

Globalisation, knowledge economy and the implication for indigenous knowledge

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This chapter considers the impact that globalisation and the knowledge economy have on the protection and promotion of indigenous knowledge (IK). It is asserted that globalisation and the knowledge economy have opened up the world and facilitated the flow of information and knowledge. However, the flow of knowledge has been governed by uneven economic and political power between developed and developing countries. This has a number of ramifications for IK. The dilemma faced is that whichever method is taken to protect IK, such as intellectual property rights (IPR) regimes, documenting IK, etc., it exposes IK to some misappropriation. Protecting IK through IPR is also fraught with problems. Documenting IK exposes it to the public domain, which makes it that much easier to be misused. However, not protecting IK runs the danger of having it disappear as the custodians holding it die, or as communities become swamped by the effects of globalisation. The conclusion, therefore, is that governments have to take a greater interest in protecting, promoting and using IK than they have been doing.

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Introduction

According to Mazrui (2001), there are three distinct ways in which globalisation is interpreted: as economic interdependency across vast distances; information availability and movement across vast distances; and reduction of the world into a global village. He states further that two forms of globalisation can be identified: economic and cultural globalisation.

Globalisation is also viewed as the opening up and interconnectedness of the world. This openness and interconnection have been given impetus by the need to open up economic and trade markets, as well as by developments in information and communication technology (ICT) culminating in the so-called “knowledge economy”. Many people assert that globalisation is characterised by a mismatch of political and economic power, and that it is the more powerful countries in the North that benefit from globalisation.

It has been stated in some quarters that colonialism can be viewed as the first stage of globalisation (Saul, n.d.). Mazrui (2001) agrees, stating that although the term “globalisation” is new, the actual process started centuries ago, fuelled by four major engines: empire building, economy, religion and technology. Colonialism was about empire building, finding raw materials and new markets. To do this effectively, some colonisers used religion to undermine the rich cultures of the colonised people. At the same time, many people were displaced from their cultural lands to pave the way for settlers and for development; cultural objects and artifacts were plundered and carried away from the colonised countries; and the indigenous knowledge (IK) of communities was denigrated, as it was appropriated by the colonisers to create new products and ideas.

Misappropriation of indigenous knowledge and other products and artifacts is therefore not a new thing and has been going on for many centuries. It was only in the 20th century that the issues of intellectual property of communities from which the IK originated, who were mostly in developing countries, was given any thought. These issues are still being debated and grappled with, and it is contended that globalisation and the knowledge economy necessitate the protection and promotion of IK – a move that has ethical implications.

Indigenous knowledge and its importance

Many writers have defined IK as the knowledge, ideas and practices that are peculiar to a particular community and embody the community’s identity and ways of surviving and maintaining the environment they find themselves in. Jones & Hunter (2003) maintain that there are varied meanings of IK and these emanate from the fact that IK itself is “embedded in the cultural fabric, woven with the social, economic, technical and scientific threads of a people developed and refined over time”. However, some definitions of IK are based on the fact that it is derived from communities that are indigenous to a region or place, such as the Maori of New Zealand, the Basarwa of Botswana, American Indians and the indigenous people of Canada. But, also, IK is often associated with rural-based communities that possess limited or no education and who still live as one with nature, using IK to survive the vagrancies of nature.

It is, however, the contention that IK is not only a preserve of indigenous people or rural communities, but is the knowledge that is held communally by communities that have lived in a particular area for a significant amount of time. These communities may be indigenous, rural or urban. IK therefore represents a strategy that is used by communities to deal with everyday issues of life, be it food production, health, education, the environment, and so on. Kigundu (2007a) distinguishes between indigenous knowledge and indigenous knowledge systems (IKS). He states that IK is also referred to as folklore, and IKS refers to the techniques and methods used by communities to harness the IK.

Most IK, especially in developing countries, is not documented and is transmitted orally from generation to generation. As such, it is vulnerable to gradual disappearance due to the influence of globalisation and as individuals who lived life the old way pass away. Arguments have been raised that undocumented IK is considered to be in the public domain and therefore available to all, with the possibility of being easily misappropriated. It is for these reasons that the documentation of IK has been advocated. The creation of digital libraries is seen as a way in which ownership of IK can be articulated and the databases used to check whether the IK is new, or has always existed, and therefore cannot be patented to individuals wishing to own it.

The importance of IK has been acknowledged as crucial for health and agriculture, and for commercial value in many other products. Arts and crafts emanating from IK have also attracted a great deal of attention. Products of IK are part of a multimillion trade and investment in the world. Moahi (2005), quoting Sahai, notes:

The global market for herbal products is exploding; it is estimated to touch 5 trillion by 2020. Four out of ten people in the US are using what they call alternative medicine, even when the cost is not covered by medical insurance.

The issue is that, since such information is undocumented and is thus in the public domain, it has been used to produce goods and products from which the communities who own the IK have not benefited. It is for these reasons that people have advocated documentation to guard against the disappearance and misappropriation of IK. In spite of this interest and the money that is being made from IK, communities who own it are sliding further and further into poverty.

According to Daes (1998), IK is also a very important resource for communities because it is very much tied to the socioeconomic, spiritual and cultural aspects of the owners' lives. She concludes that the protection of IK cannot be divorced from rights to land, culture and adequate livelihood for communities who own IK. At the same time, IK is also important for the world as a whole and should be shared as long as communities are consulted and acquiesce to its use – and, most importantly, benefit from such use.

Globalisation and IK as a public good

Economic globalisation is characterised by transnational and multinational corporations seeking to extend their markets and sources of raw materials and ideas. Generally, they tend to look for these in less-developed countries. Indeed, Luna (2005) notes the current great rush to the world's forests to learn about the potential of medicinal plants. This, according to Mudiwa (2002), is because biological resources are the mainstay of humankind's survival and are mostly found in developing countries. Although the contention is that biological resources are meant for the good of the entire world, the irony is that the finished products, such as drugs, are

patented and are out of reach for poor countries and communities.

Negating IK

Cultural globalisation can contribute to the erosion of people's languages and culture. This may have an effect on IK, as the tendency is to be dismissive of undocumented, unscientific knowledge. Developments in media and ICT contribute to this state of affairs. The effect has been to engender a negative attitude in most people towards all things indigenous, such as traditional practices relating to health, education, agriculture, and so on. The major argument advanced is that such practices have no scientifically proven basis. Indigenous information is regarded as inferior because it is not backed and validated by scientific methods.

Individualisation and commercialisation of IK

Globalisation has commoditised and privatised knowledge, resulting in the knowledge economy. Indigenous knowledge has not been exempt from this privatisation. Knowledge that was in the public domain, owned by communities and passed down from generation to generation, has been privatised by applying intellectual property rights (IPRs) that confer rights on individuals, thus effectively robbing whole communities.

Daes (1998) states that globalisation is a "two-edged sword": on the one hand, it has opened up the world so that there is a free flow of ideas; on the other hand, however, a few voices and global corporations have drowned out other voices. It therefore comes as no surprise that IK is said to be under threat.

IK as a knowledge system worth having

Developments in ICTs have fuelled what is now commonly referred to as the knowledge economy. The basis of this economy is that we live in a world where the major currency is information and knowledge – just as much, if not more than, capital and land. It is posited that whoever has access to information and knowledge and uses it effectively can expect to develop and generate wealth. A major argument is that developing

nations are not progressing because they do not have access to knowledge that they would use to improve production and generate wealth. However, knowledge is available for use by developing countries, but it is not attractive because it is said to be unscientific, and can only be useful if subjected to scientific methods that are mainly a Western construct that the rest of the world adheres to. The development of ICT has, however, brought IK into focus as a knowledge system worth having – hence the clamour to obtain IK and develop products and services of value.

The paradox of IPRs

The knowledge economy has had a number of influences and impacts on IK and communities who own it. Pradip & Nyamnjoh (2007) have succinctly spelt out the ways in which both globalisation and the knowledge economy have impacted IK. First, in the knowledge economy, intellectual property has been given a very high profile and represents greater economic value. Indeed, much of the intellectual property of knowledge products is not vested in those who created it, but rather in global corporations that become the content providers and therefore command the greatest profits. The efforts being made to apply IPRs, which are by nature individualistic, to knowledge that is communally owned, such as IK, has created myriad problems, especially for the communities who own the IK. Pradip & Nyamnjoh (2007) further state that some elements of IK, such as:

... music, weaves, symbols, artifacts, knowledge of natural resources, dance steps, motifs – are steadily becoming privatized and have become part of the circuits of knowledge production, distribution and consumption.

The effect has been commercialisation of these products, with the result that they become trivialised and lose their sacredness and meaning. Indeed, as stated before, communities whose baskets, etc. are commercialised do not benefit to the extent that global capital does. For example, women may weave baskets in Botswana, sell these to a middleman who conducts brisk trade in supplying some global partner, who then makes much more money than the women will ever see from products of their own knowledge and hands. Pradip & Nyamnjoh (2007) state that as the knowledge economy spreads its tentacles,

it begins to displace IK from the hands of its owners, the communities. The knowledge is then “reconfigured in response to the asking and dictates of global capital”.

Dispossessing communities of IK

Globalisation, or neocolonialism as some refer to it, has played a large role in dispossessing communities of their knowledge and identity. Many ideas and knowledge have been removed from communities through agreements for bilateral aid. Research organisations and governments in developing countries benefit from donor funding as long as they will accept foreign students and researchers to come and conduct research and, invariably, take home all the data and findings. These eventually find their way back to developing countries as products developed in the West and patented there. Clearly there is a dire need for intervention aimed at protecting IK and ensuring that the economic gains of communities and the protection of their sacred and confidential knowledge are assured.

Ethical dilemmas of not protecting IK

Given the problems of protecting IK, there are, however, some ethical dilemmas of not protecting it. Ng’etich (2005) points these out clearly:

- Many communities that own documentation are slowly disappearing and their way of life is changing. It is therefore crucial that IK be preserved through documentation.
- Although there are issues with Western technology through multinational corporations bankrolling the appropriation of IK, it is a fact that this technology is required, as many communities do not have the means to facilitate the appropriation.
- Not documenting IK means that it is taken to be in the public domain, to be picked up and used by anyone who has the means. Documenting it means that there is a database against which patent claims can be checked.
- Knowledge and information have been shown to be the means to development and economic benefits, protecting and securing IK for appropriation by the communities themselves, through what Ruiz (2005) refers to as contracts and know-how licences that regulate access to

IK and establish terms under which such IK can be used, as well as the way in which communities should benefit.

Issues of protecting and promoting IK

According to various authors, such as Chisenga (2002), developing countries (especially Africa) contribute a minimal amount of knowledge or content on the Internet. The Internet is completely dominated by the US, Europe and Asia. Such writers have insisted that these countries need to put their own indigenous information on the global network so that they not only look to foreign, Westernised information to solve their problems, but also have access to their own. The argument is that such countries do have knowledge that is indigenous to their situation and can assist them both in surviving and in generating wealth, and this information can be a means of bridging the knowledge divide that seems to exist. However, there are problems and issues to deal with.

The first concern is the failure of governments to harness IK, even as they acknowledge that sustainable development can be abetted by integrating IK. There is talk of the importance of IK and the need to protect it, but governments have not done much, with a few exceptions, such as Brazil, India, South Africa, and so forth. The vacuum created by the governments tends to be filled by other international organisations and researchers, who may do so legally or illegally. Where international organisations provide support to efforts by governments to harness and document IK, agreements are made that provide access to external forces to the IK, sometimes without consulting the communities (Pradip & Nyamnjoh, 2007).

Intellectual property rights agreements and conventions have been signed which, according to owners of IK, propose measures that run counter to the beliefs and cultures of the communities. They tend to take a non-holistic approach that does not consider the rights of IK owners to land, biodiversity and self-determination. In situ IK protection should therefore be considered (Pradip & Nyamnjoh, 2007):

Indigenous peoples have called for approaches for protection of rights over IK to be holistic, reflecting their holistic worldviews, where knowledge is

inextricably linked to traditional territories, resources and culture.

Swiderska & Argumedo (2006) reviewed eight UN agencies' activities around the protection of IK. They found a common thread of weaknesses in the work of all these agencies, which lends credence to the criticism levelled against these organisations by communities owning IK and other interested parties. These include the following issues:

- An artificial boundary is created between IK, biodiversity, and folklore and crafts.
- IK is treated in isolation from the human rights of the communities that own the IK.
- There is a need for more recognition in this regard, and it has been missing.
- Membership is typically made up of government representatives and communities are hardly represented; therefore they are excluded from making decisions that affect them.

Second, there is reliance on Western science and technology to transform IK and products into value-added products. Once this is done, communities tend to lose control of the product and do not benefit from the profits that are made – and yet the knowledge originated from them. According to Kawooya (2006), African scholars, researchers and scientists are said to be reluctant to digitise IK because the very tools of the information society make it easy for such knowledge to be misappropriated. Others have argued that documenting IK exposes it to the public, whereas some communities would prefer to keep their own IK to themselves rather than expose it. Moreover, some communities may have their own laws and regulations about what information may be disclosed and under what circumstances. This may be at variance with the establishment of national IK repositories or even IPRs. Another argument is that putting IK in the public stage may disadvantage communities that are rural and poor, who may be unable to defend their knowledge and resources against misappropriation once they are out there.

Third, it is argued that IK can be protected by *sui generis* laws, where the state legislates on behalf of the communities who own IK. Writers have expressed concern about this, stating that it is undermining indigenous peoples' right to self-determination and control of their own resources

and, in some instances, may result in the exploitation and marginalisation of such communities. Organisations such as the World Intellectual Property Organisation (WIPO) and World Trade Organisation (WTO) advocate the use of existing or novel *sui generis* measures to protect IK. WIPO's "Model Provisions for National Laws on the Protection of Expressions of Folklore against Illicit Exploitation and Other Prejudicial Actions" provides a *sui generis* model for countries to adopt (Kawooya, 2006). In spite of this, few countries have such protection, particularly in the African context.

Fourth, it has been argued that access to the Internet will enable developing countries to put their own content on the Internet. However, Daes (1998) argues that it will then be a struggle for indigenous people to keep their most sacred and private knowledge off the Internet:

At the touch of the finger, volumes of confidential material will be placed irreversibly on the global public domain – the global commons – where it can then be transformed and commercially exploited by others.

Questions do arise:

- Who will be responsible for putting IK content on the Internet?
- Will communities be able to access their own content?
- What powers will communities have to control access to, and use of, that content?

These are very real issues that must be addressed if IK is to come into its own and drive the development process.

Approaches to protect and promote IK

Given the weaknesses found in international efforts at protecting IK, there is a need for homegrown solutions that will take the holistic rights of communities into consideration and involve them in policy making, decision making and implementation. At present, governments in developing countries, particularly in Africa, have not expended their energies on the issue of protecting IK. If there are any activities, they are restricted to universities and research institutions without the participation of government in devising policies and legislations governing bioprospecting, research and trade in IK,

biodiversity and artifacts. According to Moahi (2005), governments can, and should, take more active interest in matters concerning IK. They should do this by setting the national agenda through developing national IK policies and formulating legislature that would protect and promote the use of IK for national interest.

In taking an active position regarding IK, governments should do so in consultation with the various communities that own IK. There has to be collaboration and agreement on how, for example, sacred IK is to be treated; how communities should be consulted and play an active role in the protection, promotion and use of their IK; and ensuring that IK protection is done in a holistic manner that takes all aspects of IK into consideration. In considering what should be done to protect and promote IK in Botswana, Kiggundu (2007b) suggests that the University of Botswana should take the lead and therefore educate communities on their IK rights. This would be a good approach and it is the contention here that governments should move to designate organisations to protect and promote IK while, at the same time, educating communities about the importance of IK rights.

Governments can also act by supporting and championing IK resource centres or repositories to act as clearinghouses for collecting, documenting and disseminating IK by sponsoring and encouraging research into IK in the same way that governments in Brazil, India and South Africa are doing. They can involve communities in IK documentation exercises to ensure that holistic documentation is maintained.

Another form of promoting and protecting IK is to document IK in databases and on websites to establish prior existence and deter fraudulent claims of intellectual property. This should be done in consultation with communities where the responsibility of putting IK in a database is clearly articulated, access issues are taken into consideration and measures are put in place to ensure proper use of the IK. According to Kiggundu (2007b), once IK is documented in digital form, it becomes easier to market it for the benefit of communities and to prevent what he terms "unauthorized and surreptitious exploitation". This has been done in countries such as Brazil and India.

Governments should also, in consultation and

collaboration with communities, put in place *sui generis* legislation to govern the flow and use of IK in a bid to protect it from misappropriation on the grounds that it cannot be patented because it does not have novelty value. This can be done by adding legislation within the existing laws that govern IPRs. Kiggundu (2007b) gives an example of how this may be done, especially with regard to IK in areas of food, drink and medicine. He states that such knowledge can be protected by geographic indications where patenting may not be possible.

Conclusion

This chapter has shown how globalisation and the knowledge economy have affected indigenous knowledge. Globalisation and the knowledge economy have exposed the potential and actual value IK has yielded to the world's most powerful multinational corporations. At the same time too, globalisation has negated IK by viewing it as untried and untested unless processed by Western technology. IK has also been individualised and commercialised to the point where symbols that are held sacred by communities are trivialised as slogans and logos, which are used and patented.

From the above, it is very clear that efforts must be expended to protect IK, if only to mitigate these issues. This chapter has considered a number of ways that have been used to protect IK, such as enacting *sui generis* laws, documenting IK, seeking contract licensing, and so on. However, in order for this to work, governments will have to take a more proactive stance and be at the forefront instead of the background.

Despite the above, there are many initiatives in the developing world that are aimed at providing the much needed intervention to protect and promote IK in the face of globalisation. South Africa, for example, has an IKS policy that was adopted in 2004 and supports research into IKS. Nigerians were recently urged by President Obasanjo to set up a training and research institute in the field of traditional medicine. South Asian countries are poised to create a digital library of the region's traditional knowledge and develop laws against misappropriation. India has its own traditional knowledge digital library, which has been used as a benchmark by other countries.

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