi-Telewa, V. (2016). Folklore and environmental conservation among the Swahili and Luhya of Kenya. *International Journal of Innovative Research and Development* v, 146-154.
- Khasandi-Telewa, V. (2023a). An ecolinguistic positive discourse analysis of ‘Mwambu and Sella’, A Bukusu oral narrative from Western Kenya. *Language and Ecology*. <http://ecolinguistics-association.org/journal>
- Khasandi-Telewa, V. (2023b). An ecolinguistic reading of Luhya oral narratives in Kenya: The ecofeminism and ecocentrism ecosophies. *Language and Ecology*. <http://ecolinguistics-association.org/journal>
- Mago, P., & Anand, R. (2022). Ecological worldview in folklores and folk tales leads to environmental conservation. *SSRN*. <https://ssrn.com/abstract=4164904>.

- Maweu, J. M. (2011). Indigenous ecological knowledge and modern western ecological knowledge: Complementary, not contradictory. *Thought and Practice*, 3(2), Article 2. <https://doi.org/10.4314/tp.v3i2>
- Monanti, N., Okongo, B., Amayi, Z., & Wafula, R. (2013). Oral poetry for environmental conservation: A study of selected Gusii song t. *Journal of Emerging Trends in Educational Research and Policy Studies*, 5(1), 25-34.
- Muhando, J. (2005). Sacred sites and environmental conservation: A case study of Kenya. *Indigila Africa Journal of Indigenous Knowledge*, 4. <https://hdl.handle.net/10520/EJC61476>
- Osemeobo, G. J. (1994). The role of folklore in environmental conservation: Evidence from Edo State, Nigeria. *International Journal of Sustainable Development & World Ecology*, 1(1), 48-55. <https://doi.org/10.1080/13504509409469860>
- Saikia, A. (2008). Folklore and environment. *Indian Folklife Editorial*, 28.
- Schmonskey, J. (2012). The Ecological Importance of Folklore. *Voices for Biodiversity*. <https://voicesforbiodiversity.org/articles/>
- Selim, A. (2019). Conservation of environment through folkloric beliefs and practices. *Environmental Issues: Approaches and Practices*, 1, 85-93.
- Shower, A. (2013). The desert locust in Africa & Western Asia: Complexities of war, politics, perilous terrain, and developments in Radcliffe's *IBM World Textbook*. University of Minnesota.
- Simotwo, P. (2019). An analysis of linguistic choices in Kalenjin narratives relating to protection of animals. *Language and Ecology*. <http://ecolinguistics-ssociation.org/journal>
- Snell, G.S. (2005). *Nandi customary law*. Kenya Literature Bureau.
- Stibbe, A. (2014). Ecolinguistics and erasure: Restoring the natural world to consciousness. In C. Hart and P. Cap (Eds.), *Contemporary critical discourse studies*. Bloomsbury Academic, 583-602.
- Stibbe, A. (2015). *Ecolinguistics: Language, ecology and the stories we live by*. Routledge.