

**JOURNAL OF GENDER, INFORMATION AND
DEVELOPMENT IN AFRICA (JGIDA)**

- Indexed at: EBSCO, ProQuest, J-Gate and Sabinet
- Accredited by IBSS

Special Issue, March 2019

Pp 237-243

**The Significance of Indigenous Knowledge
Systems (IKS) for Africa's Socio-Cultural and
Economic Development in the Dawn of the
Fourth Industrial Revolution (4IR)**

DOI: <https://doi.org/10.31920/2050-4284/2019/s1n1a14>

Pakiso Tondi

*Central University of Technology
Bloemfontein, Free State,
South Africa*

Abstract

Considering the frictions and tensions about the socio-cultural and economic development of Africa and the existence of some of tendencies and actions that are not in favour of the continent's advancement, the main aim of this article is to argue for the deliberate reinstatement and retrieval of African Indigenous Knowledge Systems (IKS). The purpose this argument which in the main is a political position of an African cultural activist is to motivate for the use of IKS as a tool for socio-cultural change and economic development strategies that are vital in the era of globalisation and the Fourth Industrial Revolution (4IR). This is not new in that as demonstrated by situations of Japan and other Asian countries, IKS has all the potential to enable the African continent to meet the challenges of globalisation and chart its future. In addition, the article argues that the deliberate re-centering of IKS has a potential of complementing the

4IR initiatives with sciences that are embedded in life and work of communities that are majority in the world and are still depended on the natural resources that are under threat of diminishing.

Keywords: African Indigenous Knowledge Systems (IKS), Re-Centering, Revitalization, Socio-Cultural, Economic, Development; Fourth Industrial Revolution (4IR)

1. Introduction

As a consequence of the power relations lying at the interface between science and colonialism, IKS is often overlooked especially within the modern reductionist approach to science. The indifference and arrogance of science is particularly seen in the adage that unless information is developed under aseptic clinical conditions by scientific methods, it is to be viewed as “inferior”, or “primitive, undertaken by “quacks”, or “witch doctors (Ntuli 2004:172)

In a world that is predicated on knowledge systems and cultural values that are alien and marginalizing to the majority of people of underdeveloped countries, for the African continent the reality is that, “Western technology and Western cultural values have given many Africans a conflicting vision of the world in which they live” (Zindi 1994/5: 8). With the dawn of the Fourth Industrial Revolution (4IR) Africa must make efforts to reclaim and revitalize its traditional knowledge systems that have sustained its masses from time immemorial. This is to enable the Africa’s communities through their knowledge systems and science to embrace the 4IR and dismiss the negative views about its ability to contribute to the modern science and technology.

In fact, most of the marginalised communities of Africa are confronted by the legacy of a hegemonic perspective of the Europe-centred Knowledge Systems, whereby they are expected to grapple and be content with a technology that has no reference to their cultural experience(s) and practices. This demonstrates how Western imperialism interrupted and disorganised scientific and technological development of the colonised, precisely because with its sophisticated philosophies and structures it made it impossible for the colonised to build upon indigenous traditions of invention and innovation existing within its communities. As a matter of fact, it is an undisputable fact that

knowledge systems of a people stand central with respect to their socio-economic development in time and space (P' Bitek 1973: 4).

The tragedy of Africa, which somehow has contributed to her situation of abject poverty, disease and underdevelopment, is that some alienating and marginalizing cultural experience(s) and knowledge systems have been held up as the standard. This has contributed in the disorientation of African creativity and advancing of sciences that are still practiced in some of its communities and are relevant. Ngugi wa Thiong'o (2003: 5), reflecting on the socio-cultural struggle against European domination and the apparent victories or benefits, observes, "...arising from the dialectically linked benefits and misfortunes of capitalist modernity was the creation of the world that reflected the West." What this implies is that, in the process of creating a world made of its own image, most of the people in the African continent were made to depend on and be governed only by official European knowledge as if the supreme creator of humankind created the people of the African origin helpless and not able to create and recreate their existence.

In this article, the exercise of revitalization and re-centering IKS is regarded as of paramount significance in that knowledge [systems] assists societies to create and recreate their social, cultural and political identities as well as to adopt a preferred vision for the future and their path of development, more especially in the context of subjugation and domination by other prioritised knowledges. It will not be a good idea to roll-out Artificial Intelligence (AI) initiatives that are meant to engage in sustainable development initiatives without also engaging with African knowledges and its nuances.

2. The Significance of Indigenous Knowledge Systems (IKS) for Africa's Socio-Economic Development

As maintained by Eyang (2007) IKS "refers to the set of interactions between the economic, ecological, political, and social, environments within a group or groups with a strong identity, drawing existence from local resources through patterned behaviours that are transmitted from generation to generations to cope with change." This provides a comprehensive explanation of what is IKS and its implications for its communities and is an explanation adopted in this article. In this regard the change that is real for Africa today is globalisation and the dawn of the 4IR.

Explaining the relationship between the call for Africa's renewal and Indigenous Knowledge Systems (IKS), Ohiorhenuan (2001: 40) defines the latter by pointing out that:

a society's knowledge system embodies the collective wisdom of its past. It is embedded in its cultural practices, and its norms and values. It is manifest [ed] in the skills and expertise of managing and maintaining a dynamic equilibrium with nature.

What this description implies is that the relationship between the two lies in the fact that, "Indigenous Knowledge Systems are critical to the renaissance imperative of reconfiguring knowledge, economy and politics," meaning "it is a matter of starting from the known, to chart the way forward to an envisaged future" (Ohiorhenuan 2001: 40). More precisely, Indigenous Knowledge Systems can also be explained as the complex set of knowledge and technologies existing and developed around specific conditions of populations and communities indigenous to a specific geographic area.

Connected to the need for the re-centering of IKS in Africa's developmental endeavours, one of the objectives of the African Renaissance concept as a new vision for Pan-Africanism in the 21st century, is to highlight the fact that, faced with the challenges of globalization and the dawn of the 4IR, Africa needs time and space to reconstruct the nearly destroyed African village, meaning the shell within which are contained the essence of values, the morality, the philosophy, the wisdom, the culture, and the political philosophy of African civilization (Vilakazi 2001: 56-67). In some communities within the South African context there are situations of unending tension because the modern governance structures are refusing to recognise and work along the traditional systems.

The Indigenous Knowledge Systems encompass the African thought systems, beliefs and institutions, technology and medicine. Thus, linked to the African renewal call and its activities the role of IKS is to provide Africans with both the intellectual and raw material through which the task of reconstructing African societies along African ways of thought and practice can be made possible and attainable. Considering the politics of relations of the dominating and dominant cultures that are central in the global village the challenge for the African continent and its rural communities is to critically look at its indigenous knowledge

systems and see how they had transformed the past into different forms and how they could be used for addressing the ‘now’ and develop solutions for both the specific African problems and that of the world.

As observed by Emeagwali (2003: Online), considering the factors of human inventions and innovations, especially in areas such as technology and medicine, it is obvious that there are intersections between mainstream science and IKS. With the scourge of the HIV-AIDS pandemic the need to re-centre IKS into the core of mainstream science is imperative. Further, Emeagwali points out that IKS “...whether institutionalized or not, structured or unstructured, has specific implications for democratization, community empowerment and nation building.” In addition, “...it also has implications for sustainable development, capacity building and intellectual development in Africa in the 21st century” (Emeagwali 2003: Online).

Undeniably, as Vilakazi asserts the continent of Africa in its current condition needs what he refers to as an African Development Paradigm. A socio-economic strategy “which is formulated by Africans themselves, on the basis of the unique cultural foundations, traditions, and histories, of the masses of African people” (2001: 2). The African Development Paradigm will be modelled along the lines of improved indigenous economic practices such as *letsema*.

The concept of *letsema* can be explained as a traditional African concept for economic empowerment that encouraged collective work and responsibility. As seen in its expression and through its activities, *letsema* is a group of people who are collectively organised for specific tasks in the community. In traditional society such a task is carried out by men and women who work together, for an example, to plough the land, hoe, harvest, or build a house for a member of the community. In each case participants bring their own tools.

As a traditionally corporate idea and practice it emphasised group solidarity rather than individualism. In the context of the global economy with its marginalizing tendencies the main goal of the African Development paradigm is to ensure that social and economic development, in most of Africa’s villages and small towns, is to uplift individuals (not only as islands but as part of the group) and improve human relations and the quality of social life. This means the economic anthropology and indigenous economics should be built on the basis of the local economic behaviour, customs, institutions and systems.

From this it is obvious that the need for the (re)centering of IKS in Africa's developmental endeavours is crucial. What's more it is through the IKS that communities of Africa can be able to develop strategies of ensuring effective management of scarce resources, such as water, soil and energy and create those that can ensure more sustainable ecosystems. This can be successfully achieved in collaboration with systems that are created through the technologies of the 4IR and AI.

3. Conclusion

Without diminishing the significance of Europe-centered Knowledge Systems the process that is suggested in this article is the one in which space will be created to enable other existing Knowledge Systems to be redefined and reclaimed for the benefit of all humankind in the globalizing world. The point that this essay attempted to put across is that the overall socio-economic development of Africa cannot be achieved as long as the continent and its people remain divorced from its ethnicity and traditional systems.

As human kind sharing the same space there is a need to find a way of blending the traditional cultural ways of life with the modern. This means for Africa to be able to survive the trials and the tribulations of underdevelopment, globalization and the 4IR it needs to learn to reference its socio-cultural and economic development strategies on its own cultural heritage and develop confidence to interact with modern science and technology.

Reference

- Eyong, CT (2007) Indigenous Knowledge and Sustainable Development: Case Study of Central Africa. *Tribes and Tribals*, Special Volume (1): 121-139.
- Emeagwali, G. 2003. African *Indigenous Knowledge Systems (AIK): Implications for the Curriculum*. Retrieved August 27, 2005, from <http://www.africahistory.net/AIK.htm>.
- Nabudere, DW (2006) Towards an Afrology of Knowledge Production and African Regeneration, *International Journal of African Renaissance Studies, Multi, Inter- and Transdisciplinarity*, Vol. 1, Pretoria: UNISA Press.

- Ngugi wa Thiong'o (2003) *Recovering Our Memory: South Africa in the Black Imagination*, Fourth Annual Steve Biko Lecture, University of Cape Town, South Africa, 12 September.
- Ntuli, P (2004) The African Renaissance, IKS & Globalisation: The Challenge for a Truly African University, In: S Seepe (ed) *Towards an African Identity of Higher Education*, Pretoria: Vista University and Skotaville Media.
- Ohiorhenuan, JFE (2001) African Renaissance: Rejection and embrace of the Past, *Enterprise Magazine*, April, p 40.
- Okopt P' Bitek (1973) *Africa's Cultural Revolution*. Nairobi: Macmillan Books for Africa.
- Owomoyela, O (1996) *The Africa Difference: Discourse on Africanity and the Relativity of Cultures*. New York: Peter Lang.
- Zindi, F (1994/5) Redressing African/Western Cultural Imbalances, *Southern Africa, Political & Economic Monthly*, Vol. 8, Nos. ¾, dd. December/Jan.