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Power/Knowledge in the Governance of Natural Resources: A Case Study of Medicinal Plant Conservation in the Eastern Cape

Soul Shava, University of South Africa

Abstract

This article explores the power/knowledge relations at the knowledge generating interface between a modern community development organisation and a traditional health practitioner community in a town in the Eastern Cape, South Africa, through the lens of Foucaldian governmentality. This case study is part of a broader study which explores power/knowledge relationships in the representation and application of indigenous knowledges in selected environmental education and community development contexts. This study traces the various loci of power/knowledge and their implications in a project focusing on the conservation of traditional medicinal plants in which the community development organisation and traditional health practitioner community were involved as key partners. The case study provides a micro-setting to analyse natural resource governance, which reveals how power located in modern institutions is reinforced by the generation and accumulation of disciplinary (scientific) knowledge as a hegemonic regime of truth that is applied in the governance of medicinal resources. It also reveals the location of power within the traditional healer community on the other hand and how this is maintained by the resilient cultural retention of medicinal knowledge and related practices within the community against a background of dominant Western medical practice.

Introduction

Indigenous knowledges of local communities still remains to a large extent marginalised within mainstream education, research and development contexts. This is despite the fact that modern research and education institutions generate knowledge through interactions with local communities and derive their information from them. This case study explores the influence of power/knowledge relationships (Foucault, 1980) in the way indigenous knowledge on medicinal plants is represented from knowledge generation processes at the interface between a community development organisation and a community of traditional health practitioners in a medicinal plant conservation project. It attempts to reveal the various mechanisms used in the knowledge generation processes and their implications in the politics of knowledge representation and the governance of medicinal plant resources on the ground. The study forms part of a bigger study that explores the representation and application of indigenous knowledges in environmental education and community development contexts (Shava, 2008).

The medicinal plant conservation project emerged as an initiative of the community development organisation. The premise of the project was based on the scientific imperative

to promote the conservation of medicinal plants in the Eastern Cape, drawing from scientific research into the use of medicinal plants that states that the demand for medicinal plants exceeds supply (Mander, 1998; Wiersum *et al.,* 2006), hence the need for initiating education, awareness and agency to propagate and conserve medicinal plants among users. This conservation imperative falls within a broader mandate to conserve indigenous plants in the Eastern Cape bioregion, which in itself falls within the national and global imperative to conserve biodiversity and nature. Emerging from this is a dominant discourse, a regime of truth, of the limits of the earth's resources that necessitates their regulation and management, which forms the central tenet/theme of global environmental politics (Rutherford, 2007). This project was funded by an external donor with a focus on community gardens for sustaining a horticultural and botanical legacy (through conservation of biocultural diversity).

The approach to the project was to target and involve local traditional health practitioners (traditional healers), who comprise a significant component of medicinal plant resource users, and work with them through raising awareness amongst them on the threatened and endangered status of medicinal plants in their vicinity and the need for their cultivation. The traditional healers are nationally governed by the Department of Health through the Traditional Health Practitioners Act of 2004.

Research design

An ethnographic case study approach was used in this research (Bassey, 1999; Kyburz-Graber, 2004). The research sample comprised staff members from the community development organisation that were directly engaged in the medicinal plant project and a group of 29 members of the traditional healer community. The research instruments employed were individual and focus group interviews, observations and document analysis. Individual interviews were done with each of the three key staff members engaged in the project using unstructured open-ended questions to avoid restricting the participants' answers (Schurink, 1998). For the traditional healers, a focus group interview was done with a group of eight members to capture the collective views of the healers on different aspects of the project. Observations of interactions between the staff of the community development organisation and the traditional health practitioners during meetings and training sessions were recorded. The traditional healers' attendance during the meetings and training varied from between 21 to 29 participants. Document analysis was done on reports and minutes made by the community development organisation, which served as primary data sources (Sifuna, 1995). The data generated was then analysed using Foucault's genealogical analysis method (Tambouku, 1999; Smart, 2004) with a specific focus on governmentality. Genealogical analysis brings into play previously subjugated knowledges such as indigenous knowledges of local communities (Foucault, 1997).

Research methodology

Natural resource governance entails a nexus of power/knowledge relations that shape how we come to understand certain knowledge representations with regards to natural resources as the truth. In defining governance, Swiderska *et al.* succinctly captures its essence by stating that:

> Governance is about who decides and how, and encompasses policies, institutions, processes and power. (2008:1)

Taking into consideration the institutions (formal and informal) involved in this case study and their interests, Foucault's concept or notion of governmentality (1991) will be used as an analytical lens to articulate the power/knowledge relationships in this study. Governmentality, the 'conduct of conduct', expounds the issue of power/knowledge relationships beyond the realm of government into everyday life. Governmentality is defined as:

> The ensemble formed by institutions, procedures, analyses and reflections, the calculations and tactics that allow the exercise of this albeit complex form of power, which has as its target population, as its principal form of knowledge political economy, and as its essential technical means apparatus of security. (Foucault, 1991:102)

The application of this definition is elaborated by Michael Dean in the following statement:

> An analysis of government, then, is concerned with the means of calculation, both qualitative and quantitative, the type of governing authority or agency, the forms of knowledge, techniques and other means employed, the entity to be governed and how it is conceived, the ends sought and the outcomes and consequences. (Dean, 2004:11)

Governmentality actually extends beyond the realm of influencing the conduct of others into the realm of self, that is, the way in which individuals question their own conduct. Here the focus is on how we as individuals behave, act and create our identities in order to better govern it. To govern therefore refers to 'how we structure the field of possible action, to act on our own or other's capabilities for action' (Dean, 2004:14).

Governance in the Medicinal Plants Project

In analysing governance in this study, the primary aspects I considered (following Dean, 2004) were:

- *Visibility (truth):* the ways of seeing and representing reality (the episteme);
- *Knowledge:* distinctive ways of thinking and questioning, vocabularies and procedures used for the production of regimes of truth which circumscribe how the world is perceived/apprehended;
- *Techniques and technologies of government (forms of power):* tactics, mechanisms and procedures used to deploy rules and construct experts;
- *Biopolitics (identity):* the formation of particular kinds of subjects, the shaping of agency and direction of desire through various techniques or strategies of knowledge gathering, measurement and assessment.

Visibility

Visibility makes reference to knowledge world views of epistemologies. In the medicinal plant project two world views are evident. On the one hand there is the Western scientific world view of modern institutions. This view emphasises the bounded nature of the earth and the limits of its resources and forms the basis for global environmental governance. This is made visible through maps, charts, graphs and other means of surveillance for capturing, documenting and presenting evidence in established modern institutional structures and systems. From the Western scientific perspective nature has been reduced to a collection of quantifiable resources, such as medicinal plant species, which need to be managed as an economic commodity. This is the basis for its logical argument to stem plant biodiversity loss and to ensure constant supply to users through the cultivation of medicinal plants.

On the other hand there is the traditional healers' world view which is grounded in the traditional healing culture. From the traditional healers' perspective medicinal plants are inscribed into the holistic context of everyday life, are a gift from the ancestors and from God, are unlimited and for them to be effective they have to be obtained from the wild. The knowledge of traditional healers is made visible through its application in practices of healing, that is, the practical knowledge of which plants in the lived environment can be used to heal different ailments.

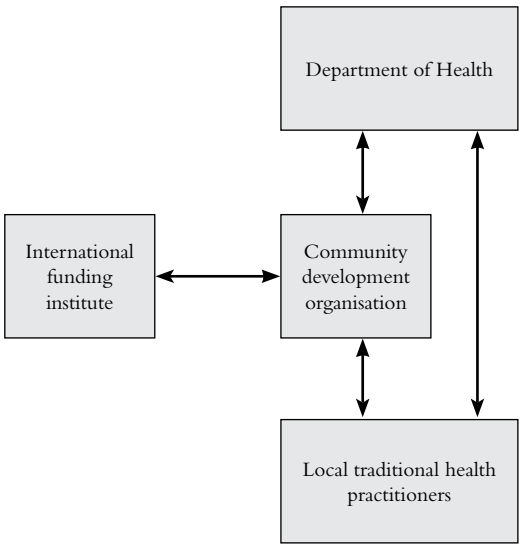
Knowledge: Regimes of truth

Western scientific knowledge generation is supported by its normalising mechanisms, techniques and technologies of representing reality. These include evidence gathered through statistical information, assessment, observation and recording processes on the studied entity. The forms of knowledge generated, the thought systems and the experts involved in generating that knowledge comprise important components for establishing and validating the regimes of truth. However, power is expressed not only in the scientific discourses but in the power/knowledge relationships in which those discourses are brought into play. Here the prolific generation of Western scientific knowledge on medicinal plant scarcity and the global plant biodiversity threats and its dissemination in formal research, education and socio-economic contexts ensures that it is the accepted reality or recognised regime of truth that is applied in the governance of medicinal plant species. As a result, Western knowledge hegemony is entrenched while the locally contextualised cultural knowledge, views and practices of traditional health practitioners are excluded and marginalised and subsumed by the widely recognised Western science discourses.

Technologies and techniques of government

These are mechanisms, tactics, techniques or procedures that are used to rationalise action in order to achieve intended ends, such as imposing limits to harvesting and proposing the cultivation of medicinal plants. A stratified structure of governance is evident with regards to different stakeholder influences, reflecting plural forms of governance that are interwoven with a thread of continuity (Foucault, 1991). This is represented in Figure 1 below. Each institution utilises various techniques of government to entrench itself and influence the conduct of others.

Figure 1. The tiered governance structure in the Traditional Plants Conservation Project



In the above stratified structure:

a) The c*ommunity development organisation* serves as an information hub and conduit that provides an enabling platform for deliberation and agency on medicinal plant biodiversity conservation. It also serves to interpret related policy and to facilitate deliberations on policy implications and advocacy for policy transformation processes. For the traditional health practitioners, the institution is made to serve as an interlocutor, providing a voice for the voiceless. The institution has therefore strategically positioned itself as a primary knowledge source, broker, interlocutor and advocate on behalf of the traditional health practitioners. However, the main role of the institution is to promote: the conservation of medicinal plant populations through awareness of their threatened or endangered status; the cultivation of medicinal plants; and the application of sustainable harvesting practices. Its reason is medicinal plant biodiversity conservation in the Eastern Cape biome. Its techniques are the mobilisation and control of human, financial and infrastructural resources for providing a training programme for the cultivation and sustainable harvesting of medicinal plants and a platform for deliberations on medicinal plant biodiversity conservation, intellectual property rights and policy issues. Its subjects are: local traditional medical practitioners (who are the project's primary target group), whom it intends to transform into agents of conservation; policy makers such as the Department of Health; and researchers and research institutions interested in the knowledge of medicinal plants.

b) The *local traditional health practitioners* are mobilised into a loosely structured institution that presents itself as a community of practice around a shared common concern of sustaining traditional health practices. This arrangement gives them

a common (agential and resistance) voice and protects their interests as well as regulates external interactions (by determining criteria on whom they do or do not work/collaborate with). Their reasons are the sustenance of the culture of traditional health practice and the protection of medicinal plant knowledge and healing practices, which are the source of their livelihoods. Their subjects are: researchers and research institutions (through appropriation); plant traders (through wrong prescription and culturally incorrect collection of medicinal plants); and government (through negative policy) that threatens their practice.

c) The *international funding organisation* provides funding for the development of medicinal plant gardens and mandates the community development training institution to facilitate this. Its reason is plant biodiversity conservation. Its technique is the sourcing and provision of financial resources for indigenous plant conservation through garden development initiatives. Its subjects are: the community training organisation, which furthers its cause; and the traditional health practitioners, who have been instrumentally co-opted as the agents to implement the medicinal plant gardening initiatives.

d) The *Department of Health* is a formal government institution with an overall regulatory function on health practitioners. To this effect it has formulated an overarching policy framework that aims to regulate local traditional health practitioners and their practices. Its reasons are safe health provision for all. Its techniques are the regulation and standardisation (that is modification and westernisation) of traditional health practices through a nationalised system of human, financial, systematic (policies and legal instruments) and infrastructural resources. It subjects are the traditional health practitioners, whom it has to regulate and whose practice it is attempting to standardise.

What is evident in techniques and technologies of government in this case study is the fact that governing medicinal plant resources occur in multiple sites and through the application of a myriad of techniques (Rutherford, 2007).

Biopolitics: Formation of identities

Governance of populations is achieved by effects on the identity (agency) of the targeted entity, what Foucault refers to as biopolitics. Dean explains that government seeks to 'shape conduct by working through our desires, aspirations, interests and beliefs, for definite but shifting ends' (2004:11). Legg (2005) explains that governmentality works through the concept of information and calculation, utilising the data gathered for defining what constitutes the truth through positing academic disciplines as the gatekeepers of knowledge. In the governance of medicinal plants, two populations are involved and affected, firstly the medicinal plants and secondly the traditional health practitioners.

With regards to medicinal plants, while the identity of these plants and their use as medicines originates from the traditional health practitioners who use them, they have now been re-defined within the regimen of Western scientific discourse through various techniques or strategies of Western knowledge representation. These plants, through normalising processes of

control, selection, organisation and distribution – such as assessment, statistical quantification of the population and re-classification – have been appropriated from the domain of traditional medical practice into the realm of global Western scientific environmental discourse of scarcity (threatened or endangered) and prioritised for conservation, thereby making them entities for Western modes of environmental governance. In other words, the scientific discourse on medicinal plants shapes how we perceive them, thereby transforming them from a local resource available for use by traditional medical practitioners to plants that are endangered or threatened with extinction and therefore needing protection from human exploitation through regulatory processes.

The traditional healers, due to their being identified as resource group users that impact on the availability of medicinal plants, have been selectively targeted for involvement in this project. The community development organisation, while acknowledging the significant role played by traditional healers in the provision of health services to the local communities, also contends that the harvesting of medicinal plants in the wild is not sustainable and that traditional conservation practices are ineffective. The basis for this argument is scientific evidence of declining populations of local medicinal plant species that could become extinct. Despite the traditional healers' cultural (and also scientifically supported) belief in the fact that the potency of medicinal plants is derived from their growing in their natural habitat, the discourse of declining species occurrence provides a convincing argument that can or will transform traditional healers into environmental subjects who are willing cultivators and users of cultivated medicinal plants. Therefore, by invoking a focus on this particular form of truth (on the scarcity of medicinal plants), the community development organisation is able to influence and regulate the conduct of the traditional medical practitioners that it is working with.

Locating Power/Knowledge and Its Implication for Agency

In this section I will attempt to trace the loci of power/knowledge in the medicinal plant project.

Foucault describes power as diffuse, capillary and productive, producing subjects and utilising knowledge (1990). This focus on power is not only on individuals and institutions and how they impose their authority over others, which usually results in skewed power relations that favour the powerful over the less powerful. Rather, the focus is more on the de-centred, rhizomatic distribution of power, how it permeates all subjects and social relationships, as well as the exercise of power. Foucault (1980) claims that power is neither possessed, given, exchanged, nor recovered; rather, it is exercised. Individuals are vehicles for the transmission of power, always in a process of simultaneously undergoing and exercising power. Power circulates and is never localised, it is not a commodity but a strategy, a multiplicity of force relations comprising dispositions, manoeuvres, tactics, techniques and functions. Foucault (1984:83) refers to power/knowledge relationships as the 'hazardous play of dominations' and a 'strategic game between liberties'. Foucault brings into perspective another useful aspect of power besides its usually repressive effect, that is, its productive effect and its networked strategic nature (Foucault, 1995).

Foucault also argues that power and knowledge are intertwined and are always and necessarily interdependent. Power produces knowledge and knowledge in turn enables the exercise of power (Foucault, 1980; 1995).

In this case study the community development organisation was informed by Western scientific evidence in the form of knowledge of the taxonomic identity, availability and spatial distribution of medicinal plants in the area, and uses this as the basis for the project. In addition to Western knowledge symbolic capital, the organisation also had human capital in the form of experienced staff qualified in Western science (botanists and horticulturalists), and financial capital in the form of funding provided by the external international donor. Through these various forms of capital the community development organisation was able to exercise power to influence the direction of the project in order to achieve its intended goal of medicinal plant conservation through education and awareness, leading to traditional healer agency for the cultivation and sustainable harvesting by the traditional healers as the targeted users. This was in line with the external donor's goal to develop community gardens for medicinal plant conservation purposes.

However, despite this authoritative position, the community development organisation was aware that it could not undertake the project without the involvement and willing participation of the traditional healer community as a key stakeholder. This then involved yielding power to the traditional healers and allowing them to have a representational say in the project's decision-making processes. The awareness of the community development organisation of the power of traditional healers was evident by the sensitivity with which they treated the healers in the project and their efforts to avoid confrontational issues with them. This was revealed in their consulting the healers on what plants can be grown and how to cultivate them without infringing on cultural taboos and in their respecting the privacy of healers' knowledge on the use of medicinal plants, thereby protecting their intellectual property rights. It was also expressed in the protective exclusion of other researchers who wanted access to the healers but with whom the healers did not want to interact.

However, a major threat to the long-term success of the cultivation of medicinal plants was the scepticism that traditional healers, especially older, senior ones, have towards the effectiveness of cultivated medicinal plants. The acceptance or non-acceptance of medicinal plant resources from cultivated sources is therefore in the power of the traditional healers, which has implications in the sustainability of the project.

Traditional health practitioners, as a community of practice, derive authority from their indigenous knowledge and practices of healing utilising local medicinal plants within their cultural–spiritual worldview. This knowledge and practice is their cultural capital that has enabled them to sustain their medical practices parallel to the dominant modern medical practices. However, lack of access to medicinal plants due to scarcity resulting from changes in land use patterns (proliferation of private game farms), makes previously accessible natural vegetation areas no longer accessible and leads to an over-exploitation of herbal medicines by commercial traders (from both within and outside the local community context) who mass harvest medicinal plants and pose a major threat to their practice.

The impact of other open-access resource users, such as commercial medicinal plant harvesters, as well as the impact of changing land use patterns, such as the transformation of agricultural land into private game farms which are inaccessible to traditional healers, needs to be carefully articulated and given due consideration in the project. In essence, traditional healers are disempowered with regards to control over land and medicinal plant resources as most of the land belongs to private individuals, corporations or to government (Swiderska *et al.*, 2008). Medicinal plant resources on common property areas that the traditional healers have access to are also accessible to everybody, resulting in the 'tragedy of the commons' phenomenon (Hardin, 1968). Because the land does not belong to the community, they are not capable of managing and controlling the resource use therein. It is this aspect that has driven the traditional health practitioners to embrace the new Western scientific reality of plant scarcity and the possibility of extinction and to explore alternative means of ensuring continued access to medicinal plant resources. Their consent to participate in the project, while in itself an exhibition of freedom, also exposed them to forms of subjectification and states of domination.

Environmental education processes should reveal all the interrelated factors contributing to an environmental issue, leading to a more holistic view of the issue. In the case of medicinal plant scarcity, the role of other stakeholders needs to be highlighted as this has significant bearing on the success of the project. Raising awareness and engagement with these other stakeholders, such as commercial gatherers, private game farmers and private game reserves, is crucial for a more comprehensive approach to effectively address medicinal plant scarcity.

One imposition on the traditional healers was the intention by government to regulate them through the Traditional Health Practitioners Act, which attempts to standardise their practices to conform to Western medical practice and international policies. From a global perspective, the World Health Organisation's global survey report (WHO, 2005) on national policy on traditional medicine and the regulation of herbal remedies found the non-regulation of traditional health practitioners and herbal remedies a challenge and advocated for the development of international standards and appropriate methods for evaluating traditional medicine. It outlined the key elements for developing a national policy on traditional medicine as a regulatory framework. The WHO advocates for the institutionalisation of traditional medicine (WHO, 2011) and for its regulation and control (Robinson and Zhang, 2011). This reveals the extent of the external influence of the international organisations who are powerful actors in generating the regulatory discourse and mapping the future direction of traditional medicine and, overall, of drugs and medicinal practice in the global arena. The traditional healers were aware and concerned that they were being measured against the yardstick of modern medicine and that most modern medical practitioners view traditional medicinal practice as inferior to modern medicine (Shava, 2008). It was this that prompted them to challenge the development and negative implications of the Traditional Health Practitioners Act of 2004. The main threat from the Act was the imposed requirement for healers to be registered under the Act. This has the possibility of excluding and criminalising those individual practitioners not registered under the Act who are already engaged in the practice and recognised and respected by their communities. The community development organisation played a significant educational role in raising awareness among traditional healers of the implications of the Act

and how they could include their voice in its development. However, this should also have extended to incorporate the influence and interests of global players such as the WHO.

One major bone of contention with the Act is the attempt to standardise traditional healing practices in an effort to ensure safety in health provision. Traditional healers argued that traditional medical practice cannot be standardised as it is a calling from the ancestors through dreams and visions and that each person is called differently, hence there can be no uniformity in traditional healing practice. They pointed out that the gift of healing differs in each healer and therefore one healer can be gifted in healing a particular ailment while another is gifted in a different area. Incidentally, this aspect of specialisation is an accepted norm in modern medical practice. Similarly, traditional healers also query the hospital referral system which tasks them to refer patients that they suspect have HIV/AIDS to hospitals. It fails to reciprocate the practice by referring patients which modern medicine cannot treat who could be helped by traditional medicine (Shava, 2008). They also claim their role as equivalent to that of a modern physician or doctor because they have the ability to diagnose and treat patients. They refuse to be equated to or undermined by a nurse who takes instructions from a doctor. The traditional healers' response to the Traditional Health Practitioners' Act supports Foucalt's notion that:

> Where there is power, there is resistance, and yet, or rather consequently, this resistance is never in apposition of exteriority in relation to power. (1990:95)

In essence the Act is challenged for its top-down imposition on, and failure to represent the interests of, the traditional health practitioners that it intends to govern.

Traditional healers recognised the strengths of the community development organisation (through its various forms of capital) in that they saw them as a knowledgeable authority that would serve as educators to the traditional health practitioners. In this regard, the traditional healers yielded to the power wielded by the community development organisation and played a subordinate and recipient role in the project. However, the traditional healers have, on the other hand, been able to strategically leverage the advantage of working with the community development organisation to their benefit. This has included using the influence of the community development organisation to seek access to medicinal plant resources on farms, to secure land from the municipality for their organisation, to obtain animal hides and remains required for their practice from taxidermists and to acquire certification as registered traditional healers to further their cause. Similarly, the formal training provided by the community development organisation also adds clout to the traditional healers. Overall, this reveals the positive and productive aspects of power in interactions with the community development organisation.

In attempting to trace the loci of power in this case study, one can conclude that power is everywhere and is exercised from innumerable points through various practices, agents, discourses and institutions (Foucalt, 1990; Rutherford, 2007). This is evidenced in the power of the community development organisation (through is knowledge and human resource and financial capital), the traditional health practitioners (through their choice to participate, and their knowledge and cultural practices and the ability to use the influence of the community

development organisation to their benefit), the Department of Health (through its regulatory framework) and the donor organisation (through its funding preferences or interests). The case study reveals a strategic interplay of power relations, of domination and resistance, consensus and will. Foucault explains that:

> governing people is not a way to force people to what the governor wants; it is always a versatile equilibrium, with complementarity and conflicts between techniques which assure coercion and processes through which the self is constructed or modified by himself. (1993:203–204)

Conclusion and Recommendations

What is evident in the relationship between the traditional healers and the community development organisation, together with other modern stakeholder institutions (the donor organisation and the Department of Health), are the complex and dynamic power struggles which bring into perspective what Foucault (1987:130) refers to as the 'strategic game between liberties' in the governance of medicinal plant resources. This reveals that power is not located within one powerful entity and that it is not uni-directional in nature. Rather it is distributed across and expressed through various entities within the project during their interactions in order for each to achieve their intended ends.

The power of modern institutions derives from their generation, recording, accumulation and application of Western knowledge discourses as a hegemonic regime of truth that permeates the global arena. However, it should be exposed that the knowledge on medicinal plants is derived from traditional healers and is appropriated into Western scientific knowledge where it is then represented in the discourse of limited earth resources that need to be scientifically governed (while traditional conservation practices are silenced).

Traditional health practitioners, on the other hand, rely on the application of time-proven traditional knowledge and cultural medical practices in the local context as the basis for their practice that defiantly resists and exists parallel to the dominant modern medical practices. However, while the traditional medical practice is locally sustained by the healers' agency, knowledge generated from modern institutions currently remains dominant and it negatively influences the practice of traditional healers from a global and national level.

The productive aspects of power are clearly revealed by the way that traditional healers leveraged on the power/knowledge capital of the community development organisation to further their cause. This was clearly a positive spin-off from the healers' interactions with the modern community development institution and reveals that such interactions are not necessarily negative to local communities.

In conclusion, environmental education processes should seek to critically interrogate and bring to the fore the interplay of power/knowledge relations and reveal their implications in the way knowledge is represented from knowledge generation processes involving the interaction of modern institutions and local communities. This critical approach challenges the

normalised institutional knowledge generation processes that appropriate local knowledges and subsume them into Western science knowledge discourses. This then creates spaces for the inclusion and representation of indigenous voices in the academy and its application in community development contexts.

Note on the Contributor

Dr Soul Shava is an environment education and sustainability specialist. He holds a PhD in environmental education from Rhodes University, South Africa. He is currently a senior lecturer in environmental education in the College of Education at the University of South Africa (UNISA). Dr Shava has research interests in indigenous knowledge research, its representation in knowledge generation processes at the interface of modern institutions and local communities and its application in community development contexts and environmental education processes in southern Africa, community based natural resources management (CBNRM), socio-ecological resilience, climate change, intangible cultural heritage, traditional agribiodiversity conservation, and the use of traditional crops and indigenous food plants by local communities to achieve food security and resilience to climate change impacts. Email: soul.shava@gmail.com

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