



Centre for Education Policy Development

**CULTURE, INDIGENOUS KNOWLEDGE  
AND DEVELOPMENT:**

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**The Role of the University**

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In South Africa, Dr Odora Hoppers was the Deputy Director, and later, a member of the Board of Trustees of the Centre for Education Policy Development (CEPD) in Johannesburg, Chief Research Specialist at the Human Sciences Research Council (HSRC) in Pretoria, where she was Co-ordinator of the Project on Indigenous Knowledge and the Integration of Knowledge Systems. In the area of gender, she has been a continental expert under the auspices of the Organisation of African Unity (OAU) and provided support to African Ministers of Education and Gender. She has been a senior consultant to the World Bank under the Tanzania Human Resources Development Strategy, and is a member of the Technical Advisory Committee of the Forum for African Women Educationists (FAWE).

In the area of indigenous knowledge systems, Dr Odora Hoppers has been an advisor and resource person to the National Steering Committee under the auspices of the Parliamentary Portfolio Committee on Arts, Culture, Science and Technology (Parliament of South Africa), and led the Task Team on Indigenous Knowledge Systems set up by the Minister of Arts, Culture, Science and Technology. She is an expert for the World Intellectual Property Organization (WIPO) in the area of traditional knowledge and community intellectual property rights, and has been a resource person to the World Economic Forum and to several ministries and organisations in South Africa on issues around technology ethics and innovations, indigenous knowledge and community rights in the context of education transformation, the link

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Dr Odora Hoppers was Associate Professor at the University of Pretoria in South Africa, and is presently Visiting Professor at the Institute of International Education, Stockholm University, from where she is the Co-ordinator of the South Africa-Sweden Systems research collaboration.

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#### **AUTHOR'S NOTE**

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## 1. Culture

Culture is best understood as the totality of socially transmitted behaviour patterns, arts, beliefs, institutions and all other products of human work and thought. This reflects a major evolution from the Latin usage, which defined the concept *cultura* as ‘tending’ or ‘cultivating’, and its latter meaning of ‘training, development and refinement of mind, taste and manners’. After Clifford Geertz (1973) and Clyde Kluckhohn (1949), culture is that spectrum encompassing the total way of life of a people, the social legacy the individual acquires from his group, a way of thinking, feeling, and believing, a storehouse of pooled learning, a mechanism for the normative regulation of behaviour, and a set of techniques for adjusting both to the external environment and to other people. It is a precipitate of history, a behavioural map, sieve or matrix. Put simply, it is the everyday: the food you cook, the music you learn, the religion, the festival and the ritual (Visvanathan, 2001a).

Culture is public because, as a system of meaning, it is the collective property of a group. When we say we do not understand the actions of people from a culture other than our own, we are acknowledging our ‘lack of familiarity with the imaginative universe within which their acts are signs’ (Kluckhohn, 1949:12-13). A system of meaning is a set of relationships between one group of variables (like words, behaviours, physical symbols) and the meanings which are attached to them. When a society agrees upon certain relationships between a certain class of variables and their meanings, a system of meaning is established. Language is perhaps the most formal of human meaning systems.

As a precipitate, culture is best understood as in the phrase ‘a precipitate of history’. The word is being used to make an analogy between the chemical process by which a solid substance is recovered from a liquid solution (during which it falls to the bottom of the test tube) and the process by which culture (analogous to the solid) is formed within and from the material of history (the liquid). The noun ‘precipitation’ is most commonly used to refer to rain or snowfall; the verb ‘to precipitate’ means to cause something to occur (Geertz,



1973, citing Kluckhohn, 1949). Unlike qualities of human life that are transmitted genetically, culture is learned. Thus culture can be seen as that body of learned behaviours common to a given human society. It is the template shaping values, behaviour and consciousness within a human society from generation to generation. 'Cultural rights' means the right to preserve and enjoy one's cultural identity and development.

## **2. Indigenous Knowledge Systems**

### **2.1 Definition**

Within this template, the notion of indigenous knowledge systems (IKS) has been defined as the sum total of the knowledge and skills which people in a particular geographic area possess, and which enables them to get the most out of their natural environment (Grenier, 1998). Most of this knowledge and these skills have been passed down from earlier generations, but individual men and women in each new generation adapt and add to this in a constant adjustment to changing circumstances and environmental conditions. They in turn pass on the body of knowledge to the next generation, in an effort to provide survival strategies.

Introducing history and a time dimension to the definition, indigenous knowledge is described as:

that knowledge that is held and used by a people who identify themselves as indigenous of a place based on a combination of cultural distinctiveness and prior territorial occupancy relative to a more recently arrived population with its own distinct and subsequently dominant culture (ILO, 1989: Article 1).

Traditional knowledge is thus the totality of all knowledges and practices, whether explicit or implicit, used in the management of socio-economic, spiritual and ecological facets of life. In that sense, many aspects of it can be contrasted with 'cosmopolitan knowledge' that is culturally anchored in Western cosmology, scientific discoveries, economic preferences and philosophies.

## 2.2 Categories

Categories of these traditional knowledges include agricultural, meteorological, ecological, governance, social welfare, peace building and conflict resolution, medicinal and pharmaceutical, legal and jurisprudential, music, architecture, sculpture, textile manufacture, metallurgy and food technology. There is a cultural context surrounding the practice of these knowledges, including songs, rituals, dances and fashion; it also includes technologies that range from garment weaving and design, medicinal knowledge (pharmacology, obstetrics), food preservation and conservation, and agricultural practices - including animal husbandry, farming and irrigation - to fisheries, metallurgy and astronomy. A large component of these technologies was specifically designated, owned, managed and controlled by women.

The concept of indigenous knowledge systems also delineates a cognitive structure in which theories and perceptions of nature and culture are conceptualised. Thus it includes definitions, classifications and concepts of the physical, natural, social, economic and ideational environments. People own, manage and manipulate the knowledges according to their level of expertise in the particular domain. Thus not all women are obstetricians or pharmacologists. Neither are all men metallurgists.

## 2.3 Relationship to others

The relationship between people, the knowledge and the technologies for its application are under-girded by a cosmology, a world view. In the African context, the relationship with and to nature, human agency and human solidarity, for instance, underpins the knowledge system and the human existence around it. Relationships between people hold pride of place, expressed in the various philosophies across Africa, and best captured by the African concept of *Ubuntu* - a *human-trophic philosophy, a turned toward-ness* (Malan, 1997:91).

A person is said to have *Ubuntu* if they are caring, generous, hospitable and compassionate. It means that my humanity is caught up with and

inextricably bound with yours - in other words, we belong in a bundle of life. A person is a person through other people. It is not 'I think therefore I am', but rather 'I am human because I belong'. Harmony, friendliness and community are the greatest good. Anger, resentment, lust for revenge, even success through aggressive competition subvert, undermine and corrode this good. *Ubuntu* means that, in a real sense, even the supporters of apartheid were victims of the vicious system which they implemented and which they supported so enthusiastically (Tutu, 1999:34). *Ubuntu* is an organising principle of African morality, a unifying vision, a spiritual foundation and a social ethic. It defines the baseline for a morality of compassion, communalism and concern for the interests of the collective (Pityana, 1999:137-48).

## **2.4 Relationship to nature**

In the context of such a philosophy, IKS practice does not seek to conquer or debilitate nature as a first impulse. This can be contrasted, for instance, with the counselling of Francis Bacon and the mechanistic conception of reality, which urged a 'passionately vicious' approach to nature. 'Nature' had to be 'hounded in her wanderings, bound in service, and made a slave. She [note the pronoun] was to be put in constraint. [The work of the scientist was to]... torture nature's secrets from her' (Capra, 1988:226).

IKS stresses instead the essential interrelatedness and interdependence of all phenomena - biological, physical, psychological, social and cultural. Indigenous cosmology centres on the co-evolution of the spiritual, natural and human worlds. Thus many indigenous peoples in Africa still practise the ritual of burying their umbilical cords and immediately planting trees on the spot in order to establish a relationship with plant life. Family histories make reference to some animal totem to be conserved.

IKS holds that there are sacred places that have to be avoided and must be conserved. There are places where people are not permitted to fell trees, hunt wildlife or collect wild fruit for commercial purposes. Natural phenomena like rivers and mountains play a significant role in

the psyche and constitution of communities. Experiences from indigenous communities in other parts of the world emphasise the fact that knowledge is relationship, and relationship brings with it responsibilities and obligations and extends into ecological practice (Peat, undated and 1987).

## **2.5 Law and jurisprudence**

What is referred to as ‘Law’ and taught in all countries that were colonised is either rooted in English Common Law or Roman Dutch Law or both. The jurisprudence which underpins these legal systems is based on the idea of retributive justice, in which an impersonal state hands down punishment with little consideration for either victims or perpetrators (Tutu, 1999:51). Disorder is approached in terms of adversarial trial, proof, guilt and punishment (Peat, undated).

Jurisprudence in traditional law, on the other hand, is anchored in the idea of restorative justice. Here, the central concern is not retribution or punishment, but the healing of breaches, the redressing of imbalances, and the restoration of broken relationships. This kind of justice seeks to heal both the victim and the perpetrator, who can be given the opportunity to reintegrate with the community he or she has injured. The processes are focused not so much on the establishment of the factuality of what has occurred but rather on seeking a way of restoring balance. Thus the perpetrator may be asked to suggest some action that would satisfy all parties (Tutu, 1999:51).

## **2.6 The context of IKS practice**

The context in which traditional knowledge is generated and preserved is extremely important to its meaning, and reflects the internal cultural cognitive categories of the particular community. Thus, although they are simultaneously creations that may exist purely to satisfy the aesthetic will of the artisan, or to cure a patient of a disease, or to respond to challenges of survival, many such creations are symbolic of a deeper order or belief system.

When a traditional singer performs a song, the cadence, melody and form all follow rules and protocols maintained for generations. Thus a song's performance entertains and educates the audience, but also unites the current population with the past. Practical knowledge, social history, art, and spiritual or religious practices provide a valuable foundation for developing an understanding of the people who hold this knowledge. Intertwined within practical solutions, traditional knowledge often transmits the history, beliefs, aesthetics, ethics and traditions of a particular people. Thus plants used for medicinal purposes also often have symbolic value for the community. Many sculptures, paintings and crafts are created according to strict rituals and traditions because of their profound symbolic and/or religious meaning.

## **2.7 Language**

Language plays a crucial function in that it contains the map of the land, the relationships to the energies and spirits of all living things - rocks, trees, plants, birds, fish and animals. The flux in which they live is perfectly expressed in what could be termed their 'process language'. European languages have a heavy reliance upon nouns, and lend themselves to a type of thinking that deals in categories and Aristotelian logic. The Western physical reality is that of objects in interaction with one another - nouns linked by verbs (Peat, undated).

In IKS communities, language contains movement, process and transformation. Nouns as objects emerge in a secondary way though the modification of verbs. Take, as an example, healing. To the Western mind, this is a transitive business in which the doctor (noun) acts upon the patient (another noun) to bring about some change of state. For IKS communities, healing is a process. This process itself is the primary reality. Healing often involves singing, and the process of the singing is the focus of the linguistic act. Rather than singing being performed by someone, where the pure act of singing is taking place, in IKS communities it is out of this singing that healing unfolds to reveal the previously sick person. To non-Western societies, the English language is clearly a

straightjacket which forces minds into a world of objects, categories and restrictive logic (Peat, undated).

## 2.8 Healing

The holistic health models in IKS do not focus just on bacteriological infections. The physical symptoms are examined from a social, historical and spiritual perspective, and the notion of ‘intangible dimensions of wellness’ is brought to the centre in order to determine whether *dis-ease* in these realms has manifested itself as *disease* in the physical realm. The search is for the trigger that has created the *dis-ease* in order that a process of true healing can be established (Glavish, 2002).

Plants have a power to heal in a way that goes deeper than the chemical substances or molecules contained within them. This power includes energy and spirit - that is, its ‘archetype’ - in the same way that the sacred sculptures of India are both objects (clay, stone) as well as windows into the world of the sacred. One comes into a relationship with the luminous through the catalytic action of the icon in the same way that the plant and its associated chemicals open into a larger world of energies and healing powers (Peat, 1994). Scientists on the cutting edge of Western science know this. They know that at the quantum level, a molecule is a pattern of energies which extends into the ground state of the cosmos, and which provokes a range of transformations of the body's biochemical activities (Peat, undated).

## 2.9 Standards of transmission

Different indigenous knowledge systems can be described as ‘disciplines’ which embody ethical standards, standards of responsibility, standards for transmission, and a system of rules and practices. They include different practices of earning and sacrificing to gain knowledge. To become a knowledgeable person, you have to work for it. You have to do different kinds of work to gain authorisation. In

other words, indigenous knowledge is discipline-based but within a holistic, interdisciplinary frame of reference, with its own protocol of how the knowledge can be learned. Its promotion is at once a restoration of dignity to communities, and part of a development strategy for enterprises and capacity building inside communities.

## **2.10 Social and spiritual capital forced underground while cultural racism flourishes**

Today, indigenous knowledge is marginalised, even denigrated, but it lives and sustains millions of people economically, socially and spiritually as a living framework for continuing creativity and innovation in most fields of technology. It is a source of wealth, both as an economic asset and as cultural patrimony.

Thus when the combination of colonialism, capitalism and science actively promotes individualism, and when those norms are forced upon billions of people, or when they directly or indirectly promote the further subjugation of diverse knowledges, the response has been to impel IKS underground or at least outside the gaze of the marginalising culture. Once underground, only the most resilient of its aspects survive the persistent and systematic misinterpretation and misrepresentation in the mainstream marginalising culture.

Over time, this systematic subjugation has given rise to cultural racism as a structural phenomenon in formal systems, while promoting a denial of identity, epistemological disenfranchisement, and the strategic disempowerment of African people and communities. IKS has been forced to situate in an invisible informal regime, denied space, resources and the recognition it ought to have. Cultural heritages and artefacts that were meant to be used in the daily lives of people were expropriated, and put into formaldehyde solutions in museums, galleries, archives and private collections in Western cities. These knowledges therefore:

- need to be protected, developed, promoted or integrated in order that present and future generations can benefit from them. It is

not desirable to develop a system that only documents and preserves this knowledge created in the past and which may be on the brink of disappearance.

- demand a people-centred vision of development that favours human well-being and environmental sustainability over a simplistic economic-output benchmark, and self-reliance over dependence.
- need to be revisited within the framework of a human rights approach to development, which pays attention to the root causes of poverty, 'injects' economic and social rights into discussions on poverty, and recognises the dehumanisation that has been inherent in development models thus far.

Scientists must be brought close to the centre of this vital debate, to identify the entry points for science in responding to issues such

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Here, it can be recalled that some glimmer of an expanded interpretation of ‘society’ can be traced to Brown (1992, in Guston & Keniston, 1994:6-7), whose idea of a revised social contract implored the scientific community to seek to establish a new contract with policy makers that was based not on demands for autonomy but on the implementation of an explicit research agenda rooted in social goals. In other words, under the revised social contract, there is a clear expectation that, in return for public funds, scientists and universities must address the needs of ‘users’ in the economy and in society (Martin & Etzkowitz, 2000).

For the most part, however, it is globalisation that has greatly influenced institutions of tertiary education all over the world, bringing with it transnational imperatives and problems such as synchronicity of systems across borders. Universities have been kept very busy indeed dealing with this phenomenon. New yardsticks for measuring performance have to be designed and implemented without delay. Incongruence between the increase in student numbers and the decline in unit resources allocated to each student remains a headache, while the intensive use of technology to reach even larger groups imposes fresh challenges.

Globalisation and its economic underpinning seem to have come to stay. In this new framework, the role of universities in meeting societal needs is translated narrowly into meeting the needs of industry and the private sector. Research is closely linked to the economic value it promises from its vantage point as the source of new knowledge in the new knowledge economy.

What should this new ‘social contract’ consist of in Africa? Are universities becoming more closely linked to societal needs? Where do universities in Africa stand on this question of the link with society?

### **3.2 The short-sighted vision of higher education in Africa**

Taking but a brief peep at history, the shortfall emerges right from the first conceptualisation of the African university. In those early days, universities were conceived of as institutions for producing manpower to indigenise the civil service following independence.

To say today that this framework involved a complete misunderstanding of the tasks that lay ahead is an understatement (Mkandawire, 2000:1).

Clearly there was a gross underestimation of the intellectual and political processes of development and nation building that followed independence, and the short-sightedness of it all became evident very quickly. Once indigenisation was achieved, governments had little reason to continue to support universities, especially after indigenisation was compounded by the dubious claims of the World Bank that higher education in Africa had lower returns than secondary and primary levels of education - signalling to all donors to diminish their support for university education.

Soon thereafter, the repressive politics that became the norm across the continent in the 1970s entrenched the relativisation of Academe, and simply left no room for intellectuals to occupy public space, sending scores of Africa's best brains into exile, self-effacement and invisibility, self-imposed marginalisation, fawning adulation of power, jail or death (Mkandawire, 2000:1). In better times, African intellectuals had been instinctively organic - that is to say, they submitted their intellectual values to the nationalist project. This project had five tenets:

- complete decolonisation of the continent and national sovereignty;
- nation building;
- economic and social development;
- democratisation; and
- regional co-operation (Mkandawire, 2000:1).

African intellectuals shared these objectives and were willing to submit themselves to the command of the nationalist and developmental state, which they viewed as the custodian of the development process. The university was seen as the institution that had to train human resources for that development. This consensus generated mutual tolerance and amicable co-operation (Mkandawire, 2000).

By the 1970s, however, things had begun to sour, and by the arrival of structural adjustment, African governments had turned elsewhere. They began to mumble that local research was 'irrelevant', by which they meant that it was not usable in policy matters. Supported by donors, they were on one side of the road insisting (in a populist manner) on relevance - which was by then reduced to the provision of manpower resources for development - while the academics lined up on the other side of the road waving 'quality' placards at the government (Mkandawire, 2000:1).

In order to be relevant, universities were expected to gravitate towards the attainment of concrete and demonstrable goals, with an emphasis on applied research. Not surprisingly, the response to this pressure was structural conservatism as universities whined about how such a move would detract from their classical objectives of teaching and research (Sawyerr, 2002), even though no serious questions were being asked about the nature of research questions. Universities were defending a status quo - which was itself in disrepute - stressing the maintenance of a stale stability, and vowing it would continue to do the same thing, in the same direction, and at the same pace (Sawyerr, 2002).

Under enormous pressure to account for themselves (Mafeje, 1993), many African intellectuals soul-searched about their role as intellectuals, and the relevance of the institutions that they inhabited or ran. It is from this soul-searching that one picks up critical cultural analysis of the African university. Mazrui (in Mkandawire, 2000) for one had long argued that the African university was conceived of as a transmission belt for Western high culture rather than as an institution to contextualise standards and set parameters of excellence based on the needs of African society and people. It is this latter conception that enabled the grounding of the very process and agenda for learning and research in local conditions.

### **3.3 The general absence of cognisance and moral sensitivity to local conditions**

As it turned out, whether consensus had persisted between the African intellectual and the government, or whether the wrangle over relevance and quality had never occurred, or indeed whether the pendulum between basic and applied research had stood still, the question to haunt Africa (which was never asked, and thus not addressed) was whether basic research really addressed the key issues afflicting African people and African society. Closely following on this is the related question as to when the research institutions, as they went on borrowing concepts, toolkits and instruments, were sufficiently morally cognizant of Africa's local conditions to problematise it without falling into the deficit notions prevalent at the time.

The argument in this paper, therefore, is that the failure to develop an organic intellectual infrastructure to adapt, translate and retool borrowed knowledge cannot be attributed only to the government posture in postcolonial Africa or to a lack of resources. Rather, it is a consequence of the failure to perceive the full depth, scope and what Visvanathan (2001c) has referred to as the 'tight architectonic' woven together by the confluence of the ideologies of science, development and modernity and which had, over time, created a

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reference, the mounting criticism of the architectonic has not been given substantive content to enable African universities to seize the trigger and kick-start a transformative sequence in the institutional or policy arenas. This means that in both knowledge production and high-level human resource production, the university in Africa was not cognizant of any need for rethinking the basic software and hardware of its system.

In order for substance and content to be added to the political economy analyses which dominated post-colonial scholarly work, it was important that renewed scrutiny should be accorded to the labyrinth of myths, metaphors, methods, models and techniques that science and modernity have created - the lattice-turned-paradigm which determines what is relevant and irrelevant, what one can see and not see, what one can say and not say, or dare not be heard to say. This paradigm that is cruel, blind and has no place for defeated knowledges or alternative theories of knowledge needs to be exposed for what it has done, and continues to contribute to the violation of human rights.

To illustrate, recognition that Africa is cast as an epistemological vacuum precisely because of the history of colonialism, coupled with the way the present paradigms of development and of knowledge are constructed, could compel rethinking, and demand the cultivation and assertion of reverse but empowering discourses in many domains. For example:

- Following Gupta (1999), the continent can be affirmed as knowledge rich, but economically poor.
- In biodiversity, it can be factually noted that while the North may be awash with the information explosion, they have less and less biological and genetic information (Jackson, 1987, in Visvanathan, 2001c:5).
- Becoming cognisant of the fact that species extinction at a rate of one thousand species a year, coupled with the genetic truncation of major crops and the loss of cultural information due to the depopulation of rural areas - all in the name of development - threatens humanity's survival in this century and in our very lifetime may, of itself, heighten our moral sensibilities and push us towards more ethical debates around responsibility and commitment to more ecologically coded behaviour.
- Acknowledging that African models of farming and systems of healing might embody different notions of community and science, and that within such a framework African agriculture and systems of healing might be alternative paradigms, elusive and elliptical to current modes of science (Visvanathan, 2001c) - turning around Africa from a 'void', a 'black box', to an alternative list of possibilities and epistemologies - would take us some way on the path to a genuine African renaissance.

Such regeneration efforts in higher education, and in universities in particular, of course require concerted and courageous intellectual work. But more importantly, it would enable us to decipher that it is precisely the holders of this indigenous knowledge, this 'informal'-community of expertise located in rural areas of Africa, Asia and

other parts of the world, that the official application of science and development has destroyed.

It is here that revisiting the concepts of culture and of indigenous knowledge provides poignant content to the idea of a developmental university. Tertiary institutions in Africa are challenged to make their positions known on the integration of knowledge systems, social and intellectual capital of local communities, the critical evaluation of indigenous knowledge, the reciprocal valorisation (Hountondji, 1997) of knowledge systems, and cognitive justice (Visvanathan, 1997) as Africa seeks to find its voice, heal itself and reassess its true contributions to global cultural and knowledge heritage.

The idea of the developmental university emerging from this process would, in the first place, contemplate development in human terms as re-humanisation within the framework of restorative justice.

## **4. Remembering the Unwritten Narratives**

### **4.1 Seeking new theories of freedom**

Fed on the Marxist, functionalist or semiotic staples of class, order, mobility and pollution, scholarship has become distant, antiseptic and removed from the experiences of the lived world and thus from recognising the pain, anger and anguish being experienced in the society beyond the world of 'workers' (Visvanathan, 2001b). The only time Academe seems to turn violent is when someone disturbs its consensus. This means that questions of anger and humiliation, the anguish of poverty, marginalisation and indignity have to be reintroduced into moral and ethical reasoning to bring out a sociology in which emotions create a cognitive world, a sociology born out of anger (Visvanathan, 2001b), but which simultaneously seeks to work to transcend this (Fatnowna & Pickett, 2002).

An atrocity, Visvanathan (2002b) has argued, cannot be understood in the usual opposition of academic sociology between functional and

conflict theory. To understand an atrocity we should not merely study the sociology of conflict, but attempt to understand evil and a phenomenology of humiliation which standard sociology has so far not captured. An atrocity as a victim's narrative often falls afoul of the expert because the victim's testimony is often in discordance with the expert's assessment. Calibrating an atrocity with standard sociological tools, Visvanathan argues, often leads to surreal results. In other words, an atrocity cannot be domesticated as a mere human rights violation. It has to be a theory of freedom where literature and political theory combine in a new way. The integration of knowledge systems and the development of bicultural expertise is not only a human rights issue, but something which demands a theory of freedom - something more infinite, multi-vocal and inexhaustible. This is because freedom comes prior to rights, and goes beyond equality as a measure. Each new act of freedom is a new beginning (Visvanathan, 2001b).

Therefore, when textbooks and formal institutions designated to produce and legitimise knowledge become cognitive regimes that acknowledge only the victor, and defeated knowledges are erased or condemned as unscientific, then we witness a system of complicity in withholding freedom from those who need it the most - those on the receiving end of knowledge apartheid.

How is this theory of freedom justifiable in the context of development priorities and the role of higher education? In order to answer this question, it is important to revisit the less-spoken-about dimensions of the landscape left behind by colonisation.

## **4.2 Questioning the forced metamorphosis**

To begin with, although in African history the colonial experience represents but a brief moment from the perspective of today, this moment remains charged and controversial in that it signified a new historical form and the possibility of radically new discourses on Africa, its traditions and its cultures (Mudimbe, 1988). One of these discourses that has left a distinctive trail centres around the Hobbesian picture of pre-European Africa in which there was no account of time, no Arts, no



Letters, no Society, and in which there was the continued fear and danger of death. Another is the Rousseauian picture of an African golden age of perfect liberty, equality and fraternity (Hodgin, 1957:174-5).

Much has been written on the colonial project and its impact. An area that has been much foregrounded in political-economy analyses has been the nature of imperialism within which colonialism and the subsequent scramble for Africa evolved into a process that brought the continent into the present world economic order. Less analysed are the cultural and methodological processes that underpinned colonisation, and an assessment of the depth and impact of those methods. What comes to mind in particular is the rearrangement of Africa into European constructs.

To get a picture of this, one has to recall that representative colonial organisation consisted of procedures for acquiring, distributing and exploiting land, policies for domesticating 'natives', and policies and strategies for subverting and suppressing ancient forms, cosmologies and modes of production. The complementary hypotheses and action to emerge from this were the domination of physical space, the reformation of the native's mind, and the integration of local economic histories into the Western perspective (Christopher, 1984:27-8). It is this forced metamorphosis that has been at the heart of most development efforts whenever programmes for 'regenerating' the African space and its inhabitants are proposed. Aime Cesaire (1972:23, in Mudimbe, 1988:2) has long observed that the great historical tragedy of Africa has not been so much that it was too late in making contact with the rest of the world, as the manner in which that contact was brought about.

Regarding the manner in which that contact was brought about, Bergesen (1994) has urged scholars both within education and among political scientists and sociologists to revisit the conceptual foundations of international relations and the world system, and to correct the inversion of history that underpins those analyses. He has argued that the political scientist's emphasis on regime formation and treaties (Bergesen, 1994), and the sociologist's oblivious preoccupation with within-country societal development (Magubane, private communication, 2000; Mabubane, 2001) (especially the

fixation with the impact of 'the natives coming to town') consistently narrows analysis and contributes to an obscuring of the historical process as it actually occurred.

Most such within-disciplines analyses sidestep the fundamental element of force and power, and the dehumanisation and denigration of societies that accompanied this. Indeed, as Fieldhouse (1981:103) says, only a dogmatist would attempt to state categorically that colonialism was the best possible medium for stimulating growth in those societies. In fact, it can be said that colonialism was responsible for producing marginal societies, marginal cultures and marginal human beings, with the cumulative effect being dislocation and loss of cultural reference points - in short, an imposed deculturation (Mudimbe, 1988).

However, because of the dichotomising system and linearity intrinsic to the colonising system, marginalisation arose directly from the attempt to tight-fit African society into one or the other of the paradigmatic oppositions - traditional versus modern, oral versus written and printed, agrarian and customary communities versus urban and industrialised civilisation, subsistence economies versus highly productive economies, literate versus illiterate. In Africa in particular, one is struck by just how much is promised about the evolution implied in the passage from one paradigm into the other. What is cast aside as 'collateral damage' is what happens in the diffused intermediate space in which social and economic events define the extent of the marginality, the diffused intermediate space in which to be illiterate of the Western alphabet is to become an absolute ignorant (Hountondji, 1997).

In other words, from the moment of colonisation onwards the forms, formulations and aims of the colonial structure become the means of trivialising the entire mode of life and the spiritual framework of millions of people. The transformation also means that the mere presence of this new culture is a reason for the rejection of unadapted persons and perhaps confused minds.

What is coming back to haunt us now in the twenty-first century is the fact that it is despair that continues to give this intermediate space its

precarious pertinence and, simultaneously, its dangerous importance as the major signifier of underdevelopment. It reveals the strong tension between a modernity that is often an illusion of development and a tradition that sometimes reflects a poor image of a mythical past. It also unveils the empirical evidence of this tension by showing concrete examples of developmental failure such as demographic imbalance, excessively high birth rates, progressive disintegration of family structures, severe economic disparities, dictatorial regimes operating under the cathartic name of democracy, the breakdown of religious traditions, and so on (Mudimbe, 1988:5).

Troubled by such confusion, social scientists prefer to plead for a reassessment of programmes of modernisation. Many theories will be proposed and plans made to patch up the uncomfortable detractions that the despair based in this marginality may bring into the open. Yet the real issue is that this space has been a great problem since the beginning of the colonising experience rather than being a step in an imaginary evolutionary process. This space has been the locus of the paradoxes that have called into question the very modality and implications of modernisation in Africa (Mudimbe, 1988:4-5).

Thus for disciplines such as anthropology, which used to be the study of human beings retarded, gradual and backward, the truly traumatic task in changed times is that of recording how the savage becomes an active participant in modern civilisation (Mudimbe, 1988:20).

### **4.3 Exposing the *Terra Nullius* rationale**

The story begins with the manner in which the system of charters and patents turned acts of piracy into divine will, and how the canonical jurisprudence of the time made the Christian monarchs of Europe rulers of all nations 'whenever they may be found, and whatever creed they might embrace'. These charters and patents, anchored in the principle of 'effective occupation', the 'vacancy' of lands occupied by Christian princes, and the 'duty' to incorporate the 'savages', laid the moral and juridical foundations for the colonisation and ruthless extermination of non-European peoples (Shiva, 1997).

The Native American population declined from 72 million in 1492 to less than four million a century later (Shiva, 1997:2). In a well-documented, legalised theft, records show how through progressive legislation, the land owned by the Maori of New Zealand shrank from 66 million acres in 1840 to eleven million 50 years later and to four million in the following 50 years (Glavish, 2002:8).

Over time, it became clear that the colonisers' freedom was built on the slavery and subjugation of the people with original rights to the land. The violent take-over was justified morally on the grounds that the original residents were not really human; they were part of the fauna of newly discovered lands. Aborigines were equated with their half-wild dogs, for example. Being animals, the original Australians and Native Americans, the indigenous Africans and the tribal peoples of Asia possessed no rights as human beings. This approach - the assumption of empty lands, *terra nullius* - justified denying them their humanity and freedom. Conquered territories were treated as unpopulated in the patents of the fifteenth and sixteenth centuries, and people were naturalised into 'our subjects'; as subjects, the billions of the world's population were deemed not to have any will or teleology.

At the heart of Columbus's discovery was the treatment of piracy as a natural right of the coloniser, necessary for the deliverance of the colonised in much the same way that at the heart of the General Agreement on Tariffs and Trade (GATT) and its patent laws is the treatment of biopiracy as a natural right of Western corporations, necessary for the 'development' of Third World communities.

The decimation of indigenous peoples everywhere followed closely the defining of Christianity as the only religion, and all other beliefs and cosmologies as the paradigmatic 'Other' - primitive and 'atheist' as opposed to 'theist'. This quickly found its parallel in defining commercialised Western science as the only science, and all other knowledge systems as primitive. Five hundred years ago, being a non-Christian culture with a distinctive world view and diverse knowledge systems was enough to lose all claims and rights.

Denying other cultures their rights on the basis of their difference from European culture, then a convenient means for taking away their wealth, continues to dog the development enterprise to this day. The past five decades of development have been characterised by the question of how and by which most cost-effective means non-Western societies - perceived as they are to have this enormous incompleteness and defective characters - should be turned into the forms of civilisation familiar to the people of the West.

#### **4.4 From erasure to exploitation without recompense**

One of the consequences of colonialism for indigenous knowledge systems was the fundamental cognitive triage and erasure that was imposed on the rich knowledge heritages of non-Western people. By declaring non-Western lands to be 'empty' (that is, devoid of people or ideas), and the diverse sciences and innovations that steered and maintained those societies as 'non-science', the cultural and intellectual contributions of non-Western knowledge systems were systematically erased. They were not taught in schools, and they were not allowed into the public domain of policy or academic life. Academe was then reserved exclusively for the knowledges, heritages, cultures, institutions, norms and idiosyncrasies of Western society. Their development trajectory was thus compromised and severely truncated.

Today, bioprospecting still renders invisible the fact of prior use, prior knowledge and prior rights associated with biodiversity. As the original economic and ecological systems disappear, the Western prospector is projected as the only source for medical or agricultural uses of biodiversity. The scale of this problem calls for a radical rethinking of the way such business is done. To illustrate the point:

- Of the 119 drugs developed from higher plants and on the world market today, it is estimated that 74% were discovered from a pool of traditional herbal medicines (Laird, 1993:145-9).

- The annual world market for medicines derived from medicinal plants discovered from indigenous peoples amounted to US\$43 billion in 1985 (Posey & Dutfield, 1996, in Mugabe, 1999:102).
- A report prepared by the Rural Advancement Fund International (RAFI) estimated that at the beginning of the 1990s worldwide sales of pharmaceuticals amounted to more than US\$130,000 billion annually (Mugabe, 1999:102).
- Other reports state that plant-derived prescription drugs in the United States originate from forty species, of which twenty are from the tropics. These twenty species generate about US\$4 billion for the economy of the United States (Mugabe, 1999:102).

Although trade in medicinal plants from developing countries has increased, few, if any, benefits accrue to those countries and their traditional communities. Total trade in herbal remedies and botanicals in 1995 yielded over US\$56 billion, and the only payments to the communities were for the manual labour involved. According to Posey and Dutfield, less than 0.001% of profits from drugs developed from natural products and traditional knowledge accrue to traditional people. Intellectual property and economic benefit sharing linked to these endeavours therefore have to be resolved (Mugabe, 1999:103).

Apart from medicinal plants and products, indigenous people all over the world have stated that their arts, crafts, sciences, literature, medicines, music and heritage are the subject of research and eventual commercial exploitation by others, while they are denied not only financial benefits but also respect and official recognition. Contractual agreements made by corporations are concluded with local universities or scientific research institutions. Indigenous or local communities are usually not mentioned in these agreements, and there is never any guarantee, or legal or moral obligation, that they should ever be consulted (Burdekin, 1999:8).

## **5. Redesigning the Template: IKS in the Twenty-first Century**

### **5.1 Legislative and policy imperatives**

Any IKS strategy should lay out the framework for the recognition, protection, development and promotion of indigenous knowledge systems. Protection takes two forms. Defensive protection, also referred to as negative protection, generally entails protection *from* something. The second type of protection is positive protection, which is protection *to* something. The first includes protection from improper appropriation without due

Finally, an IKS strategy should strengthen regional collaboration within the continent and among developing countries on intellectual property rights in the context of the World Intellectual Property Organization (WIPO), on benefit sharing in the context of trade-related aspects of intellectual property (TRIPs) and the Convention on Biodiversity, on research and development, manufacturing and marketing of IKS products, on quality control, on professional exchange and capacity building, and on infrastructure development.

## **5.2 Recultivating trust and confidence of rural communities**

The links between IKS and education, rural development, improvement of existing skills, grassroots innovations, job creation, enhancement of the entrepreneurial spirit, primary health care and human resources development in general need to be strengthened. Here, the IKS process is seen as helping to facilitate and engender mind-set change in all public institutions with regards to IKS in particular, and knowledge and people-centred development in general.

Science and technology need to be democratised, and the trust and confidence of marginalised communities should be proactively cultivated by investing in the promotion of rural-based science and technology activities, strengthening community participation in information gathering and ownership of research processes and findings, and developing mechanisms, protocols and codes of conduct for value addition.

At the same time, poverty continues to threaten the majority of Africa's rural communities. The protection, development and promotion of indigenous knowledge systems will, therefore, help to improve the livelihoods and economic well-being of local communities by ensuring equitable and fair benefit sharing by local communities in the utilisation of the nation's resources. IKS will also necessitate the development of capacity in rural communities in,



among other things, legal and cultural education, information technology and management.

### **5.3 Promoting innovation from below**

It has been stated that the twenty-first century will be the century of knowledge, indeed, the century of mind. Innovation is the key for the production and processing of knowledge. A nation's ability to convert knowledge into wealth and social good through the process of innovation will determine its future. Issues of generation, valuation, protection and exploitation of intellectual property, therefore, will become critically important all around the world. Intellectual property will no longer be seen as a distinct or self-contained domain, but rather as an important and effective policy instrument that is relevant to a wide range of socio-economic, technological and political concerns. The development of skills and competence to manage intellectual property rights and to leverage their influence will need increasing focus, particularly among the developing countries (Mashelkar, 2002).

At the same time, an understanding of the role of intellectual property rights (IPR) in the process of innovation, and the role of innovation itself in the process of development, is crucial. Innovations go beyond the formal systems of innovation carried out in universities and industrial research and development laboratories. For proper development to occur, innovations from below have to be taken into account and accorded appropriate support at national level.

While innovations promise to be a key factor in promoting equitable and sustainable development, it is recognised that there is a gross asymmetry in the rights and responsibility of those who *produce* indigenous knowledge in local communities and those who go about *valorising* it in the formal sector (Gupta, 1999). This brings to light the issue of the ethics of extraction and responsibility. Experiences with development efforts during the decades since many countries in Africa and the rest of the Third World attained their independence show that development that is not embedded in and that does not build on what people have is bound to fail (Odora Hoppers, 2002). At the same time,

other experiences are emerging which demonstrate that research and development (R&D) activities can be undertaken directly with local communities and custodians of indigenous knowledge, provided that adequate protective protocols, terms and conditions are worked out and agreed upon.

From the perspective of biodiversity, it has become clear that a major threat to the sustainability of natural resources is the erosion of people's knowledge, and that the basic reason for this is the low value attached to it. Indigenous veterinary experts, human herbalists and pastoralists know a great deal about the habitats, life cycles and various other aspects of plants and other resources. It is important to understand that biodiversity erosion starts a chain reaction. In other words, the disappearance of one species is related to the extinction of innumerable other species with which it is interrelated through food webs (Gupta, 1999).

The crisis of biodiversity, therefore, is not just a crisis of the disappearance of the species that serve as industrial raw materials with potential for spinning millions of dollars for corporate enterprises. It is, more basically, a crisis that threatens the life-support systems and livelihoods of millions of people in developing countries. Yet, efforts to build upon knowledge systems of people who have maintained their natural resources so far are quite inadequate. The issue of value addition to innovations taking place in local communities is key to authentic development in the area of biodiversity; value addition will help local communities co-exist with biodiversity resources by reducing primary extraction and generating long-term benefits. The discussion on biodiversity can only become authentic if we probe deep enough into knowledge traditions of each part of the world to discover the roots of sustainable ethics. However, this discovery requires preparing our minds for visions that may collide with the dominant materialistic world view.

#### **5.4 Professional conduct among researchers visiting communities**

Closely connected with this is the increasing concern with the unprofessional conduct of scientists, especially the tradition of always mak-

ing local communities anonymous in scientific practice, even when these communities have divulged key information regarding certain plants or drugs. Such practices are no longer acceptable.

Language remains a problem in the continent's effort to revitalise local communities. Writing in English, for example, has been recognised as being valuable for connecting internationally, but it is acknowledged that English alienates locally. There are several goals here:

- to encourage transparency in the interaction between the 'collectors' of knowledge that visit local communities and the holders of indigenous knowledge;
- to feed back what scientists learn from and make of IKS to local communities and individual innovators, in their own language;
- to share with them what scientists learn from other contexts, thus enhancing the public understanding of scientific developments.

## **6. Redesigning the Bridge between Universities and Society in Africa**

### **6.1 Using humanism to reinforce the cosmopolitanism of universities**

Visvanathan has argued that the university is a futuristic institution that makes innovative use of the past. At the same time, however, as one of the last surviving medieval institutions - in fact the only one of its guilds to adapt and survive in modern society - the university remains a microcosm of the walled city. Today the wall may not exist, but the separation between the university and society is real. It is a source of tension, but also a source of creativity. Citing Goodman, Visvanathan (2000) argues that the creativity is found in the fact that the 'wall' - the separateness - is inevitable because the culture of scholars from different origins is inevitably foreign. Scholars do not easily abide local prejudices, and thus

cannot always be expected to 'fly the national flag'. A university thus has a cosmopolitanism that trade schools and parochial seminaries do not have. It is this foreignness, this humanism, that makes the university, that is part of its institutional methodology, and that constitutes its unspoken social contract with society. This community of scholars, according to Visvanathan, constitutes one of the longest surviving democracies in the world.

The call for social justice, therefore, should not be a ticket handed out by a machine. Rather, it should be linked to a resuscitation of the idea of the university as a hermeneutic institution that read, reread and reinvented justice through the three axes of liberty, equality and justice. It is through the university's slow but repeated encounter with culture, and with culture as politics, that the university reworks its notion of democracy, and the notion of the university as a formalised ecology of knowledges. In doing so, the two sets of tensions inherent in the genealogy of universities - that is, the dualism between the sciences and humanities on the one hand, and the dialectic between itself and the external 'Other' on the other hand - can signal a new opportunity.

In the history of things, this external Other has often been the dissenting Academy. In socio-cultural contexts, however, the Other is in fact the cultural and social community within which the university is located, and from which it derives part of its identity. It is the recognition of this epistemological tenet of the university's agenda for reconnection with the context that is significant in terms of the actual or potential transformation that may be under contemplation. Latouche takes this further.

## **6.2 The search for reciprocity and co-existence**

Latouche (1991) argues that critical scholars and practitioners should let the real impasse of non-development become a motivation for questioning the rationality of the 'development' industry<sup>2</sup> itself. Behind this search for new ways lies the imperative for us to rethink our connection of those forms of knowledge that have been subjugated, and their carriers whose development paths have been circumscribed by the gate-keeping functions of present development paradigms.

He thus posits that behind this valorisation of the informal, and the choice to see it as the heralding of social forms, is an ethical stance which is anchored in the possibility of dialogue between cultures that could also become the guarantor of an authentic co-existence of different cultures. This may imply that certain cultures renounce their barbarism in order to have the Other renounce its own. The hope is to propagate willingness to tolerate contradiction, and to act generously in situations of unresolved antagonisms (Latouche, 1991:6-7). Thus if over the past 200 years the West has taken a monopoly over the very definition of the problems of existence of all societies in the world, then the crucial challenge for those in the West wishing to afford genuine respect to those Other than themselves would be to relinquish this monopoly, and to listen more openly to the discordant messages of silenced populations.

The search for reciprocity - of a 'space of fraternal coexistence' - is itself an ethical choice that carries some real implications. It implies affirming the richness of the Other, even in their material poverty. It implies affirming that this is not a matter of quantity but quality of life, and that all helping is reciprocal, just as learning must be reciprocal. This respect for the Other implies acceptance of dissension, of loss and of death, which is translated into life for the Other.

For the dominant groups, building reciprocity may mean rethinking equity at the cultural level. In this view, equity goes beyond making concessions to marginal groups, allowing them access to goods which mainstream dominant groups enjoy, or being 'nice' to those less fortunate than ourselves. It has to be taken as a matter that works reciprocally. A truly equitable society is the one in which the mainstream groups see it as essential to have access to the linguistic and cultural resources of minority groups, and demand such access as a matter of equity. It has to be seen as equality of cultural trade, where each social group is seen as being able to make contributions of equal value to all other social groups in the larger social unit (Kress, 1996:18).

### **6.3 Building fraternity at the cognitive level**

Taking this one step deeper is the understanding that there is another kind of fraternity which needs to be built - the fraternity between

forms of knowledge. This is particularly important in this day and age when craftsmen, tribal elements, traditional experts and women are not seen as part of the citizenship of knowledge, and especially when it is still assumed that the history of knowledge begins with one's entry into the university.

The imperative to fraternity, therefore, imposes on us the obligation to develop a fraternity of ecology of knowledges. The development of such ecology must take as its starting point the acknowledgement of the fact that modern development tends to privilege scientific knowledge over other forms of knowing. Science tends to hegemonise other forms of knowledge either by museumising them into ghettos, or by treating them as occult or oriental or primitive superstition. The objective would thus be precisely to return life to these forms of knowledge and to restore their place in the livelihood of communities so that they can, without coercion, determine the nature and pace of the development they require.

From this point of view, the absence of bicultural experts at the epistemological level has made it next to impossible to break the cycle of hierarchisation of knowledge endemic in the structures of the university, the prejudice of science and the pitfalls of modernisation in general. It has made it difficult to create a systems-level dialogue, to identify and articulate systems difficulties, systems limitations and new possibilities building on combined strategies anchored in multiple knowledge systems. In short, it has made it almost impossible to contemplate indigenous knowledge systems without strapping them to the 'procrustean bed' of Western knowledge systems.

The most important criteria of fraternity of knowledge are cognitive justice and the right of different forms of knowledge to survive - and survive creatively and sustainably. An experiment in cognitive justice, therefore, can turn this hierarchy into a circle. The search becomes not just one for equality, but for a method of dialogue. Fraternity at the cognitive level is born only with a method for exploring difference, and providing for reciprocity and empathy. It is not just respect for the knowledge system. It is an understanding of the life forms, a livelihood and a way of life. It is fraternity at the epistemological and ontological level that the university needs, and it is in this search for cognitive justice as a fraternal act that the future university lies (Visvanathan, 2000).

In other words, fraternity cannot be reduced to community-level hosted programmes or summer visits. Local knowledges, tribal knowledges, civilisational knowledges, dying knowledges all need a site, a theatre of encounter which is not patronising, not preservationist, not fundamentalist, but open and playful. Without this mix of theory and vision, the communities of knowledge one is searching for might be stillborn. The university must encompass not merely dissent and diversity, but also the question of violence relating to the Other beyond the fence or border.

In short, Visvanathan (2000) sketches out the following as a way of breaking the vicious cycle:

- Universities must provide the heuristics, the methodological discipline, the non-dominative non-fundamentalist space that this reform strategy needs.
- Universities need to combine the ethical and the political, a theory of the Other as a thought experiment and as a form of life.
- Universities must develop theories of development that do not end in the disaster of serial displacements that we have seen over the past four decades.
- Universities must remain an enabling environment in which the Other can articulate its conceptions of an alternative world and its vision of the university in it.
- Universities need to develop a theory of the West within the ambit of an alternative vision of the world.

## **6.4 Rethinking science: the Budapest Agenda**

Science is an expression of human creativity, both individual and collective. Since creativity has diverse expressions, science ought to be a pluralistic enterprise that easily refers to ‘ways of knowing’. It should not be restricted to Western science, but should include the knowledge systems of diverse cultures in different

periods of history. Recognition of diverse traditions of creativity is an essential component of keeping knowledge systems alive.

The UNESCO World Conference on Science for the Twenty-First Century and its Declaration established the efforts that should be invested to make science advance in response both to social expectations and to the challenges posed by human and social development. Among other things, it reiterated the commitment to scientific endeavour, especially to finding solutions to problems at the interface between science and society. Especially pertinent to IKS are the pronouncements contained in Section 3 of the Science Agenda: Framework for Action entitled 'Science in Society and Science for Society' which contain new caveats to inform scientific practice in this millennium.

The Declaration emphasises that all cultures can contribute scientific knowledge of universal value, and thus that there is a need for a vigorous, informed and constructive intercultural and democratic debate on the production and use of scientific knowledge. It urges the scientific community to open itself to a permanent dialogue with society, especially a dialogue with other forms of knowledge. It affirms that modern science does not constitute the only form of knowledge, and closer links need to be established with other forms, systems and approaches to knowledge for their mutual enrichment and benefit, in order that better ways are found to link modern science to the broader heritage of humankind.

Full and free exercise of science, with its own values, should not be seen to conflict with the recognition of spiritual, cultural, philosophical and religious values. An open dialogue needs to be maintained with these value systems to facilitate mutual understanding. Finally, the Declaration states that for the development of an all-encompassing debate on ethics in science, and possibly an ensuing code of universal values, it is necessary to recognise the many ethical frameworks that exist in civilisations around the world.

Disciplines of scientific knowledge, the Framework elaborates, should be brought closer together in interdisciplinary projects dealing with the links between culture, environment and development in such areas as



conservation of biological diversity, management of natural resources, understanding of natural hazards and mitigation of their impact. Local communities should be involved in these projects, and the scientific community has a responsibility to communicate in clear language the scientific explanations of these issues and the ways in which science can play a role in addressing them. Governments, in co-operation with universities and higher education institutions, should extend and improve their training and facilities for human resources development, utilising traditional and local knowledge.

Science, therefore, must become a shared asset benefiting all people. Scientific research and its applications can yield significant returns towards economic growth and sustainable development, including poverty alleviation. Scientists have a special responsibility to practise and apply the sciences in a manner that is inclusive of the participation of indigenous peoples and ethnic minorities. However, a purely prospecting approach without proper mechanisms being put in place to protect the weaker party, in this case the holders of IKS, gives fertile ground for possible misappropriation of traditional intellectual property, often for economic profit of the institutions or professional individuals, with total disregard for equitable sharing of benefits with local knowledge holders. In this way, the blind excursion of science and the imposition of science-centred approaches as the sole criteria for developing IKS pose more problems for indigenous knowledge. They ignore the fact that indigenous knowledge systems possess a cultural logic of their own.

The issues of ethics and responsibility will confront local elites in Africa directly, especially their utilisation of knowledge. What will the local elites use their internationally high-level knowledge for? Will they simply use it to create a socio-economic advantage within the local communities with themselves as the principal beneficiaries, or will they also undertake to help these marginalised or subjugated cultures rise to international level?

## **7. Conclusion**

It is clear that there is a wide range of arguments that reflect varying degrees of disaffection with the university worldwide. A great deal of understandable effort is directed at the impact of globalisation, especially how it is making universities engage in academic capitalism (Slaughter and Leslie, 1997). The alternative arguments emphasise democratic internal governance and external community service driven by the goals of social equity, democratic values and concern for the public good. Currie and Subotsky (2000), referring to the South African situation, caution that without exploring the basis upon which reconstructive community development can be institutionally operationalised, the twin goals of global and redistributive development will remain unsolved. They point to the over-investment in accounting for the new organisational and epistemological features of the 'market' university, policy and academic debates that are silent on the corresponding features of the reconstructive development function of higher education, especially in light of the widening disparity between conventional academic practices and societal needs (Currie & Subotsky, 2000:136).

This paper has argued that the depth of that chasm between universities and society reveals stories of death, humiliation, denigration, racism and epistemological disenfranchisement. The new social contract to be contemplated should take into account the factor of amnesia and the concomitant factor of the relevance of historical memory. When one reiterates what appears to be common knowledge and facts of history, such as what happened to indigenous people in the process of colonisation or to black people during the apartheid era, it is in part an effort to ensure that it remains in our active memory.

As the issues become universal questions, not only can appropriate political action be brought to bear, but scientific rigour can be applied to its archaeology, its ideological functions, scientific alibis and arguments for its (continued) philosophical legitimacy. In this way, present and future policy nooks within which it can incubate and fester long after national constitutions have been promulgated are exposed in an on-going manner. This is part of what can be

referred to as continued protective or defensive action against the bad and the evil of the past. It should continue.

At the same time, when we transcend the set of discredited values connected with the past, we do not only retain those facts of history. Turning the facts of history into starting points for present and future action carries with it a tremendous catalytic and empowerment propensity, especially for the 'wounded' as they become 'wounded healers' (Nouwen, 1972) and innovators. Once that agony and pain takes on a revolutionary relevance, recalling the facts of the past does not mean telling the old story over and over again. Rather, it begins to open channels through which people can discover themselves, clarify their own experiences and find vantage points from which to put new content, meaning and strategy to whatever developmental visions and provisions in legal frameworks have been made available to the citizen (Odora Hoppers, 2003).

This is not part of an effort to incubate reverse assimilation, reverse hegemony or cultural imperialism. Rather, it is part of a search for co-existence, co-determination and co-operative action on a transnational and trans-societal level. It is time for a rapprochement, an integrative coming together of world views in a way that is not just pluralistic tolerance and respect, but goes beyond that to effect transformation in the sense of emergence of a new synthesis that incorporates the existing diversity of world views (Fatnowna & Pickett, 2002).

The knowledge paradigm of the future is beginning to develop by reaching out to those excluded. It is a compassionate but strategic evolution through contemplation during which the outer voice of possibility meets the inner voice of disenfranchisement. Significant and intimate connections are then made between the pain and the creative impulses essential for the transcendence, which then become the very touchstones of healing and creativity.

Plainly put, just as there can be no reconciliation without healing, it is only by embracing the profoundness of the agony both politically and intellectually that it is possible to begin the process of 'turning the monster on its head', so to speak, with the depth of force that can sustain a steadfast momentum in support of the new directions. It is a process that provides



## References

Bergesen, A. 1994. Turning the World Systems Theory on its Head. In *Global Culture: Nationalism, Globalization and Modernity*, edited by M. Featherstone. London: Sage.

Burdekin, B. 1999. Intellectual Property and Human Rights. Opening Address to the WIPO/UN High Commission for Human Rights Round Table, UNHCR, Geneva.

Capra, F. 1988. *Uncommon Wisdom. Conversations with Remarkable People*. London: Flamingo.

Christopher, A.J. 1984. *Colonial Africa*. Totowa, NJ: Barnes & Noble.

Currie, J. and Subotsky, G. 2000. Alternative Responses to Globalization. In *Globalization and Education. Integration and Contestation Across Cultures*, edited by N.P. Stromquist and K. Monkman. Oxford: Rowman & Littlefield.

Fägerlind, I., Holmesland, I. and Strömquist, G. (eds.). 1999. *Higher Education at the Crossroads. Tradition or Transformation?* Stockholm: Institute of International Education, Stockholm University.

Fatnowna, S. and Pickett, H. 2002. The Place of Indigenous Knowledge in a Post-Postmodern Integrative Paradigm Shift. In *Indigenous Knowledge and the Integration of Knowledge Systems: Towards a Philosophy of Articulation*, edited by C. Odora Hoppers. Cape Town: New Africa Books.

Fieldhouse, D.K. 1981. *Colonialism 1870-1945. An Introduction*. London. Weidenfeld and Nicholson.

Freire, P. 1972. *Pedagogy of the Oppressed*. London: Penguin.

Geertz, C. 1973. *The Interpretation of Cultures*. New York. Basic.

Glavish, N. 2002. The Intangible Dimensions of Wellness. Unpublished paper prepared for the Auckland District Health Board, Tikanga, New Zealand, and presented at the International Bar Association Annual Conference, Durban.

Grenier, L. 1998. *Working with Indigenous Knowledge: A Guide for Researchers*. Ottawa: IDRC.

Gupta, A. 1999. Conserving Biodiversity and Rewarding Associated Knowledge and Innovation Systems: Honey Bee Perspective. Paper presented at the World Trade Forum, Bern, August 27-29.

Guston, D.H. and Keniston, K.A. 1994. Introduction: The Social Contract for Science. In *The Fragile Contract*, edited by D.H. Guston and K.A. Keniston. Cambridge and London: MIT Press.

Hodgin, T. 1957. *Nationalism in Post-colonial Africa*. New York: New York University Press.

Hountondji, P. 1997. *Endogenous Knowledge. Research Trails*. Dakar: CODESRIA.

International Labor Organization (ILO). 1989. *International Labor Organization Convention on Indigenous and Tribal Peoples in Independent Countries*. June (referred to as Convention 169). Geneva: ILO.

Kluckhohn, C. 1949. *Mirror for Man*. Cambridge: Harvard University Press.

Kress, G. 1996. Representational Resources and the Production of Subjectivity: Questions for the Theoretical Development of Critical Discourse Analysis in a Multi-Cultural Society. In *Texts and Practices. Readings in Critical Discourse Analysis*, edited by N.P. Stromquist, K. Monkman, R.M. Caldas-Coulthard and M. Coulthard. London: Routledge.

Laird, S.A. 1993. Natural Products and the Commercialization of Traditional Knowledge. In *Intellectual Property Rights for Indigenous Peoples: A Sourcebook*, edited by T. Greaves. Oklahoma: Society for Applied Anthropology.

Latouche, S. 1991. *In the Wake of the Affluent Society: An Exploration of Post Development*. London: Zed.

Mafeje, A. 1993. African Intellectuals: An Inquiry into their Genesis and Social Options. In *Academic Freedom in Africa*, edited by M. Diouf and M. Mamdani. Dakar: CODESRIA.

Magubane, B. 2001. African Sociology. Towards a Critical Perspective. The Collected Essays of Bernard Makhosezwe Magubane. Trenton, NJ: Africa World Press.

Malan, J. 1997. *Conflict Resolution Wisdom from Africa*. Durban: ACCORD.

Martin, B.R. and Etzkowitz, H. 2000. *The Origin of the University Species*. Brighton: University of Sussex.

Mashelkar, R. 2002. The Role of Intellectual Property in Building Capacity for Innovation for Development: A Developing World Perspective. In *Indigenous Knowledge and the Integration of Knowledge Systems: Towards a Philosophy of Articulation*, edited by C. Odora Hoppers. Cape Town: New Africa Books.

Mkandawire, T. 2000. Non-organic Intellectuals and 'Learning' in Policy-making in Africa. Paper prepared for the Expert Group on Development Issues seminar on 'What do Aid Agencies and their Cooperating Partners Learn from their Experiences?' Stockholm.

Mudimbe, V.Y. 1988. *The Invention of Africa. Gnosis, Philosophy, and the Order of Knowledge*. London: James Currey.

Mugabe, J. 1999. Intellectual Property Protection and Traditional Knowledge: An Exploration in International Policy Discourse. Paper presented at the WIPO/UN Commission for Human Rights Round Table, Geneva.

Nouwen, H. 1972. *The Wounded Healers*. New York: Doubleday.

Odora Hoppers, C.A. 2002. Indigenous Knowledge and the Integration of Knowledge Systems. In *Indigenous Knowledge and the Integration of Knowledge Systems: Towards a Philosophy of Articulation*, edited by C.A. Odora Hoppers. Cape Town: New Africa Books.

Odora Hoppers, C.A. 2003. Historically Black Universities in an Integrated Development Paradigm: Social Responsiveness, Survival and Innovation. Pretoria: HSRC/Ford.

Peat, F.D. Undated. Blackfoot Physics and European Minds. Online. Available url: <http://www.f davidpeat.com/bibliography/essays/black.htm>. Accessed March 2003.

Peat, F.D. 1987. *Synchronicity: The Bridge Between Matter and Mind*. New York: Bantam.

Peat, F.D. 1994. *Blackfoot Physics: A Journey into the Native American Universe*. London: Fourth Estate Limited.

Pityana, B. 1999. The Renewal of African Moral Values. In *African Renaissance*, edited by M.W. Makgoba. Cape Town: Mafube and Tafelberg.

Rajagopal, D. (ed.) 1964. *Krishnamurti: Think on These Things*. New York. Harper and Row.

Sawyerr, A. 2002. Challenges Facing African Universities: Selected Issues. Online. Available url: <http://aau.org>.



Shiva, V. 1997. *Biopiracy: The Plunder of Nature and Knowledge*. Boston, MS: South End.

Slaughter, S. and Leslie, L. 1997. *Academic Capitalism: Politics, Policies and the Entrepreneurial University*. Baltimore: John Hopkins University Press.

Timberlake, L. 1985. *Africa in Crisis. The Causes, the Cures of Environmental Bankruptcy*. London: Earthscan.

Tutu, D.M. 1999. *No Future Without Forgiveness*. London: Rider-Random House.

Visvanathan, S. 1997. *A Carnival for Science: Essays on Science, Technology and Development*. Calcutta: Oxford University Press.

Visvanathan, S. 2000. Democracy, Plurality and the Indian University. *Economic and Political Weekly*, September 30: 3597-606.

Visvanathan, S. 2001a. Culture, Culture on the Wall. India Seminars. Online. Available url: [www.india-seminar.com](http://www.india-seminar.com).

Visvanathan, S. 2001b. Durban and the Dalit Discourse. *Economic and Political Weekly*, August 18 2001.

Visvanathan, S. 2001c. Knowledge and Information in the Network Society. Online. Available url: [www.india-seminar.com](http://www.india-seminar.com).

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