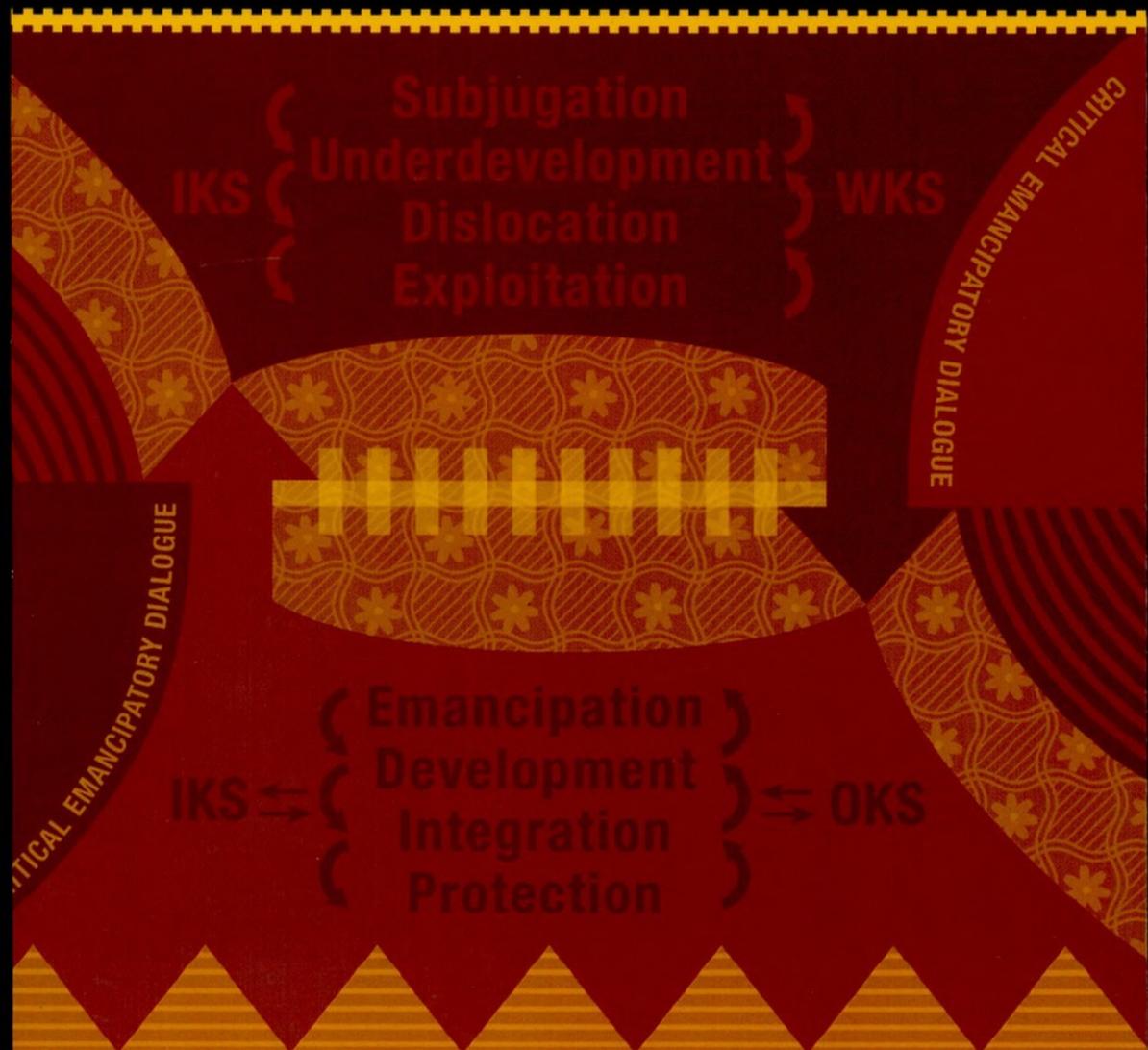


Indigenous Knowledge and the Integration of Knowledge Systems

Towards a Philosophy of Articulation



Edited by **Catherine A Odora Hoppers**

*Indigenous Knowledge
and the
Integration of Knowledge Systems*

Towards a Philosophy of Articulation

Edited by

CATHERINE A. ODORA HOPPERS

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NAE

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Introduction

Catherine A. Odora Hoppers¹

This book is a response to a call from the Parliamentary Portfolio Committee on Arts, Culture, Language, Science and Technology, for the Heads of the Science Councils in South Africa to explore the role of the social and natural sciences in supporting the development of indigenous knowledge systems. How can indigenous knowledge systems impact on the transformation of knowledge-generating bodies such as science councils and higher education institutions?

The challenges that this call posits to the scientific community is immense, as Odora Hoppers and Paulin Hountondji articulate in their chapters. These challenges range from the ideological to the philosophical or methodological, and to application. At the ideological level lie questions about the ideological basis for scientific work and especially how the power of the ideology of rationality embedded in it was propagated in the context of the colonial conquest of non-Western societies. At the philosophical or methodological level, one finds the harrowing legacy of epistemological silencing and the concerted strategies that have combined to pre-empt any possibility for co-existence, fruitful exchange of methods, or even dialogue around heuristic methods. At the level of application is found the arrogance of practice, which is still rife in formal institutions that are confidently, and without qualms, determined to continue with the monochrome logic of Western epistemology.

The confluence between this arrogance and the quasi-sciences on the one hand, and the rendering of other knowledge systems to the informal sector on the other, has had tremendous consequences on identity formation and human development in all societies, wherever colonialism had left its footprints. Clearly the vacuum in theorisation, in the formation of perspectives on knowledge production, as well as the gap between formal institutions and society, cannot be left to posterity. The same can be said of the unhelpful kinds of rules, regulations and protocols that govern scientific practice, especially in terms of the relationship between science and society.

Sooner or later, the time will have to come to draw attention to the manner in which the exclusion of other traditions of knowledge by reductionist science is itself part of the problem that has led to myriad failed development initiatives all around the world. The development model premised on this ideology transmogrified billions of people and sent them to the back of a queue (Esteva 1992), at the head of which stood the totality of the Western model of life, its idiosyncrasies, its ineptitude

as well as its possibilities, a provincial model extrapolated widely. The concrete and vernacular implications of this model in people's daily lives are that anyone who can demonstrate efficacy in imbibing, especially uncritically, this provincial rendition of reality, will find a place around the banquet table. The scale of the poverty that came subsequent to this massive disempowerment is yet to be computed.

Sooner rather than later, it would have to be acknowledged that knowledge is a universal heritage and a universal resource (Hountondji 1997), that it is diverse and varied, and that the link between epistemology and democracy is one that can help us finally to raise issues of cognitive justice (Visvanathan 1997). At the same time, Hountondji warns that we have to guard against the sterile, nationalistic populism that comes with the overvaluing of the 'golden past', accept that the 'imported' is part and parcel of ourselves, and work relentlessly to develop a pluralistic and dynamic view of heritage. Hountondji argues that it is this frame of reference that can enable us to reconstruct the knowledge-generating process called research, and its associated practices, and move beyond the fascination with ethno-science that has no intention to emancipate or question the power relations between the knowledge systems.

Shiv Visvanathan deepens this line of thinking by zooming in on science as pilgrimage and science as citizenship. He argues that science is not just about technical answers to technical questions, or just a collection of textbooks. Science is a fractured pilgrimage that has turned the 'self' into a spectator, a recorder of events; it is an act of alienation. Over time, the gaze of science over the so-called 'non scientific' became a gaze of surveillance. He argues that the way science is constituted prevents the entry of pain and compassion, leaving the 'I' of science an impoverished self without a backstage. Drawing from numerous illustrations of disasters, such as the Bhopal in India, Visvanathan laments how scientists rarely pause to weep at the effects of their creation. He argues that indigenous knowledge systems force science to become a part of a struggle of memory against forgetting. Bringing indigenous knowledge systems into the formal realm will enable the contesting of the museumisation of the 'Other', and expose the sensitivity of science that meets the 'Other' only in death. Visvanathan argues that science is not only political, but also goes beyond politics to create its own microphysics of power, with its own capillaries, by pre-empting and terminally judging the way one thinks. His plea is that it is not restraint that science needs, but a celebration of plurality, which is the only antidote to the ethnocentrism so deeply embedded in its ethos. Science must recover its sense of questioning and dwelling, begin to produce a medicine for its melancholy and recover its sense of play. We need the rights of different traditions and knowledge forms to exist for science to survive. When you standardise the mind, you destroy the fecundity of citizenship. In other words, the citizen does not need to be posited as a layperson before scientists. Every person is a scientist and every village is a science academy. Citizens must have institutionalised access to institutions and

be allowed to propose technological scenarios. Science must become an agent of plurality and of heretical dissent.

P. Pitika Ntuli takes up the issue of indigenous knowledge systems as a counter-hegemonic discourse in the context of the African Renaissance, and contests the sustained disdain for African indigenous knowledge and the construction of the colonised that this entailed. Ntuli argues that the colonial discourse framed and fixed the African as a *tabula rasa* that needed to be filled. He draws attention to the similarity between the African world-view and quantum physics, and posits quantum physics as a theory that provides us with a conceptual framework with which to examine our world-view (especially the Cartesian, Newtonian dualisms) from a new perspective. The African world-view rejects the instrumentalism embedded in the separation between subject and object, and seeks a harmonious balance between people and nature. A culture based on dualisms, on opposites and confrontation, breeds violence and confrontation. One that generates respect will breed respect. The African Renaissance challenges us to find new paradigms of change that emphasise complementarity and interconnectedness, rather than duality.

From Australia comes an articulate analysis of the strategies for establishing an indigenous-directed process. Stressing notions of 'dynamic diversity' and the non-categorical, indeterminate aspects of contemporary knowledge, Harry Pickett and Scott Fatnowna posit the idea of an indigenous-directed partnership approach to ongoing negotiations of the recognition, privileging, positioning, decolonising, protection and involvement of indigenous knowledge and practice. They 'walk the talk' in developing the protocols for the development of an indigenous viewpoint, spaces for self-determination and empowerment. They call for a decolonisation to occur from both angles, and for a mutually enriching sharing and difference that are essential in effecting encompassing transformation in the world-views and ethics of humankind. They propose a forward-looking liberation of substance and a shared paradigm shift, and for a resistance to and reversal of the pervasive determination of indigenous matters by 'others' that should lead to the re-centring of restorative and creative determinations in indigenous hands. They argue that, in determining what is taken to be knowledge, the battleground and the weapons are also conceptual, in that indigenous knowledge has often been categorised and determined through the gaze of non-indigenous people, most of whom rationalised colonialism. Now, however, the objects of earlier analysis have become speaking subjects. Indigenous scholars should therefore speak back to the layers of constructions and proscribed definitions. 'Agency', they argue, should be exercised by both perpetrators and victims, as both are personally and collectively subjects within the determining effects of circumstance. The task is then not for a return to some golden age, but for a transformation to a new future of a very different kind, a self-reflexive praxis, a way forward that is achievable through becoming involved, critical explorers of human

and societal possibilities. The conceptualisation of indigenous knowledge systems is not just about indigenous knowledge and epistemology, but about developing a critical theory of indigenous knowledge.

Peter Crossman and René Devisch state that the weight of the imposed Western techno-rational, scientific tradition, accompanied by the Rostovian model of development, have prevented the possibility of the development of endogenous, context-specific knowledges. The Africanisation of African universities consistently left the debate on models and the content of curricula and structures intact. Indigenous knowledge systems were always posited in reductionist terms, with much of the reference to indigenous knowledge in development being limited to discussions about its efficacy (i.e. making development efficient). They state that anthropology failed to legitimise indigenous knowledge and avoided dealing with the whole issue of plural or alternative knowledge, when it had intimate access to local communities the world over. They view the present thrust for indigenous knowledge systems in South Africa as a quest for identity in an as yet inequitable society; an extension of the political liberation struggle that has lost vision due to the transformation itself, to a large extent because liberation is no longer easily defined, given the shocking realisation that, in terms of world-views, the enemy has largely been internalised. With apartheid having insisted that there is no possibility for mutuality and plurality, with enlightenment science not admitting plurality, and a development perspective that subjects all knowledge to its evolutionary vision of progress, the problem of power is to define 'authenticity' and 'progress'. Science is not free of culture and does not function independently of its practitioners and their vested interests. Western scientific knowledge has erected boundaries and installed a very pervasive oppositional thinking. The problem of mediating between knowledge systems is therefore a problem of the trans-liberation of knowledge systems as a whole.

Bothlale Tema looks at the issue of indigenous knowledge systems from a science education point of view and reads the challenge posed by indigenous knowledge systems as a 'moment in time', a moment of deep exhalation after a long walk in the mountains, an opportunity to re-examine the *tabula rasa* assumptions associated with African children entering schools. She argues that there is a need for a change in attitude on the part of some educators to allow African students to bring their cultural experience to the learning situation. She expressed concern over the monopoly that white people have over research skills. This translates into white domination over academia and is interpreted as meaning that black people have never possessed the techniques for the initiation of serious research. Here, she asks whether it is the method or the nature of the issue that should constitute the legitimate starting-point for research. She concludes by outlining the features of a science classroom of the future in the context of the African Renaissance.



Abnerson Majeke begins his chapter by stating that the present system of legal education is practically unsuited to deal with the nature and profile of the disputes that originate from African communities. He argues that the contents of curricula and syllabi emphasise the social and cultural rhythms of the settler communities, complete with the conceptual structures and categories of thought. The colonial processes taught and trained indigenous African students in skills that did not allow them to fit back into their communities and forced them to work in employment situations where white people's undertakings were situated. He is concerned that post-liberation has not changed much of this structure. None of the academic fields have ever attempted to investigate how these fields of study and work functioned in indigenous societies. The result of this is what he terms 'professional and vocational inefficiency, a misuse, abuse of scarce resources'. Law, he argues, needs to be taught as an interdisciplinary area with multiple users that include authorities on indigenous knowledge systems dealing with traditional medicine, for instance. The present South African legal system stands on three legs: the Roman, Dutch and English laws forcing indigenous legal systems to take antagonistic positions in the existing superstructure. Often the sociology of disputes arising from local communities is not investigated, as such aspects do not fit into the legal parameters of the formal legal system existing in the country. The foreign legal systems should be taught on a comparative basis, when all systems of law that affect most of South Africa's population have been taught as a matter of necessity in schools and universities.

Livingstone Mqotsi examines the tangled web of conflicting social and psychological imperatives that typifies hybrid South African society, and argues that inherent in the science, magic and religion trajectories is the struggle of humankind to control nature and attain core goals in life. The magician directs and controls the goals, while the man of religion appeals to them to act on his behalf through supplication, prayer and sacrifice. Magic is a specific act for a specific end; religion is an end in itself. Science has often been regarded as a method only, yet it is also about a body of knowledge that is applied within the overall framework of people adapting to their natural, social and psychological environment. It is then possible to distinguish between magical adaptive techniques that stem from people's wishes and desires, and non-magical adaptive techniques that apply common sense and objective methods of adapting to one's environment based on causal relations. The difference, he argues, is one of technique. There is, therefore, a need for the development of a vision of humanity in South Africa; a search for a new-world society with an enlightened, not fossilised, humanity.

Françoise Vergès addresses indigenous knowledge systems from the perspective of a post-colonial discourse of the decentering of thought, and the contesting of meta-narratives of reason that still control intellectual life. She gives considerable attention to the post-colonial psychological situation in which militancy is built on ambivalent feelings that combine the reparation and justice impulses, alongside

aggressivity and the desire for revenge. This ambivalence has been hard to confront and resolve, using either the post-colonial discourses and strategies, or through the meta-narrative of reason. Most countries coming out of the colonial experience have been left by the roadside, unable to figure out the correct strategies to address the issue of reparation that is about reasonable and measurable justice, and revenge that is often absurd and incomplete. African indigenous knowledges, and the complex psychological therapeutic strategies within them, provide an alternative approach to show us that there may be losses that are irretrievable, and that there may be no total reparation of a wrong. They prepare us to live with loss and alert us to the fact that there may be no return to a pre-loss state. This is known in indigenous knowledge systems, and their practitioners have devised forms of therapy that combine love and hatred and that emphasise the issue of personal debt owed by victims in terms of determining a new future. It is this kind of psychology that should have been brought into play in many colonised societies immediately after independence.

R.A. Mashelkar explores the issue of intellectual property rights and argues that, because the twenty-first century is a century of knowledge, a nation's ability to convert knowledge into wealth and social good will determine its future. Issues in the generation, valuation and protection of intellectual property are therefore going to be critical world-wide. Central to this is the fact that indigenous knowledge systems will posit a challenge to the intellectual property agenda setting. The development of skills to manage intellectual property rights and leverage its influence will need increasing focus, especially in developing countries. Innovation is not just something that happens in the formal domains of universities and industrial research and development laboratories, but is also about what happens outside with the artisans and peasant farmers deep inside the indigenous civilisational systems. A key concern of developing countries is that globalisation is threatening the appropriation of the indigenous collective knowledge into proprietary knowledge for the commercial profit of a few. The emphasis at national level, therefore, needs to include the upscaling of grassroots innovations, linking those innovations to enterprise and investment. This should go side-by-side with the envisioning of new thinking on intellectual property, knowing that local communities do not have the means to safeguard their property in a system of which the origins are from a different culture. Present intellectual property systems are at odds with indigenous cultures that emphasise collective creation and ownership of knowledge. They encourage the appropriation of indigenous knowledge for commercial use without considering the sharing of benefits with the holders of knowledge. The intellectual property rights systems violate indigenous precepts by encouraging the commodification of such knowledge. Mashelkar argues, therefore, that it is in consonance with natural justice that local communities should have a greater say in all matters regarding the study, extraction and commercialisation of biodiversity. We need to develop an understanding of the economics of community knowledge, including the

types of intellectual property rights held by individuals, families, lineages or communities.

Robert Mshana grapples with the issue of globalisation and intellectual property rights in Africa. He argues that the World Trade Organisation's Trade Related Intellectual Property Rights (TRIP's) contain booby-traps such as rent dissipation, impediment of secondary innovations, and concentration of ownership of information that, in the long run, will exacerbate inequities in wealth distribution. Patents in biotechnology raise concerns about basic concerns of life, food security, livelihood, and human and ecosystems, while current intellectual property rights threaten to worsen the piracy of biological resources and traditional knowledges. Biopiracy of indigenous knowledge is a double theft in that it steals creativity and innovation, and simultaneously, patents on stolen indigenous knowledge rob the owners of economic options in their everyday survival. Citing Vandana Shiva, Mshana states that biopiracy is a result of Western-style intellectual property rights and not the consequence of the absence of such systems in rich countries. The promotion of biopiracy is intrinsic to those systems, and the unusual power of the transnational corporations and the high cost of litigation make it very difficult to protect the rights of holders of indigenous knowledge. He argues that past enclosure acts under colonialism and apartheid drove rural communities from their ancestral lands. The intellectual property rights system represents new enclosure acts in the context of globalisation, in that it will privatise intellectual commons and monopolise new technologies based on these commons.

The chapter by Robert Mshana is published posthumously following Dr Mshana's untimely death in early 2000 in the Kenya Airways plane crash off the coast of West Africa. Dr Mshana was the Executive Director of the OAU's Standing Commission on Science and Technology.

Harry Pickett and Scott Fatnowna shed light once again on the issue of the development of the indigenous knowledge systems through research and posit that knowledge production is a creative process – not just transmissive. The task for an indigenous academy, therefore, is to participate actively in the broad cultural discourse of knowledge production, with a view to engage in the continuing processes of making knowledge explicit, accessible and organised within a system of shared understanding. Research in an inclusive paradigm would acknowledge that research on indigenous people has incurred deep resentment and even resistance, thus rendering research suspect. Direct participation in the knowledge generation, production and determination processes by the indigenous knowledge authorities themselves is non-negotiable and should become the foundation of any research activity. Existing areas of misinformation, misinterpretation and misrepresentation about indigenous knowledge systems also need to be deconstructed and reconstructed. The honeymoon distraction with rationality and the scientific method in the West is being rebalanced by engagement with the East, and with indigenous

perspectives from elsewhere. This is the way to go towards attaining new heights in the interpretation of human rights. Transformation is not just political, but also relates to the knowledge and wisdom systems that should lead to new human consciousness.

Birgit Brock-Utne introduces the geopolitical dimension of the knowledge industry and illustrates from her experience in Tanzania the manner in which this works in practice. She asks the questions: What happens when an international financial institution posits itself as a knowledge bank? Whose knowledge is being extrapolated and disseminated? At present, the power of the North remains the invisible norm, and she urges the West to stop sending its experts to teach and never to learn. She argues that, rather than retrieving bits of information stored and mapped in the North, Africa needs time and opportunity to record her own knowledge built on her own roots. The degree of Western bias in all aspects of education is frightening, as examples of cultural monitoring of content from Namibia show. She pleads for indigenous knowledge authorities to become involved, in order to influence the education system.

The final chapter is a capping chapter by Harry Pickett and Scott Fatnowna, and calls for a new partnership that relinquishes dominance and control, and moves towards collaboration and negotiation. The way to the future is one towards political and epistemological co-determination and *rapprochement*, an integrative coming together of world-views that is not just one of pluralistic tolerance, but one that effects the emergence of a new synthesis that incorporates the existing diversity. The interdependence of this model of the future takes into account the spaces gained through independence. Indigenous and non-indigenous people have to move towards a culture of partnership in which the right to participate on an equal footing is the norm rather than the exception. Globalisation should, from this point of view, lead to the promotion of shared understanding, values and cooperative actions on a transnational and trans-societal level. It would be a movement that recognises and respects the diversity, variety and richness of local discourses, codes and practices, while developing viewpoints and the understanding that facilitate cooperation and coordination at a global and totally inclusive level. Integration would consider 'domain separation', as it represents not only differences, but essential incompatibilities at ethical or even moral levels.

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Part

1

*Conceptual and
Foundational Issues*

Indigenous Knowledge and the Integration of Knowledge Systems

Towards a conceptual and methodological framework

Catherine A. Odora Hoppers

Indigenous knowledge systems: A profound challenge to human development in the twenty-first century

South Africa's drive for the development, promotion and protection of indigenous knowledge systems (IKS) within which this initiative is located, comes at a time when major 'winds of change' are blowing in the country. On the one hand, there are major transformation and democratisation processes being implemented under the new dispensation. Several macro-level policies provide frameworks for understanding the equity, empowerment and development thrusts in government policies – for example, the Reconstruction and Development Programme (RDP), the policy of Growth, Equity and Reconstruction (GEAR), the National System of Innovation, and the African Renaissance.

The latter, in particular, sets forth an agenda that combines identity reconstruction and innovation, human rights, sustainable development and democratisation in South Africa and throughout the African continent. The African Renaissance aims at building a deeper understanding of Africa, its languages and its methods of development. It is a project that includes the rewriting of major tenets of history, both past and contemporary. IKSs thus posit tremendous challenges for the reconstruction and development of strategies in South Africa.

Several global imperatives also underpin the need for renewed attention to IKSs. To begin with, the world stands at a crossroad in search of new, human-centered visions of development in health, in preserving and conserving biodiversity, in human rights, and in the alleviation of poverty. All the agencies of the United Nations are seeking to promote paradigms of

sustainable human development that build on knowledge resources that exist in communities. As a continent, Africa is seeking its own renaissance and seeking to establish the terms of its development. Despite the affluence that globalisation has brought to a small minority, we live in a world in which subjection, suffering, dispossession and contempt for human dignity and the sanctity of life are at the centre of human existence.

Emotional dislocation, moral sickness and individual helplessness remain ubiquitous features of our time. Moreover, for a great majority of the population of Africa, the loss of cultural reference points has culminated in the fundamental breakdown of African societies, with dire consequences for the social and human development project as a whole. Finally, globalisation is threatening the appropriation of the collective knowledge of non-Western societies into proprietary knowledge for the profit of a few.

At the international level, key agencies of the United Nations, such as the World Health Organisation (WHO), the United Nations Environmental Programme (UNEP), the United Nations Development Programme (UNDP) and the United Nations Educational, Scientific and Cultural Organisation (UNESCO), have conventions or mandates of various kinds on the issue of diversity, indigenous and traditional knowledge, and of the rights of indigenous people world-wide. The issue of diversity, and especially biodiversity, and the role of indigenous communities in the protection and utilisation of the natural products around them, were elucidated during the 1992 United Nations Conference on Environment and Development (UNCED) held in Rio de Janeiro.

Also involved, playing an active though ethically unclear role, are the Trans-National Corporations (TNCs) with immense financial power, but with short-term profit motives keen to exploit genetic and other resources from the so-called Third World countries. The TNCs are protected by the agreements initiated at the Uruguay Round, which led to the formation of the World Trade Organisation (WTO). The WTO is the global trade 'police' interested in eliminating all trade barriers world-wide. However, it is also the WTO that legislates the idea of intellectual property rights (IPRs) in a manner that assumes individual ownership (a Western phenomenon) as a universal phenomenon, and excludes the notion of 'collectivity' that characterises ownership of IPRs in many societies in the Third World.

The WTO is attempting to establish new regimes of intellectual property rights at a time when Third World countries are not at all prepared for this. Many developing countries still need to invest in the development of skills to manage IPRs and leverage its influence for the benefit of the poor. As it stands, too many existing IPR systems are focused on private ownership, and are at odds with indigenous cultures that emphasise collective creation and ownership of knowledge. Present IPR systems encourage the appropriation of traditional knowledge for commercial use; moreover, without the fair sharing of benefits with the holders of knowledge. Current IPRs also

violate indigenous cultural precepts by encouraging the commodification of such knowledge. There is, therefore, a serious need for innovation in the intellectual property regime itself (Mashelkar 2000).

At the level of science, a recent cornerstone cue for change emanates from the UNESCO *Declaration on Science and the Science Agenda Framework* adopted in Budapest, Hungary (1999). This declaration urged member countries to define a strategy to ensure that science responds better to society's needs and aspirations in the twenty-first century. It reiterated the need for political commitment to the scientific endeavour and, especially, to make science *more responsive* and *more inclusive*. Science should become more accountable, more communicative and more dialogical. The vision of science in the twenty-first century should be a science that can appreciate interconnectedness and interdependence; a science that can decipher the meaning of words like 'responsibility' and 'ethics' in the use of scientific knowledge; a science that can comprehend the fact that science is a product of culture, or cultures, and that its diverse manifestations must be recognised; and a science that can be seen *by all* to be a shared asset.

This declaration called for a drastic change in the attitude, methods and approach in the scientific field, and to the problems of development, especially in the social and human dimension. Sciences, the document emphasised, must be put to work for sustainable development, and must thus transform itself and become inclusive of women and other forms of knowledge in terms of its culture of admission and operation. But most of all, it must take a stand on issues affecting global development, such as pollution, depletion of natural resources, poverty and the widening disparities in well-being.

Institutional development imperatives

It is with this in mind that South Africa needs to develop a corpus of academics and scientists who can act as catalysts and agents of change. Within their ranks, the process of the gradual transformation of scientific ethos, ethics and practice should emerge, while developing a strong and committed system of protocols for developing and protecting indigenous knowledge systems, biodiversity and, especially, the IPRs of local communities. It is crucial for institutions that engage with IKSs to develop an understanding of the relationship between science and the series of suppressed 'Others', and the role of science in such suppression. Part of the legacy of colonialism, and the science that accompanied it, that still lingers in academic practice in general, is that non-Western societies and the knowledges that sustained them are taken as obsolete. In the rush towards modernity, we, 'the newly modernised', have not wanted to give those on whom we have imposed the signifier of obsolescence a voice. In fact, as a group, victims are never part of scientific history or discourse. There is thus a need to open up new moral and cognitive spaces within

which constructive dialogue between people, and between knowledge systems, can occur (Visvanathan 1997).

The starting point for this is a realisation that new directions in the philosophy and sociology of science are emerging today, not from the academia, but from questions raised by grassroots movements. The grassroots movements represent dissenting organic academia and raise issues that the universities are reluctant to confront. It is the grassroots movements and their determination of new directions in the philosophy and sociology of science that have constantly demonstrated that knowledge is an intrinsic part of democratic politics. It is through such voices that we have come to understand, not only policy frameworks and the political economy of science, but also how the cosmology within which modern Western science was embedded could be a source of violence. It is by undertaking this work of reconnecting systems that questions of cosmology and political economy can be linked to democratic theory (Visvanathan 1997).

This initiative is intended, therefore, to facilitate the development of community-conscious scientists and researchers across the natural and social sciences on the one hand, and help reshape the content of curricula at universities in South Africa on the other. Central to the endeavour will be to work towards improving the lives of holders of knowledge in the rural areas who have been subjected to epistemological disenfranchisement by the combination of colonial and apartheid practices buttressed by the attitudes, ethos and practices of the scientific community. This should lead to high-level capacity-building for critical analytical work, knowledge development and strategic policy advice on crucial development issues in Africa and internationally.

Even more urgent is the fact that some universities, university faculties and individual academics are beginning to question the eschewed knowledge production formats that undergird the curriculum of tertiary institutions. The relations between universities and communities are also coming under the spotlight, giving rise to the question of how universities perceive local communities. It is also quite apparent that the knowledge that has generally informed policy development in South Africa, and most of the developing countries, excludes IKS, thereby continuing to render people in rural areas in a deficit mode with acutely disempowering consequences.

Formal research institutions should, therefore, demonstrate their readiness to work to the advantage of the holders of knowledge in rural communities, and to facilitate their recognition. Where it is identified that particular communities are 'resource-rich but economically poor', concerted research and development interventions grounded in an IKS perspective should help to rapidly highlight the situation at community level, and offer advice as to how government could and should act.

Challenges to research and development strategies and perspectives

From an IKS perspective, research as we know it is intricately linked to European imperialism and colonialism. In many local communities, the word 'research' conjures up silence and bad memories, and raises smiles that are knowing and distrustful. The ways in which scientific research is implicated in the worst excesses of colonialism remains a powerfully remembered history for many of the world's colonised people in whose domain indigenous knowledge systems repose (Smith 1999: 1). It is a history that still offends our deepest sense of our humanity. It galls indigenous communities that Western researchers and intellectuals can so glibly assume to know all that it is possible to know of local people and systems on the basis of shallow altruism or brief encounters with some individuals.

The Maori intellectual, Linda Smith, writes: 'It appals us that the West can desire, extract and claim ownership of our ways of knowing, our imagery, the things we create and produce, and then simultaneously reject the people who created and developed those ideas, and seek to deny them further opportunities to be creators of their own culture . . . , (and) deny them the validity of their own knowledge' (Smith 1999: 1).

This collective memory of imperialism has been perpetuated by the ways in which knowledge about indigenous people was collected, classified and then represented to Western audiences, and then, through the eyes of the West, represented back to those who have been colonised. It is this circularity that is still perpetuated by most formal research institutions in South Africa. It is a Western discourse about the 'Other' that is supported by institutions, vocabulary, scholarship, doctrines and research methods. It is here, where formal scholarly pursuits of knowledge are intertwined with the anecdotal constructions of the 'Other', that research becomes a significant battleground for the struggle between the interests and ways of knowing of the West, and the interests and ways of knowing of indigenous people and communities that, for so long, could only survive in the underground trenches of epistemological resistance.

In a decolonising framework, therefore, deconstruction has a larger intent. It consists of addressing social issues within a wider framework of self-determination and social justice. The simultaneous project is one of establishing new research protocols that are acceptable for those research had proscribed as its 'objects', and excavating the subjugated knowledges with a view to making them available in real time for present and succeeding generations. Research is thus not some innocent or distant academic exercise, but is recognised as an activity with intent. This intent must be made overt and explicit to those whom we have turned into the rats in our scientific cages.

Recognising innovation and creativity at community level

As Gupta (1999) emphasises, a higher consciousness about what exactly is at stake here must develop. At the material level, it is clear, for instance, that there is a gross asymmetry in the rights and responsibilities of those who produce knowledge, particularly in the informal sector, and those who go about valorising it in the formal sector. This brings to light the issue of the ethics of extraction and responsibility.

It is also strongly felt that the notion is not true that research and development by small-scale firms or individual community-based scientists cannot generate globally valuable intellectual property. At the same time, it is important to note that while no claims exist that all problems can be solved better by local communities, some problems that they solve in a creative manner, through their own genius, indicate that there are niches that mainstream science and technology institutions have either failed to fill, or have not even noticed. In that regard, there exists tremendous scope for complementarity between the knowledge systems (i.e. formal and informal) (Gupta 1999), and for the reciprocal valorisation of knowledge systems (Hountondji 1977).

It is also recognised that a major threat to the sustainability of natural resources is *the erosion of people's knowledge*, and the basic reason for this erosion is *the low value attached to it*. The erosion of people's knowledge associated with natural resources is under greater threat than the erosion of the natural resources themselves. Questions therefore need to be asked as to why the most disadvantaged people have to carry the heaviest burden of maintaining genetic diversity for future generations. Indigenous herbalists, veterinary experts and pastoralists know a lot about the habitats and life cycles of plants and animals, and various other aspects of other resources. Yet, efforts to build upon knowledge systems of people who have maintained their natural resources are, so far, quite inadequate.

Language is another problem in revitalising local communities. Writing in English, for example, has been recognised as valuable for connecting internationally, but there is an awareness that it alienates locally. The goal here is not only to feed back what (as scientists) we learn from local communities and individual innovators in their own language, but also to share with them what we learn from others (i.e. enhancing the public understanding of scientific developments).

A strong view, therefore, needs to be taken of the unprofessional conduct on the part of scientists, especially the tradition of making local communities anonymous in scientific practice, even when these communities have divulged key information regarding certain plants or drugs. This must be brought to a rapid halt, and a change in the ethics of scientific practice should gradually impact on the basic tenor of academic discourse on local knowledge (Society for Research and Initiatives for Sustainable Technologies and Institutions), and on IKS as a whole.

A development imperative to emerge from these considerations is the issue of *value addition*. Value addition to indigenous knowledge will help local communities

to co-exist with biodiversity resources by reducing primary extraction and generating long-term benefits. From this perspective, local communities are termed 'knowledge-rich, but economically poor'. Any dynamic knowledge system therefore has to evolve through the continuance of traditional knowledge and contemporary innovations, and this should be pursued by individuals as well as communities. The aim is to connect creative people engaged in generating local solutions that are *authentic* and *accountable*, thus facilitating people-to-people learning. As scientific institutions, we should be seriously concerned with the ethics of knowledge extraction, its documentation, dissemination, and its incorporation into real life products and services or policy framework. The search is, therefore, for a middle-way in the dialogue and linkage between IKS and formal knowledge systems.

At the same time, the discussion on biodiversity can only become authentic if we probe deep enough into the knowledge traditions of each part of the world to discover the roots of *sustainable ethics*. But this discovery requires preparing our minds for visions that collide with the dominant materialistic world-view. The existing epistemology relies excessively on the language and ethos of the elite, whose record of sharing their rent with providers of knowledge is not very honourable. When they plead for reforms, they advocate action by everyone else in the world, ranging from local governments to world bodies, but their own conduct and practices remain untouched by the logic of their appeal. With this in mind, it is urgent that a code of conduct be developed (Society for Research and Initiatives for Sustainable Technologies and Institutions).

The scientific community must, therefore, transform their knowledge legitimation and accreditation cultures in order to build linkages between excellence in formal scientific systems and innovations in informal knowledge systems, and thus create an inclusive knowledge network to link various stakeholders through applications of information technologies (The National Innovations Fund, India).

IKS: Towards a conceptual and analytical framework

Knowledge is a universal heritage and a universal resource. It is diverse and varied. The acquisition of Western knowledge has been and still is invaluable to all, but on its own, it has been incapable of responding adequately in the face of massive and intensifying disparities, untrammelled exploitation of pharmacological and other genetic resources, and rapid depletion of the earth's natural resources. For its part, IKSs represent both a national heritage and a national resource that should be protected, promoted, developed and, where appropriate, conserved. But it is also a resource that should be put at the service of the present and succeeding generations.

By way of a definition, the word *indigenous* refers to the root, something natural or innate (to). It is an integral part of culture. *Indigenous knowledge systems* refer to the combination of knowledge systems encompassing technology social, economic

and philosophical learning, or educational, legal and governance systems. It is knowledge relating to the technological, social, institutional, scientific and developmental, including those used in the liberation struggles (Odora Hoppers and Makhale-Mahlangu 1998).

The idea of indigenous knowledge as espoused within this framework, for instance, is not just about woven baskets, handcraft for tourists or traditional dances *per se*. Rather, it is about excavating the technologies behind those practices and artefacts: the looms, textile, jewellery and brass-work manufacture; exploring indigenous technological knowledge in agriculture, fishing, forest resource exploitation, atmospheric and climatological knowledge and management techniques (Dah-Lokonon 1997), indigenous learning and knowledge transmission systems (Doussou 1997), architecture, medicine and pharmacology, and recasting the potentialities they represent in a context of democratic, equitable participation for community, national and global development *in real time*.

The questions and challenges to practice

The issue of IKs posits profound challenges to contemporary practice, a few of which are listed below.

The first relates to the *knowledge generation and legitimation processes*, such as the type of knowledge being generated in scientific institutions; the type of research questions being asked, and the existing rules and regulations governing legitimation and accreditation of scientific knowledge.

The second relates to *social and economic survival of 'resource-rich, but economically poor' local communities* (Gupta 1999). How can the study and validation of IKs assist directly in the economic and socio-cultural empowerment of the communities?

A third agenda that the integration of knowledge systems highlights, is the need to explore deeper the interface between epistemology, diversity and democracy, to explore the potential for true exchange and what Hountondji refers to as the '*reciprocal valorisation among knowledge systems*' (Hountondji 1997: 13). Central to this is the need to establish knowledge as an intrinsic part of democratic politics (Visvanathan 1997: 2).

Fourthly, internal to the IKs, there is a separate need to engage in its critical evaluation and careful validation, while recognising its inner truths and coherence in order to *facilitate its active re-appropriation and authentication into current, living research work* (Hountondji 1997: 15).

A fifth point, one of great importance for many Africans, is that it is strongly felt that the time has come to subject to *direct interrogation, the historical, scientific and colonial discourses* behind the semantic shift that turned the illiterate from someone *ignorant* of the alphabet, to *an absolute ignorant*; pitting what is not written *as thoughtless*, as a weakness, and, at its *limit* as primitivism (Hountondji 1997: 33-

34), which has been central to the strategic disempowerment of African societies since the advent of colonialism.

Sixth, in realising the fundamental intolerance of modern science towards the legitimacy of folk or ethnic knowledges, coupled with our increasing inability to develop an ecologically coded society, engaging with IKS enables us to re-open crucial files that were summarily closed somewhere in the chaos and violence of colonialism (Visvanathan 1997: 38–40).

Colonialism remains a factor insofar as it provided the framework for the organised subjugation of the cultural, scientific and economic life of many on the African continent and the Third World (Mugo 1998: 6). This subjugation extended in a spectrum from people's 'way of seeing', their 'way of being', their way of negotiating life processes in different environments, their survival techniques, to technologies for ecologically sensitive exploitation of natural resources. All these knowledges were, *en masse*, rendered irrelevant to their use as millions of people became transmogrified by the combined advent of modern science and colonialism, into an inverted mirror of Western identity – a mirror that belittled them and sent them to the back of the queue (Esteva 1992: 6, 7).

Seventh, IKSs enable us to *move the frontiers of discourse and understanding* in the sciences as a whole, and to *open new moral and cognitive spaces* within which constructive dialogue and engagement for sustainable development and collective emancipation can begin. In effect, it makes it possible for us to 'clear space' in order to *enable new issues* in science development to be generated and fostered, and thus determine new directions for the philosophy and sociology, as well as political economy of the sciences (Visvanathan 1997: 7, 8).

Finally, IKSs enable us to re-establish science as the story of all animals, and not just of the lion; to develop a clearer sense of the ethical and judicial domain within which science works, and to begin to understand the political economy of 'Othering'. More importantly, IKSs humanise our practice, and enable those silent witnesses of marginalisation (i.e. those regarded as *refractory to the scientific gaze*) to become part of an empowering process, and strengthen their capacity to take an active part in questioning the competence and ethics of the professional expert (Visvanathan 1997: 9–13), at the same time working to forge genuine partnerships and informed alliances for development.

IKSs are characterised by their embeddedness in the cultural web and history of a people, including their civilisation, and form the backbone of the social, economic, scientific and technological identity of such people. It is these knowledges that are referred to as "indigenous knowledges". They consist of tangible and intangible aspects that, in contemporary contexts, can be identified as those that:

- have exchange value and that, with support, can be transformed into enterprises or industries;

- perpetuate social, cultural, scientific, philosophical and technological knowledge, that can provide the basis for an integrated and inclusive knowledge framework for a country's development;
- represent major socio-cultural institutions and organisational systems.

These knowledges are rich and varied, ranging from soil and plant taxonomy, cultural and genetic information, animal husbandry, medicine and pharmacology, ecology, climatology, zoology, music, arts, architecture, social welfare, governance, conflict management, and many others (Odora Hoppers and Makhale-Mahlangu 1998: 5). Their intrinsic efficiency and efficacy as tools for personal, societal and global development must, therefore, be identified and accredited as necessary. It is this recovery of indigenous knowledges, and the systems intricately woven around them, that will enable the move towards a critical but resolute re-appropriation of the practical and cognitive heritage of millions of people around the continent (Hountondji 1997: 35) and elsewhere in the world.

It is, in turn, the re-appropriation of this heritage that may provide new clues and directions as to the visions of human society, human relations, sustainable development, poverty reduction and scientific development, all of which cannot be resolved using the existing ethos of the Western framework alone.

A focus on IPRs within IKSs will also enable the indigenous authorities and communities to publicly and legally lay claim to IPRs, and copyright to the wide range of artistic, pharmacological, and other products currently being extracted largely without recompense. The development of new protocols for benefit sharing, value addition and new ethics of extraction, will further lead to the strategic revisiting of the adequacy of existing legal, educational, industrial, commercial and other sectoral provisions currently under implementation, with a view to questioning the extent to which they are oriented to serving, promoting, developing and protecting *all* sources of knowledge, and putting them to use for the benefit of all.

In methodological terms, engaging with IKSs implies sensitisation, empowerment, and restoration of holism and ethical practices, including spirituality, for individuals, systems and institutions. It means going beyond the appraisals of the work of individual scientists, beyond the output of particular research teams and the competitive acumen of individual research institutions, and reaching the point where it is possible to ask questions that can serve to re-centre Africa and the Third World (Hountondji 1997).

An integrated policy project

IKS research can be taken as 'an Integrated Policy Project' (this concept, coined by Dr Wim Hoppers of the Royal Netherlands Embassy, is used in selected projects that go beyond typical research, to impact on policy, action and empowerment dimensions) in that it seeks to *explicate* through research as it simultaneously *impacts* on

ongoing thinking and practice. An integrated policy project usually contains several policy issues. In this case, key policy issues that an IKS study addresses include:

- the interface between democracy, epistemology and sustainable human development;
- the knowledge base informing policy;
- the knowledge legitimation, and accreditation culture and procedures;
- the shortfalls in disciplinary arrangements in universities, especially their lack of responsiveness to diversity (of knowing, seeing and interpreting the world);
- introducing legislation on intellectual property in a context of cultural diversity on the one hand, and the forces of globalisation on the other;
- protection of indigenous technologies from one-sided exploitative extraction;
- economic benefits of the reversal of ownership to indigenous communities of products that would otherwise be extracted unchecked by global multinational corporations; and
- the issue of human rights and identity (i.e. the right to 'be').

Acknowledging that an initiative such as this one on IKSs cannot stand aloof from real life situations, this research initiative aims to provide structural backup to the ongoing formulation of policies. This means that expertise on IKSs is put directly to task in support of various initiatives in policy formulation. In other words, this IKS project would enable the development of theoretical and conceptual frameworks (a language of articulation in this field), but at the same time help in developing operational strategies for input into policy development. In this way, one can see clearly how research can directly strengthen capacity-building for policy work.

Looking at the national scene in South Africa, and the regional scene within the SADC, this initiative will provide a transdisciplinary and cross-sectoral national and regional framework, within which policies and strategies can be developed. It will, in particular, bring together expertise in this area, within the country, the SADC, the continent, the Third World, and internationally. The initiative also aims at fostering understanding of the interface between culture and science, culture and technology, sustainable human development, and the comprehensive development of human, material and scientific resources, in a manner that gives cognisance to the wisdom and authenticity of traditional practices, institutions and knowledges. Moreover, it will provide a new basis for the generation of knowledge and a new consciousness in protecting intellectual property and other rights of those who have been ignored or taken for granted for so long.

It is located within a critical humanist and post-positivist frame of reference, keeping the human being firmly at the centre of the activity, fully aware that the technocratic approach to valuations contributes to the domestication of perceptions, and that what usually passes for value neutrality, in reality conceals powerful but hidden conservatism (Nash 1977: 147-150). The notion of comparison in this study,

therefore, seeks to bring perspectives and experiences from different contexts into a critical reflective dialogue on the tenets of thinking and practice with a view to reconstructing or deepening the functioning of those tenets at the ontological, epistemological, and sociological levels.

Creating a holistic knowledge framework for societal development

The challenge of creating an integrated and holistic knowledge framework for societal progress and development is not only real, but also urgent ('holistic', as opposed to 'mechanistic, refers to an understanding of reality in terms of integrated wholes whose properties cannot be reduced to those of smaller units; see Capra 1982). The search for such a framework cannot be initiated purely because of economic austerity, cuts in welfare budgets, or for that matter, because wafts of paternalistic altruism are adrift in our times. Rather, it is a search for a holistic knowledge framework that seeks to make whole that which was partial, incomplete, in large measure stunted, and therefore also stunting. The new framework to emerge involves principles that were present all along but unknown to us. It includes the old as a partial truth, and by its larger framework, it transforms the traditional positions and the stubborn new observations, reconciling their apparent contradictions (Hountondji 1997).

It is common knowledge, for instance, that social sciences as taught at universities in general, are based on Western theories. One of the challenges has, therefore, been how to go about creating a relevant interpretation of Eurocentric-based models when working among African people (Makhale-Mahlangu 1998).

A dialogical search for integration, therefore, is incompatible with legacies in which one group consistently deposits ideas into others, or that in which one narrow perspective, by default of historical factors, is made into what it is not and cannot be. Dialogue cannot exist in the absence of profound love of the world and of people. The naming of the world, which is an act of creation and recreation, is not possible if it is not infused with love (Freire 1972: 61–62).

It thus implies a coming to terms with the consequences of the prior arrangements whose inadequacies gave rise to the present imperative. The search is for a framework that will affirm, not deny, the integrity of all human beings; a framework that, by underscoring the notion of agential citizenry (Kenway 1996: 217–232), can posit people not as perpetual victims or pawns, but as knowing subjects, irrespective of the knowledge frameworks within which they are located.

The exclusivity that accompanied the rational and linear frameworks of Western knowledge has, in practice, meant that cosmologies that did not fit into that framework were dismissed and ridiculed. The cosmologies of other civilisations were submerged; the knowledge of 'Other' peoples, of women, and of all phenomena that could not be measured by the different scientific methods, were all undermined or

destroyed. In the vernacular version of this subjugation that came with colonialism, and later, with modernisation, the Western framework not only determined what was 'civilised' but also became the norm by which 'Other' consciousness is measured.

The existential crisis to emerge from the realisation that the value system on which so much knowledge is validated, is itself so limited. It not only reflects, but also perpetuates the same unbalanced world-view, and is, moreover, so unable to deal with diverse manifestations of modernisation, which is central to the search for ways to consider establishing new holistic knowledge frameworks.

As governments seek to transform their societies and empower local communities, the challenge becomes one of how to *operationalise empowerment* itself in a context in which diverse knowledges are barely tolerated and exist only in sufferance and subjugative deference to a mainstream, essentially Western form of knowledge – that is safely installed as the only way of seeing, and the only tool by which the masses of humanity can receive accreditation and a licence to *be*.

The absence of flexibility and condescension towards other forms of knowledge in the institutions responsible for generating, validating and dissemination of knowledge, even as the notions of human rights, of democracy and of equality get writ large in constitutions, is truly disturbing. However, a profound cultural imbalance has resulted in the systems of academic, political and economic institutions we see all around us.

The emerging sense of disaffection

Increasingly, the chorus of disaffection emanating from scholars concerned with the basis upon which social reality of the whole world appears to have been constructed, and at the deterministic reasoning and the totalising theories of history, are being heard. The contingency of the social and the historical, as well as the affirmation of the multiplicity of worlds and forms of life (i.e. social heterogeneity and complexity) are being recognised and affirmed. It is also being recognised that forms of knowledge other than those sanctioned by science exist. These developments have led to a redefinition of the relationship between objectivity and representation; between subject and object; and led to the questioning of the status of scientific truth itself (Social Sciences and the Challenges of Globalisation in Africa 1998).

The legacy of Western rationalism is no longer unchallengeably dominant, and its universal validity in particular is now under question. De-centered understandings of knowledge systems and other forms of universal conscience are emerging outside the exclusivist frameworks of Western modernity. Not only are questions about language and the production of arguments themselves emerging, the conditions for true statements and the modalities for understanding are now also on the witness stand.

Feminists, post-modernists, and ecologically conscious paradigms of analysis have not only demonstrated, but also confronted this taken-for-granted hegemony of Western knowledge. The degree to which reductionism has become so ingrained in mainstream culture that it is often identified with the scientific method should be a matter of concern to all. The Cartesian partition, Werner Heisenberg wrote, has penetrated deep into the human mind during the three centuries following Descartes, and it will take a long time for it to be replaced by a really different attitude to the problem of reality (Heisenberg in Capra 1988: 19).

The total effect of these trends is to bring to bear a forceful return of philosophy to the social sciences, and to the evolution of emergent 'open', non-linear and 'flowing spaces of information' ('Social Sciences and the Challenges of Globalisation in Africa' 1998: 1-2). Such is the strength of the new demands that it would appear that the legitimacy of the social sciences no longer rests in the obligation to produce objective knowledge alone, but also in the identification of a nexus between the development of knowledge and the transformation of societies.

From the perspective of the production of knowledge, it is increasingly the case that sites for the production of knowledge on Africa and about Africa have to be subjected to interrogation and deconstruction, in order to clear space for authentic participation by Africans in such an endeavour. It has, for instance, been noted that there is a deep feeling of alienation in relation to the social sciences with regard to the field's inability to relate to history on the one hand, and to generate emancipatory power on the other ('Social Sciences and the Challenges of Globalisation in Africa' 1994-5).

A development paradigm is an agreed school of thinking about how to view development, and how to investigate and assess reality for the development of policy and action. The basic premise of the conventional development paradigm, however, is a *hierarchical human spectrum* in which some quarters are 'superior' and therefore qualified to determine the 'Others' development. A professional class of intellectuals serves these structures of organised domination by assessing, labelling, naming and constructing knowledge and reality. However, the predominant focus on economic needs and economic 'poverty' has led to a development discourse that is preoccupied with what the people *do not have* (Rahman 1993: 216). This thinking is trapped in a negative dependency orientation that it generates, rather than motivating society to become constructively engaged in moving forward.

If development is endogenous, however, then the people are the *subject*. They are not trapped in the cold condescending gaze of the rich upon the poor, because endogenous development begins at the point where people start to pride themselves as worthy human beings inferior to none; and where such pride is lost, development begins at the point at which this pride is restored, and history recovered.

Yet the confluence between modern scientific knowledge, wealth and power continues to privilege the exogenous model of development. Priorities in crop, live-

stock and forestry research daily reflect the bias against the indigenous knowledge of rural people. It cannot be said enough that rural people's knowledge and modern scientific knowledge are complementary in their strengths and weakness. Combined, they can achieve what neither would alone (Chambers 1983). But for this combination of complementarity to occur, outside professionals have to step in humility down off their pedestals, and sit down, listen and learn (Chambers 1983: 75). The present framework in which knowledge flows in one direction only – downwards – is not only disempowering, but also demeaning.

The relations between knowledge systems

In seeking to move towards an IKS research agenda, the core strategy at the level of epistemology is to seek the best of both. Both the Western system and the IKSs represent national resources. The local contextual expertise and technologies that indigenous knowledge frames offer, can complement some of the mechanical and technical precision capabilities of the Western knowledge systems to generate forms of creativity that benefit and empower everyone. But for this to happen, power must shift.

Accordingly, the initiative seeks at a deep level to contribute to the emancipation, development, integration and protection of IKSs. A process of dialogue through research should be central to such a methodology, in order to clarify the role of IKSs within human development. The *emancipation* of IKSs is a necessary condition for development; *development* is crucial if they are to be integrated with other knowledge systems to achieve a holistic framework; *integration* is crucial if IKSs are to fulfil their potential for contributing to human and social development in a rapidly changing global context; and *protection* is a strategy of vigilance against exploitation by dominant world forces.

We also need to 'clear space' in institutional and other policy arrangements for these diverse knowledges to exist and participate in unfolding modernisation processes. By bringing in both the developing and developed countries, the intention is to signal the seriousness of the commitment to the agenda for dialogue on the issue of the transformation of the knowledge-generating fields at the global level, knowing, uncomfortably so, that 'having insisted on the authority of the Western "tradition" throughout the colonial period in Africa, Europeans must join in and contribute to the relativisation of its legitimacy' (Professor Devisch, in personal communication with the author in 1999).

Within South Africa, continentally and internationally, there is a need to establish new research protocols and codes of conduct for scientific work, by initiating a critical reflection on the ethical questions surrounding research in the human and natural sciences, and to raise new research questions. In the years to come, such interventions should inform the overall framework of the National Innovations

Fund and the National System of Innovations that have been established in South Africa.

We need to generate and present debates and analyses on the internal and external characters of both IKSs and Western knowledge systems, separately and in relation to one another, with the objective of promoting strategies and terms under which their integration can be achieved. The contributions that Western knowledge has made to the development of science and technology is acknowledged. However, it is also recognised that, despite their internal fragmentation, Western knowledge systems have achieved world hegemony under subjugative colonialism and imperial relations. Conversely, indigenous knowledge systems have undergone mutations, have been subjugated, sometimes underdeveloped and exploited, but retain the potential for human and social development.

Strategies for achieving the circular empowerment objective*

These strategies will be achieved by positing public policy dialogue as dialogue between fields that problematises the relationships between knowledge, power and human development. The basic perspective follows from Gramsci, Foucault and Freire, and has been articulated in the African context by Odora Hoppers (1997) as both a methodology and strategy for ensuring informed participation and thus empowerment. This empowerment strategy involves at least three constituencies (be they at national or international levels): individuals and organisations in civil society; the scientific, especially the academic community; and policy makers.

The scientific community is meant to include individuals based at universities, the academia in general and science institutions. In the South African context, this would include science councils. But this also includes autonomous, authoritative and influential persons in the academic or intellectual world who are able to contribute global or African perspectives on IKSs. The role of this constituency will be to interrogate and explicate the epistemological foundations of knowledge systems, and the processes of knowledge generation that take place within these institutions.

Policy makers in general refer to sectoral ministries. In South Africa, this would include the Parliamentary Portfolio Committee on Arts, Culture, Science and Technology that took the leadership through the National Steering Committee to conduct an audit of indigenous technology, as well as the efforts of all sectoral ministries. The role of policy makers will be to interrogate and explicate the epistemological parameters of current and emergent policy, specifically with reference to the

*I am extremely grateful for the invaluable and sharp insights that came out of the four days of intensive engagement with Mr Daryl McLean in late 1998. The discussions led to the crystallisation of the conceptual models that will be used in this research initiative.

relations between knowledge and power, and perceived limits to policy within existing parameters.

The attention given to rural development in policy will be given a critical re-evaluation from the perspective of IKs. This will help determine the extent to which IKs as national resources are actively incorporated into development strategies, and the extent to which expertise in indigenous knowledge is accorded cognisance.

Individuals and organisations in civil society may be drawn from constituencies presently defined as 'social partners' in South Africa: business, labour, critical interest groups (such as the Committee on African Renaissance), NGOs, and authorities in IKs within communities. Their role will be to interrogate and explicate the links between epistemology, cosmology and democratic participation, and to establish the new formula for fostering critical, self-reflexive praxis.

At a higher level, the 'dialogue' between these constituencies also signifies a dialogue between the fields of theory, practice and policy. 'Fields' are taken as discursive formations that are manifestations of knowledge and power domains. Reconstruction in the framework of the dialogue between fields implies disruption in order to create a higher level basis for action, and engender a more inclusive democratic practice that takes full cognisance of the plural manifestations of epistemology and cosmology. Disruption is regarded as essential to the contemplation of 'potential realities' (from oral discussions with Daryl McLean, October–November 1998), given the already dislocative nature of 'normal' practice, the tendency to take Western hegemony as a given, and the general disinclination to interrogate the cosmology and epistemology undergirding the social construction of reality at the moment for the majority of people who have experienced imperialist or colonial conquest.

All three participant constituencies (the scientific community, civil society and policy makers) need to engage with one another in all three fields, but with emphasis on and roles appropriate to their immediate concerns and potential contributions. The dialogue will deconstruct and reconstruct each field from the perspective of epistemology. The studies of micro-practices should lead to a reconstruction of theories, and to policy critiques and recommendations. A generative, open-ended language of description for dialogue within and across fields will evolve from an initial framework.

It is proposed that cues need to be taken from the humanistic perspective that is determined to keep the human being firmly at the centre of any research activity, aware that unless academic, development or research work is consistently human-centered, it becomes vulnerable to all of the manifold forms of dehumanisation that already abound in academic life. The humanistic perspective also desists from ahistorical analyses that conceal conservative standpoints under the guise of being 'value-free'; rather, to examine the contemporary as a reflection of the past and a guide for the future, and that without history, comparison becomes thin, shallow and rootless. It views without enthusiasm the development of comparative method

as a recondite activity for scholars and researchers who produce analyses, graphs, tables and theories that are of interest only to one another (and sometimes only to themselves); rather, to assail such parochialism and bring the depth of vision that a sense of the best can be found in humanity as a whole. Finally, it considers quite overtly the political nature of value systems, aware not only that the technocratic approach to valuations contributes to the domestication objective of learning, but also that what usually passes for value neutrality conceals powerful but hidden political conservatism (Nash 1977: 147–150).

The notion of comparison in this initiative, therefore, seeks to bring perspectives, insights and experiences from different contexts into a critical reflective dialogue on the tenets of thinking and practice, and the potential for something qualitatively better to emerge. The cases that are referred to in this volume are introduced to reflect diversity and plurality. Participants in the initiative take cognisance of the limitations and dangers posited by the reductionist project of Descartes, in which objects of study are arbitrarily isolated from their natural surroundings and relationship with fellows, *which in itself reflects a political choice aimed at controlling nature and the exclusion of other ways of knowing*. Sandra Harding has characterised this Cartesian tendency as the 'contemporary alliance of perverse knowledge claims with the perversity of dominating power' (cited in Shiva 1989: 29).

The comparative aspect of this initiative would aim at examining the manner in which the exclusion of other traditions of knowledge by reductionist science is itself part of the problem at the **ontological level** (in that properties of other knowledges are *simply not taken note of*); at the **epistemological level** (in that other ways of perceiving are *simply not recognised*, even where they should); and at the **sociological level** (in that the non-specialist, the non-expert is *deprived of the right of access to knowledge and to judging claims made on its behalf*).

How, then, can modern science be regarded as signalling advance for humanity, when it was achieved at the cost of tremendous silencing, parochial legitimation procedures and, most of all, the deterioration in social status for most of humanity, including women and non-Western cultures? (Shiva 1989: 29–31)

Critical emancipatory pedagogy

The insistence on a dialogical posture as a cumulative methodology, strategy and objective (Hoppers 1997), in this initiative is aimed at reinforcing democratic and collective emancipatory values and practices by bringing key agents for change together in a co-ordinated programme of research, analysis, planning, action and reflection. As a methodology, it draws on policy studies, popular education, discourse analysis and the sociology of knowledge in mapping principled procedures through which a dialogue within and between constituencies can set theories, policies and practices on a considered, transformative trajectory.

Here, the focus is on the epistemological dimension of emancipation, especially on the task of enlarging *epistemic cognition*, not only for previously subjugated groups, but for all. For those who have internalised linearity in history and nature, taking guidance from other knowledge systems will seem like 'going backwards'. For others who see plurality as the stable order for human societies and natural ecosystems, being enlightened by ethno-science will amount to returning to the appropriate path after having gone astray for a while on the mechanistic road (Shiva 1989: 35).

It also extends what is often conceptualised broadly as 'culture' or a 'cultural dimension' to its *epistemological and cosmological dimensions*. There is an awareness in this project that the nationalistic thrust of the liberation struggles omitted to ascribe content to world-views. This has resulted in a 'nationalistic backlash' when the new bourgeoisie apply redress narrowly to leverage for individual gains rather than fight for ways of constructing reality that was at the heart of the infamous 'mind-control' strategy of colonialism. The project seeks to reposition what was called 'objects of research' in a new dispensation – not just as 'sources of information' meant for extraction, but as authorities in an epistemological domain that have been purposefully kept subjugated.

By 'integration' is meant going beyond finding an aggregate position or middle ground upon which the two knowledge systems will then enter into an ahistorical dialogue. It introduces the power and knowledge critique and analysis of the hegemony of mainstream knowledges in terms of their silencing effects, paying attention to their nature, potentials, omissions and consequences.

The initiative problematises the tri-polar link between intellectuals or academia, civil society, and the state or policy domain, and posits these in historical and geopolitical terms. In this framework, there is recognition of a dissonance in the application of dialogue in the Freirean sense of 'naming the world', and an under-articulation of strategies to enable the effective participation of African knowledge systems in this naming. Some questions that can be asked are: What role exists for the African civil society in the process of the social and cosmological construction of reality? How can civil society's role be enhanced in a context of social democracy to include the issue of metacognition and epistemic cognition?

Within this framework, it is then possible to examine present limits to 'training' and even to education in the sense of formal instructions premised on Western cosmology. More pertinently, it would be possible to closely examine what role a pedagogy based on a Western framework plays in complicating the child-parent relationship for a schoolgoing child in African society. It would also be possible to draw the connection between what begins as an epistemological disjuncture at the early stages of childhood development, what matures into fundamental and existential alienation of persons processed through the Western cosmology, and their difficulty in later life with articulating their relationship with African civil society. The notion

of 'competency' could also be linked with identity and values that include the authority to 'speak' and to 'act'.

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Knowledge Appropriation in a Post-colonial Context

Paulin J. Hountondji

A process of marginalisation

The people's knowledge

What is wrong with indigenous knowledge systems? The current concern about them clearly indicates that there is a problem. Is it that these systems have been lost or partly forgotten, and special effort is needed to retrieve them? No, because in fact they have never been totally lost.

Most of our people still depend on indigenous knowledge – for instance, in the fields of health and agriculture, among many others. Only few women today give birth in maternity hospitals. Most babies are delivered by traditional obstetricians, especially in the countryside. As a rule, people who live in areas where there are no medical doctors have to rely on traditional health care. However, it is known that agricultural practices rely most heavily on traditional know-how, and that this sometimes proves to be far more productive than imported techniques. Indigenous knowledge has therefore not been forgotten. It is still widespread, though probably less so than it used to be in pre-colonial times. It is still largely operational and efficient, to the extent that the bearers of so-called modern knowledge themselves sometimes have no other choice than to refer to the practitioners of traditional knowledge as an alternative to their own failures. For instance, medical doctors operating in the best-equipped hospitals, top-level experts in surgery or paediatrics would tell their patients to 'go back to the village' and consult traditional healers, in some cases which seem to them difficult to understand, if not simply 'mysterious'. Respected and sometimes renowned physicists and chemists, once they leave their laboratories, do not hesitate to consult local rainmakers to ensure that their guests will not be rained upon during, for example, marriage, burial or other family celebration they wish to organise.

Modes of coexistence

What, then, is the problem? Indigenous knowledge has *not*, or *not entirely* disappeared from collective memory. It has *not* lost any parcel of its age-old efficiency either. Besides, it should *not* be considered a problem that it coexists today with so-called modern science (i.e. an imported, supposedly rational system of knowledge and know-how). The real problem is elsewhere: about the very form of this coexistence. One could have imagined a situation where the ancestral knowledge of plants, animals, health and illness, the technique of rainmaking and rain-discarding, the traditional handicraft and agricultural know-how and other endogenous pieces of knowledge and know-how, would have largely benefited from the exogenous science and technology and vice versa, in a relation of mutual enrichment. A fruitful exchange of methods, a dialogue about heuristic procedures, and theoretical and mutually pedagogical discussions could have taken place. An original synthesis of both systems would have been elaborated through a progressive integration of indigenous knowledge into the dynamics of modern research.

This was not the case, unfortunately. What we witness today, instead, is a situation where indigenous knowledge is marginalised. In the best cases, it goes its own way, *side by side* with the new knowledge system, in a relationship of *mute juxtaposition* and *mutual ignorance*, exclusive of all dialogue and exchange. In the worst cases, this process of marginalisation can even lead to the stifling and, occasionally, the collective oblivion of whole sectors of indigenous knowledge. My colleague Alexis Adandé, a historian and anthropologist from the National University of Benin, humorously recalls how, during the campaign over General de Gaulle's constitution for the French-African Community in 1958, the opponents of independence launched the slogan: 'You don't even know how to make a needle, and you say you want independence!' The outcome of the referendum proved how efficient this argument and others similar were, except in Sékou Touré's Guinea, where the answer to the referendum was 'No'. People had simply forgotten, in most parts of West Africa, about the existence of iron metallurgy and its considerable development during centuries of pre-colonial industry. This oblivion was even more surprising, as the metallurgical activity continued during the colonial period, and still goes on today in some parts of West Africa.

The problem, therefore, is about the present *status* of indigenous knowledge in relation to imported knowledge. However efficient it may prove in some of its applications, indigenous knowledge today lies in the margins of science. It appears as the informal sector, as opposed to the formal sector of knowledge. In some cases, this situation is the direct consequence of an active process of repression. Because it was endogenous and locally produced; because it could virtually threaten the expansion of the new knowledge brought about by colonisation; because the products of local industry based on this endogenous knowledge could successfully compete on the local market with the products of metropolitan industry, based on the so-called

modern science, the two forms of knowledge were very quickly viewed as antagonistic and steps were taken to stifle the former. For instance, the production of palm-wine alcohol was forbidden in the French colonies under the pretext that the technique used at that time entailed the cutting down of palm trees. The extraction of iron was repressed in the same way under similar ecological pretexts. The practical effect of these colonial regulations, however, was to ensure European drinks like cognac and whisky, as well as European iron goods, an unchallenged domination in the local market.

Ideological prejudices

An important component of this process was the ideological discourse that went hand-in-hand with repression. Things would have been much simpler if this discourse were false from A to Z. But, as is well known, ideology is never simply a set of lies. Its misleading power is all the more irresistible as it mixes both fantastic and real elements. Thus, in a way, indigenous knowledge can be said to be less 'systematic' than scientific knowledge, or described as empirical as opposed to rational. The sophistry begins, however, when one mistakes this lower degree of systematicity for the absence of any kind of coherence, or takes for sheer irrationality the specific procedures of empirical knowledge. In this regard, the problem today is that, in the context of colonial domination, we have to a large extent internalised the discourse of our former masters on our cultures, their denigrating views on African ways of life and modes of thought. As a consequence, we were and are still tempted to undervalue our own heritage, including the immense legacy of indigenous knowledge.

At the same time, however, we must be warned against the opposite danger. We have sometimes been, and may still be tempted to overvalue our heritage, by way of reaction against the first prejudice. We will then tend to deny any difference between indigenous and scientific knowledge, and will adopt a nationalist or populist stance. This amounts to closing ourselves into the heritage without any critical approach, without any attempt to update and renew the intellectual legacy, in a way that allows a higher degree of rationality and, as a consequence, a steadier march towards efficiency and self-reliance.

Things have to be considered afresh, therefore, at an equal distance from cultural alienation, which takes up the colonial masters' prejudices and indulges in self-denigration, and the proud but sterile populism just described, which results in a kind of intellectual self-imprisonment. We must accept that we do not have to prove anything to anybody. We must get rid of the obsession of the 'Other' in both ways, and make ourselves the privileged, if not the unique reference of our calculations and plans. If we can do so, then we will henceforth develop a critical and free relation both to our cultural heritage and to the exogenous culture. More exactly, we will realise that the so-called exogenous culture is, in a way, part and parcel of our heri-

tage today, and we will develop a pluralistic and dynamic view of our heritage, as opposed to a static and simplistic approach. For we are not only the heirs of the still unexplained, somewhat mysterious rituals of rainmaking. We are also, potentially, the heirs of the range of experiments in artificial rainmaking conducted in other regions of the world (e.g. Texas in the USA or the Ukraine in the former Soviet Union) and recorded by the existing scientific literature. We cannot just say, 'Our traditional techniques are better', or, conversely, 'Our indigenous procedures are mythical and not so efficient.' We have to face reality and look deep into the facts in such a way that we may understand both the traditional and the modern, and make use of both for our survival today.

Science in Africa today

How we do science

If we look closely at the way we do science in Africa, we will realise how different our practice is from that conducted by scientists and scholars in the West. More exactly, our practices seem at first sight to be substantially the same, as long as we consider just the intellectual and methodological procedures, and not the overall contexts. Whatever the discipline, we use the same methods as our counterparts at Western universities and research centres. As individual scholars, we are just as competent and productive as they are, especially when working under the same conditions, as is the case, for instance, when we migrate, temporarily or permanently, to European or American universities. What makes the difference, however, is the social, economic, political and cultural context. I do not only mean that the same scientist working in a laboratory in Lagos or Dakar may publish one article every three years or so, whereas he or she starts publishing two or three top-level contributions every year as soon as he or she settles at Yale or in Strasbourg. Such an observation, though accurate, would still be commonplace.

Beyond the appreciation of individual capability, what matters most is how much the countries and societies concerned benefit from the work of their scholars. To answer this question properly, one first has to examine the very structure and functioning of intellectual labour and, more specifically, of scientific research in so-called underdeveloped countries. My hypothesis is as follows: Research in Africa, and in all countries at the periphery of the world market, is as *extroverted* (i.e. externally oriented) as its economic activity.

Modern science as a theory-building activity

To understand this, one first has to refer to the conditions under which modern or so-called modern science was introduced in our countries. Some time ago, I called attention to the fact that, historically, science and technology in the form they are

practiced today in Africa, can be traced back to the colonial period. However, this observation implied a question that I did not even formulate: What is the difference between the form of knowledge known as modern science and traditional or so-called traditional knowledge?

Although I cannot elaborate on this question here, I will assume with many experts in epistemology that modern science is characterised first and foremost by one basic hypothesis: the idea that the structure of nature is mathematical, which allows the development of mathematical physics (instead of a purely qualitative description of nature) and the expectation that laws can be formulated in the form of algebraic equations that really express the relations between phenomena. In the world history of knowledge, this mathematical approach to nature dates back, as is commonly accepted, to Galileo. In other words, modern science is Galilean science (i.e. the form of knowledge inaugurated by Galileo's hypotheses and the methodological procedures based on them). This said, it should be noted that the fact that Galileo was Italian, or European, or a Westerner, does not matter much, except for the ideologues of Western imaginary superiority. The ideological claim that modern science should be considered as Western proceeds from a narrow vision of history that does not take into account the complex interaction between cultures. In fact, Galileo's intuition, though really a turning-point in the history of thought in Italy and on the continent of Europe, was made possible, at least to some extent, by the overall economic, social and intellectual evolution within and beyond Europe. If we understand this, we shall be more careful about assigning this discovery to some particular country or continent, though we can still admit, in a superficial sense, that this discovery was 'European'.

Science in the colonial context

It is not enough to observe that modern science was introduced to our countries by colonisation. The real question is: In what form was it introduced? How autonomous, self-reliant and self-sufficient were the research activities developed in the South? In this regard, it should be mentioned that, in the process of scientific investigation as understood in our times, the decisive stage is neither the collection of data that, in a way, starts the whole process, nor the application of theoretical findings to practical issues, which is the final stage. The decisive stage is what comes between them – the interpretation of raw information, the theoretical processing of the data collected, and the production of those particular kinds of utterances that we call scientific statements.

Under these conditions, I suggested some time ago, and I have not changed my mind since, that the one essential shortcoming of scientific activity in the colonies was the lack of this intermediate stage. We missed the central operation of theory-building. We only had the first and third stages of the process: (1) the data collection,

the feverish gathering of all supposedly useful information, and (2) a partial, occasional and limited application of the research outcome to some local issues. The medium stage took place in the so-called 'mother country', the colonial metropolis. The data collected was immediately exported to laboratories or research centres in the ruling countries, whether France or Britain, for theoretical or experimental processing and interpretation. The colony itself lacked laboratories and other facilities necessary for basic research; it even lacked universities, or, when it had any, they were so poorly developed that they could only promote, at best, the proto-theoretical procedures necessary to enlighten the data-collection process, and the post-theoretical procedures necessary for applied research in its final stages.

Thus, science in the colonies was characterised by a theoretical vacuum – the lack of those intellectual and experimental procedures that, being at the heart of the entire enterprise, depended on infrastructure that existed only in the ruling countries. This theoretical vacuum was substantially the same as the industrial vacuum that used to characterise economic activity. Countries under colonial domination served primarily, as is well known, as sources of raw materials and incidentally as new markets for the finished products of metropolitan industry. The raw materials produced locally through mining or agriculture were exported to be processed in the factories of the ruling country, partly for its own consumption and partly for re-export as finished products. Historians of colonisation call this mode of production the 'colonial pact'. As a result, local populations did not primarily produce what they needed for their own consumption and for the use of their immediate neighbours, but first and foremost what was needed for overseas export. Economic activity was extroverted (i.e. externally oriented).

Based on this, my hypothesis was that research activity also developed under the same 'colonial pact' and was therefore as extroverted as economic activity. This, I assumed, was not simply due to chance. It derives from the fact that science, as well as scholarly research, is itself a specific kind of production: **knowledge production**, to put it as Louis Althusser did, and therefore a kind of economic activity in the broad sense, something akin to the production of material goods, which is known as economy proper. I still believe that it is enlightening to analyse the process of research, as well as the intellectual and cultural life as a whole, on the same lines as economic activity, in materialist terms. I do not know so far of any other approach that would help us to understand the fact of scientific and technological dependence and imagine ways out of this intolerable situation.

I take it, therefore, that modern science was introduced by the coloniser in the overseas territories in the form of an impoverished science, an ersatz science deprived of the inner element, the theory-building activity that makes science. This, in fact, was a side-effect of the same colonisers' launching of so-called modern economies in these territories. The theoretical emptiness of scientific activity in the colony derives from the very nature of peripheral capitalism – a mode of production

based on the search for surplus, as in Europe, but deprived of the industrial activism, the will to transform, the creativity and inventiveness, the sense of initiative and the propensity to incur risk, that make capitalism productive in the coloniser's own country.

The institutional framework

In a Ph.D. dissertation on 'The status of science and research in Benin', Maxime Dahoun describes, among other things, the conditions in which modern science was introduced in the colony of Dahomey (the present-day Republic of Benin) and in French West Africa as a whole. To me, this work is not only important *per se* as one of the very first studies in the sociology of science in developing countries, but also as an empirical confirmation of my own hypothesis. Not only did the process of research develop first in the colony as a data-collection activity, but in the case of the French colonies, this activity itself was centralised in Paris, in such a way that the research units in the territories received directions and impulse from the capital of the empire. Dahoun carefully analyses the institutional framework of colonial science. Among other things, he highlights the role of the Paris-based National Museum of Natural History. The museum was founded in 1793 and until approximately 1840, famous world-wide for its rich collections. Then it was superseded by other institutions such as the 'Institut Pasteur', the Faculty of Science at Sorbonne, the Collège de France, which not only practiced descriptive science as the museum did, but developed a more modern style of investigation – experimental science.

The museum developed a colonial orientation by the end of the nineteenth century in order to escape complete marginalisation by the modern research units. A specific teaching curriculum on colonies was initiated in 1893. This teaching was designed for travellers, employees of the agricultural services and managers of the botanical gardens of the colonies. At the same time, the museum created a number of agricultural research units overseas. From 1896 on, botanical gardens were created throughout the Federation of French West Africa, namely in Côte d'Ivoire, Senegal, Guinea, Sudan (present-day Mali) and Dahomey (present-day Benin). Similar sites established by the Germans in Togo and Cameroon were continued by the French after World War I in 1919. Some of the sites were designed for specific crops: peanuts in Senegal, coffee trees in Côte d'Ivoire, palm trees in Dahomey and Côte d'Ivoire, and coconut palms in Dahomey.

For better coordination of these experimental gardens scattered throughout West Africa, the National Museum created a 'Colonial Garden' in Nogent-sur-Marne, a suburb of Paris, in January 1899. However, the methodology developed by the Nogent Garden came to be much more practical, and better adapted for the economic exploitation of the colonies, than the approach of the museum. Instead of seeking to adapt a multitude of plants to the tropical climate, the Nogent agrono-

mists tried to identify a small number of crops likely to be mass-produced with a real economic significance in a given colony. This is how the Nogent Garden came to be more productive than and progressively independent from the museum, its mother institution.

Beyond these *jardins d'essai* created in the colonies and supervised from Paris, institutions were created to promote the industrial applications of agricultural production. These institutions were and are still today based in France, mostly in the Paris area: the IRHO, *Institut de recherche sur les huiles et oléagineux* (Research Institute for Oils and Oleaginous Plants) and the IRFA, *Institut de recherche sur les fruits et agrumes* (Research Institute for Fruits and Citrus Fruits), both founded in 1942; the IRCT, *Institut de recherche sur le coton et les textiles exotiques* (Research Institute for Cotton and Exotic Textiles), founded in 1946; the CTFT, *Centre technique forestier tropical* (Centre for tropical forests), founded in 1947; the IEMVT, *Institut d'élevage et de médecine vétérinaire des pays tropicaux* (Institute on Livestock Farming and Veterinary Medicine in Tropical Countries), founded in 1948; the IRAT, *Institut de Recherche Agronomique Tropicale sur les Cultures Vivrières* (Research Institute for Tropical Agricultural Research on Subsistence Crops), the IRCC, *Institut Français du Café, du Cacao et autres Plantes Stimulantes* (French Institute for Coffee, Cocoa and Other Stimulating Plants) and the IRCA, *Institut de Recherche sur le Caoutchouc* (Research Institute for Rubber), all founded in 1960.

Beyond agriculture and agriculture-based industry, other disciplines happened to be promoted. A geological service for French West Africa was created in 1905. *Institut Pasteur*, the well known institute for medical and biological research, created an overseas branch in Dakar, the federal capital of French West Africa, in 1913. A multidisciplinary research institute, the *Office de la Recherche Scientifique et Technique Outre-Mer* (ORSTOM), was created in Paris in 1943. Then a research institute for social science and humanities, the *Institut Français d'Afrique Noire* (IFAN) was created in Dakar in 1949.

Some of the journals published by these institutions still exist today (e.g. *Bois et forêts des tropiques*, a bi-monthly published by the CTFT; *Revue d'élevage et de médecine vétérinaires des pays tropicaux*, a quarterly published by the IEMVT; *Café, Cacao, Thé*, a quarterly published by the IFCC; *Coton et Fibres Tropicales*, a quarterly published by the IRCT; *Cahiers ORSTOM*, a quarterly published by the ORSTOM, and *Bulletin de l'IFAN*, by the IFAN in Dakar.

Needless to say, besides these units specifically designed for research, the institutional framework of colonial science includes the whole educational system. The University of Dakar was created during the colonial period to host students not only from French West Africa, but also from French Equatorial Africa.

It appears from this description that science in the colonial context is nothing like an endogenous initiative, an intellectual adventure designed by the colonised people for their own development and/or speculative interest, but a systematic effort

by the coloniser to study, understand, and take advantage of, first, the economic resources and potentials of the colony, and, second, by the same token, the overall context in which these potentials develop, including the human and cultural environment. In Africa, colonial science is knowledge *on* Africa. The problem today is how to make it knowledge *by* Africans for their own collective promotion and development.

Science in the earlier stages of globalisation

We can look deeper into the past and ask: What was the situation of knowledge before colonisation, in the earlier stages of globalisation – during the transatlantic slave trade? As early as this period, non-European economies were integrated into the world capitalist market. Immanuel Wallerstein (1980) calls this process the expansion of ‘European world-economy’. This expansion entailed the peripheralisation of non-European economies, in a way that imposed on them the duty to satisfy, first and foremost, the needs identified at the centre of the world capitalist market. For centuries, the first commodity needed, in this context, was a servile labour force to develop America. The slave trade became the solution, and it was practiced without any qualms. The logic prevailing here was the logic of things. The slave was not viewed as a person, but as a commodity among other commodities. The Bight of Benin was named the Slave Coast, just as present-day Ghana was known as the Gold Coast and present-day Côte d’Ivoire as the Ivory Coast, because ivory, gold and slaves were respectively understood to be their main export products. Later on, other commodities were regarded as more important, and the slave trade was no longer necessary and stopped. Instead, direct control over the territories under domination was regarded as necessary, and colonisation began.

To relate this to our issue, we need to understand better what kind of scientific activity and what forms of knowledge production were introduced in our countries with or at the same time as the slave trade. We need to know what the relationship was between the indigenous and the imported practices of knowing. We must realise that, by the time the slave trade began, European science itself was still pre-modern, pre-Galilean. What happened then? What caused the technological and military superiority of Europe over the indigenous people of, say, America or Africa? Obviously, Western technology made considerable advances through the centuries, long before the rise of quantitative physics. This is another issue that is worth investigating on its own. What matters for the while, however, is that beyond colonisation, the important thing was the integration of non-European economies in the world market, in a subordinate place and with a subservient role.

The situation today

The question now is: How far has the situation changed since decolonisation? Obviously, there has been an increase in the number of research facilities, and sometimes an improvement in their quality. We have more universities, research institutes, libraries, scientific journals and publishing houses. We have more scientists and scholars, and better-equipped laboratories. Our scientific potential has therefore been enhanced to such an extent that it has become anachronistic to talk about any 'theoretical vacuum'. In the same manner, it would be anachronistic to describe the economic situation as an 'industrial vacuum', given the number of factories and industrial plants that have been created during the last forty years. Here again, however, I am still inclined to follow neo-Marxist economists who warned against an overvaluation of these changes. To take an example: although car-assembling manufacturers located today in former colonies may have positive effects on local economies (since they, for instance, employ local manpower), these effects are limited in scope and do not change substantially the North to South relations of production. The cars produced are not meant for mass consumption. They are luxury goods meant for the consumption of the local élite – the local bourgeoisie that serves as a channel to foreign domination. Because development cannot be reduced to quantitative growth, what mainstream economists used to consider as development may simply have been growth without development.

I, in turn, warned against an overvaluation of the changes observed in the field of science and research. True, as a result of these changes, former colonies no longer export raw, untreated material and data; they are increasingly in a position to make at least the preliminary transformation or interpretation process before exporting and/or annexation to the mainstream scientific tradition. Yet this new capability has not basically changed the scientific relations of production between North and South.

As proof of this, I mentioned a number of significant details that are too often overlooked. For instance, not only the equipment and most of the books used in our laboratories and libraries are imported from the North, but moreover, the best laboratories, and the best and biggest libraries are located in the North. Consequently, we can hardly do top-level research without migrating, at least temporarily, to the North. I described this constraint as a kind of institutional nomadism that is part of the condition of the African, or for that matter, of the Third World scientist or scholar today. I differentiated between the North-to-North flow of scholars, e.g. scientists from Britain or France migrating to America for all kinds of reasons, and the South-to-North migration. Northern scholars from second-tier capitalist countries may migrate to first rank capitalist areas to find better conditions of work and, incidentally, better salaries. The former have built, nonetheless, self-reliant economies and, based on these, autonomous research systems. The difference between Western Europe and North America, therefore, is not in nature, but in degree.

Instead, there is a qualitative and not merely a quantitative difference between developing and industrialised countries. Southern scholars have no other choice than travelling to and fro, as long as they wish to continue living at home and, at the same time, escape the drastic limitations of their own domestic research system as much as possible.

I also pointed to the fact that Third World scholars are keen on having their articles and books published in Western journals or by Western publishers, which amounts to addressing, first and foremost, a Western readership. This is probably the most pernicious form of extroversion. I insisted that no scholar should be blamed personally for trying to be published in the West – in the mainstream journals, as is usually said. I proposed, however, that this situation is rather strange and that something needs to be done about it.

Now, as a consequence of this extroversion, scholars tend to address issues that are primarily of interest to the Western public (i.e. their potential readers). Most of them tend to specialise, therefore, in the study of their own natural and social environment. For instance, social scientists from Africa will tend to do African history, African sociology, African anthropology, African economy or African philosophy, instead of history, sociology, anthropology, economics, philosophy *per se*.

Some might find this tendency to self-description most positive as a way of investigating issues directly significant for the researcher's own people. The problem, however, is that this orientation indulges too often in some kind of imprisonment into the particular. In order to give a proper account of the peculiarities of our cultures, we first need to be aware of what is universal in and about them. We need, therefore, to take that minimum theoretical distance that allows one to put things in perspective. This, paradoxically, is *not* what is expected from the Third World scholar by world science. What the Westerner needs is good informants to give him or her the most accurate information that would allow constructing comprehensive syntheses. He or she needs material to formulate the most adequate possible theoretical models that would help in the understanding of how human societies work. The Third World social scientist is *not* expected to participate in this synthesising activity. By confining oneself to studying one's own milieu, the social scientist plays exactly the role assigned to him or her in this international division of scientific labor.

I invited a new appraisal of the much talked about 'brain drain' in the light of this overall functioning of world science. Here again, a moralising attitude that would simply assert the responsibility of migrating scholars for this disastrous situation would be irrelevant. Although it must be acknowledged that there is still room today for voluntarism, because something has to be and can actually be done to correct the ongoing state of affairs, the first condition for success in this enterprise is to realise how far this scholar migration is just an extreme form of the scientific tourism mentioned above and, therefore, a logical consequence of extroversion.

A quick analysis of our research policies will show that, in agricultural countries, research about export crops is, to date, still better funded by the State than research on subsistence crops. A parallel observation can probably be made of non-agricultural countries where the economy is based, for instance, on mining. Intellectual activity is thus directly in the service of economic extroversion.

Last, but not least, a serious consequence of colonialism is the use of European languages as exclusive media for research and scholarly communication. The situation is worse in Africa south of the Sahara than anywhere else. This is the only continent or subcontinent where all the teaching and research are done in non-indigenous languages. No doubt something also has to be done here.

Appropriating knowledge

Ethnoscience and the study of indigenous knowledge

The story of anthropology is well known. Modern anthropology began with travellers' accounts of non-European customs and ways of life. These descriptions were part of what was called 'above science' in the earlier stages of globalisation. At an initial stage, most of these stories depicted exotic peoples as inferior, uncivilised, savage and primitive. One should keep in mind the social, economic, political and sometimes military context of such an appreciation – a context characterised by a complete domination of indigenous people by the European newcomers. Obviously, colonialism is not the only form of domination. The natives of America were not colonised, but what happened to them was worse: they suffered genocide and were almost exterminated. It is in this context that scholars of European descent started writing about them. It is no surprise, therefore, that the first accounts were Eurocentric and condescending.

However, scholars realised progressively that these cultures, which they regarded as inferior, still had a message to deliver. Some scholars even came to romanticise them in the style of Jean-Jacques Rousseau. They started paying more attention to the coherence and internal logic of these exotic systems of thought. Ethnoscience, the study of the knowledge systems of indigenous people, developed in this context. This happened in America. The first discipline to be given the prefix *ethno-* was botany. An agronomist and botanist, J.W. Harshberger coined the word 'ethnobotany' as early as 1895. Ethnozoology was to follow around 1914. The generic term *ethnoscience* was coined much later, in the third edition of George Peter Murdock's *Outline of cultural materials* in 1950. It was, in fact, used as a synonym for 'folk-science' or 'popular knowledge', as understood by a group of young ethnographers, especially at Yale University, who wanted to launch a 'new ethnography' during the same period. A discipline said to be instrumental in this exploration of 'folk science' is ethnolinguistics (Murdock 1950; Revel 1990; Scheps 1993).

Today, there are plenty of ethnodisciplines, such as ethnomathematics, ethnomusicology, ethnomedicine, ethnopsychiatry, ethnohistory, ethnopsychology, ethnophilosophy, and so forth. An impressive bibliography was published by Harold Conklin in 1972. Many new works have been published since, including those by Clifford Geertz, Paul Richards and Pieter Schmidt, to quote just a few examples (Conklin 1972; Geertz 1973, 1983; Richards 1985, 1986, 1996; Brokensha, Warren and Werner 1980; Schmidt 1996). The question, however, is: What is the meaning of these disciplines? What are their aims and real use? Whom do they in fact benefit? The indigenous people, whose knowledge systems are carefully studied and scrutinised? Or do they benefit, first and foremost, Western society, which accumulates data *about* non-Western societies and appropriates their knowledge systems?

Alternatives to ethnoscience

My colleagues at the National University of Benin and I published a book a few years ago under the title *Les savoirs endogènes: pistes pour une recherche*, an outcome of a multidisciplinary seminar that I initiated. An English version of the book was released in 1997 under the title *Endogenous knowledge: research trails*. Contributions were, among other topics, about rainmaking and rainmakers, about traditional iron-metallurgy in West Africa, about *Fa* or *Ifa* – a divination system widespread in the Yoruba and Yoruba-related areas, including the Fon, Gun, Mahi of Benin. Other chapters were about traditional models of mental health and illness, herbal medicine, foreign objects in human bodies, traditional number systems and modern arithmetic, animal names in Hausa, a tentative psychosomatic interpretation of sorcery and witchcraft, graphic systems in pre-colonial Africa, writing and oral tradition in the transmission of knowledge, and a case-study in food technology. My own introduction was translated under the title 'Recentring Africa', which is an interpretation of the French title '*Démarginaliser*'. I assume that the translator, who happens to be a well-known novelist from Ghana, Ayi Kwei Armah, felt that a literal translation of this one-word title as 'Demarginalising' would not make much sense for the Anglophone reader. But what I meant, was that, in Africa today, so-called traditional knowledge is still marginalised, and an important step forward would be to integrate it into the mainstream of ongoing research for the benefit of the people in Africa (Hountondji 1994).

This is where our approach differs from that of ethnoscience. We are not studying the so-called 'indigenous knowledge', 'local knowledge', or 'folk-science' for their own sake, from an aesthetic point of view, as if they were just products of fancy. We are asking how true they are, how valid they are. We are looking for ways and means to test them in order to validate whatever assertion or view can be validated, and make science take them into account in a reciprocal process of updating. That makes a huge difference. Ethnoscience does not ask any questions about the *truth* of local knowledge systems. It just describes them and leaves them as they are.

More specifically, ethnoscience is part of anthropology (i.e. the study of 'other cultures' – to use John Beattie's phrase). As such, it is part and parcel of a process of knowledge capitalisation in the West, for the benefit of Western societies. But we know that knowledge is power. It is not surprising, therefore, that part of the knowledge accumulated in that way should be processed afterwards by the natural scientists and other Western researchers, and, incidentally, developed into new devices and products. These products are eventually patented, for instance in pharmaceutical industries, by the laboratories where the so-called indigenous devices have been analysed and processed. This, of course, raises an enormous issue as to who the legitimate owner is (Beattie 1964).

Developments that have taken place in the field for the past eighteen years or so*, have helped development experts and agencies to realise the inappropriateness of Western know-how, which they used to expand in developing countries. They have come to value, therefore, indigenous uses and practices, especially in the field of agriculture. Anthropologists have followed this trend. Some of them, at least, no longer study the so-called local knowledge for its own sake, as if it was an end in itself, but as a path to social and economic development. They started doing what I would term 'applied ethnoscience'. This new approach may be considered a step forward in comparison to traditional ethnoscience (Brokensha, Warren and Werner 1980).

Something is still missing, however. Applied ethnoscience also considers local knowledge as it is, without questioning its status and mode of existence within the original culture. Its only demand is that this knowledge should be made operational. My own view is different: before being applied and in order to be better applied, 'traditional' or so-called 'traditional' knowledge should be tested repeatedly by the people themselves, re-appropriated in a way that allows the indispensable linkage with ongoing scientific and technological research. What is needed in Africa today is not just to apply traditional know-how in agriculture, while continuing to import from the West technologies that are poorly understood and mastered by the local users, whether in agriculture or in other fields. What is needed, instead, is to help the people and their élite to capitalise and master the existing knowledge, whether indigenous or not, and develop new knowledge in a continual process of uninterrupted creativity, while applying the findings in a systematic and responsible way to improve their own quality of life.

Action today

What is needed today is a coherent strategy to put an end to extroversion in all forms, whether economic, scientific or technological. Thus far, we have been

*A good landmark is the publication date of *Indigenous knowledge systems and development*. The editors themselves draw attention to the novelty of their approach, compared to traditional ethnoscience (Brokensha, Warren and Werner 1980).

involved in the mass production of export crops for the consumption of people overseas, and/or exploiting mines for their industrial plants. We have been producing scholarly articles, conference papers and books for them first, and only secondarily for our own people. We have been collecting data in all fields primarily for *their* use, and only secondarily for the use of our own people. We have been serving as informants, though sometimes as learned informants, for a theory-building activity located overseas and entirely controlled by people there, giving as many details we could about our history, our cultures, proverbs, myths, intellectual production, and so forth, to allow them to write impressive books on our societies. And when we happened to write such books ourselves, we did everything to have them read and appreciated by them first, and only secondarily by our own people. As a result, we could at best be co-opted in our individual capacity in a world-wide scientific discussion which remained centred in and managed by the North, while our people remained largely excluded from such a discussion.

These trends should be reversed, or at least corrected. We need to invent ways in which knowledge can be better shared by the North and the South in all its phases, be it the phase of production, accumulation and capitalisation, or of application. We need to develop an ambitious strategy of knowledge appropriation that will allow us to freely and critically take up anything that can be useful for us in the intellectual heritage now available in the world. This strategy should also allow lucid and responsible testing, verification and occasional validation – in short, a critical re-appropriation of our indigenous knowledge systems. We must find ways to reformulate traditional knowledge in terms of the imported knowledge and, vice versa, we must integrate the traditional into the modern in a way that allows the development of new forms of rationality, enlarged and more comprehensive than the forms prevailing today.

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Between Pilgrimage and Citizenship

The possibilities of self-restraint in science

C. Shiv Visvanathan

Introduction

Robert Jungk in his *Brighter Than the Thousand Suns* provides a brilliant portrait of Oppenheimer, the father of the atomic bomb. During the security enquiries that followed the explosion of the bomb, Oppenheimer was asked why he had made it and he answered, 'It was a technical answer to a technical question' (Jungk 1958). Earlier Oppenheimer also claimed that, when the bomb was tested, the scientist had known sin. But Oppenheimer talks of sin as if he is discovering the atomic weight of an element. He did not even say 'I have sinned' as a personal expression of anguish, of the I of the mind talking to the Thou of the soul.

I wish to counterpose this with a story by my favourite anthropologist, Loren Eiseley. In his *Firmament of Time*, Eiseley talks of an old scientist who had worked on the atom bomb. Walking through the woods, he spies a little tortoise in front of him, picks it and says, 'My grandchildren will love it.' He walks a bit further, then stops, nods and puts the tortoise down, saying, 'I have interfered enough with nature for a lifetime' (Eiseley 1966). This essay seeks to span the transition between these two stories, from a science which felt every 'can' implied an 'ought', to a science that is looking for ecological filters within itself.

Science as pilgrimage

There are many ways of looking at science. It can be seen as a set of textbooks, a collection of legislation on people's conception of nature; it can be seen as a set of institutions, organisations that can be studied in a way an anthropologist studies a tribe. My favourite metaphor is of science as a journey, a frac-

tured pilgrimage that began as a search for man, nature and God. It was an attempt to be at home in the cosmos that became a homelessness. Scientific man today is a cosmic outlaw. I see ecology as an attempt to move away from that position to recover that sense of dwelling, of being at home in the world, of learning to touch, but to touch gently. Like any journey, science too can be visualised in three phases: the rites of separation, the period of liminality, and the problem of the return.

Pilgrimages usually begin in wonder, submission and faith, but modern science is the first journey that began in doubt. In fact, doubt occupies in modern Western thought the same central position which wonder occupied in Greek thought. The history of Western thought has been a celebration of the victories of doubt over common sense. The history of the Copernican, Darwinian and Freudian revolutions has been the triumphs of doubting man. It was the science's way of seeing, the lenses and maps it constructed and placed between itself and the world that rewrote the world. It is the perspectives of the scientific self that need to be considered.

The scientific self, an invention, perfected the self as spectator. The radicalness of the self as spectator lay in the way it detached vision from the rest of the senses. The primacy accorded to the eye in the making of the linear perspective was fundamental to science. Central to the development of the linear perspective is a mediation between eye and world. There is either the window or the lens. Standing behind the window or the lens, one feels distant and detached, a self separated and isolated from the world, a neutral observer and recorder of the world's events. The self feels like a distant spectator, detached from the world, and the object becomes a spectacle or specimen. Scientific objectivity is the epitome of estrangement. What begins as a heuristic device, an artistic fiction, becomes over time a habit of the mind, a grammar of thought. The constitution of self and object, self and the 'Other', begins through the constitution of distance. Science began as an act of alienation.

Hannah Arendt in *The Human Condition* captured this beautifully in dubbing the scientific self as 'astronomical'. She described it as the ability to see the world as if one is outside it. Copernicus embodied it in his picture of 'the virile man standing in the sun overlooking the planets' (Arendt 1958). What began with the window as a metaphor, became the window as a map. The window that was like a graph or a grid, gradually became the eye with which we mapped the world. The grid-lines of the window became the grid-lines of the map and soon what was something to be seen through, became something to be looked at. It was the linear perspective that made maps, charts, graphs and diagrams possible, and the world became as if it were a set of maps. Robert Romanyshyn comments in a brilliant essay that, with the linear perspective, 'the geometrical, the quantifiable, the measurable dimensions become primary and the qualitative dimensions secondary'. He adds:

'Newton was one of the primary heirs to the vision, as his reduction of the rainbow to the spectrum illustrates. His experimental arrangements betray how the phenomenon of the multifarious rainbow . . . must be scaled down to the spectrum,

a matter for the eye alone. Turning his back upon the world of the day, he darkens the room to study light and then proceeds to cut a small hole in his window shade. Squeezing the light through the narrow opening and bending it through the prism, Newton unweaves the rainbow. Its colours yield to the laws of refraction and, so measured, the rainbow, together with the world in which it appears, is drained of its colour. Indeed, near the end of his experiment, Newton makes this claim. Colour, he says, no longer belongs to things, but to the light. The green grass and the blue sky of experience yield to “different rays, some of which are more refrangible than others”. When we adopt a world which scales the world of its quantities, the world is levelled of its qualities.’ (Romanyshyn 1982)

The reduction of the world and its miniaturisation, which began with the linear perspective, is consolidated by the laboratory. Both of them are maps of the world and maps on which we manipulate the world. Viewed thus, many of the constructions of science are acts of estrangement, where we distance our self from the world in order to see and manipulate it better. The gaze of science becomes the gaze of surveillance, where the world has to be mapped, surveyed, censused and controlled.

The act of homelessness is further exaggerated by the notion of nature in science. It is not only that nature is seen as dead, but it is also seen reductively as a resource. For example, a mountain simply becomes a repository of ore. All of this is candidly clear in an advertisement and self-characterisation of Anaconda: Nature creates ore deposits. Anaconda creates mines.

The will to power is present in modern science and technology. It is the heritage of technicity that sees nature instrumentally. The act of technicity converts science into a *perpetual mobile*, where the solution to a technological problem is another technological project. In this sense, environmentalism is only a continuation of the technological project. As a result, the myth of the perpetual machine that was a myth of limits became an actual goal. The sense of irony, of unintended consequences that science needs is fast disappearing. In fact, one of the saddest problems of modern science is that it lacks the poetry and myths that are necessary for providing limits. We keep returning to the myths of Faust and Prometheus or Frankenstein. But these myths are grooves of repetition because we see Frankenstein as different from the scientist. The scientist does not create the monster. The monster is not something distant and pathological – it is the scientist’s double and, because science lives in a world without shadows, the monster will always haunt him.

David Ehrenfeld in *The Arrogance of Humanism* lists as it were the basic assumptions of technicity as a mind-set, particularly in its dealings with the environment:

- All problems are soluble.
- Many problems are soluble by technology.
- Some resources are infinite; all finite or limited resources have substitutes.
- Human civilisation will survive.

Within such a framework of assumptions, scientists move across paradigms. One moves from a Green Revolution technology to Centres for Sustainable Development. All we have is cognitive shifts accompanied by neither grief nor mourning. Consider the Green Revolution and the devastation it created. The imposition of monocultures may not have been anticipated, but when scientists glibly accepted sustainable development and gene diversity, did they have a moment of doubt, of pain? The manner in which science is framed prevents the entry of pain, grief, mourning. Consider the problem of Vavilov zones. Edward Wilson in *Biophilia* shows that the haemorrhaging of nature and culture is unprecedented. We are losing literally one species an hour, maybe one language form a week. Yet when the scientists present this, it is presented as a census or an obituary. The question I want to ask is the following: Does the enframing of the problem prevent grief and mourning? Let me explain this. It is the difference between poverty and suffering. Poverty can be plotted on a map, a graph; it can be considered objectively. Poverty can be economised. It is amenable to scientific discourse. Suffering eludes these actions. It does not open itself to technology. It only opens itself to conversation, to sharing. It needs empathy – a Baba Amte, a Gandhi responds to suffering. A search for a different order of science could begin with suffering. Science cannot exhaust it, but science can be redeemed by it. Suffering also eludes socio-economic classification. It can no more be reduced to poverty or malnutrition than love to gametes. Words like ‘suffering’ encapsulate worlds that allow for variegated invention. The phenomenology of the act that seeks to minimise suffering is different from the act that seeks to minimise poverty. Prayer, caring and empathy are as much a part of your science, and not external to it. This is why India as a society went wrong on Bhopal. We medicalised it. We economised it. We ‘science-fied’ it. We offered the victims compensation at the level of the market, not justice. We did not mourn with them, but merely reduced their suffering to disease, even hypochondria. Because we enframe things for objectivity, we destroy possibilities. It is not just a question of observer participation. Has anyone ever asked whether Bhopal as a disaster changed the lives of even one official at Union Carbide in India or in the USA; led one person to walk out of his or her office to question pesticides; one person to work out the problem in a new way? Bhopal was never seen within the life-worlds of suffering. A disaster looked at scientifically only produces a disaster institute.

The idea of the self is exaggerated by the concept of the *community*. The question of science was all too often seen as an immaculate conception, of a discourse without a community. Philosophically, science is the one realised Utopia today. Reading Popper, or any conventional textbook, science seems among the most sanitised communities in the world.

The I of science seems a denuded I; an impoverished self without a backstage or an unconscious. It is a self without shadows. The impoverishment of the self meets

the impoverishment of the community. The community of science appears as an idealised set of practitioners – an elegant rationale for expert authority. But it is this notion of the expert as a hegemonic self that is the basis of the community.

The construction of self and community in science is best captured in the writings of three men: Kuhn, Pierce and Habermas. The community of science and the market have generally been counter-posed with each other. Both are based on self-interest, but the community of science has often been posed as a counter to the irrationalities of market and politics. Scientists like Meghnad Saha and Niels Bohr have often recommended the scientific community as the basis of international life. Writers like Emile Durkheim and R.H. Tawney, horrified by the prospect of uninhibited competition, recommended professional ethics as an antidote.

Pierce saw science as an epistemological community, with each scientist pursuing knowledge for prestige. Truth is thus the outcome of the communities' striving towards knowledge. It is merely the current best opinion in any field. But science is not a moral community – only an epistemological one. It is always portrayed as a cognitive community, where the role of the community is epistemological. A community of enquirers produces consensus, and consensus of a group of professionals becomes the closest to the availability of truth at any time. When science was a collection of anarchic communities, such a community of enquiry had tremendous validity. The convergence of opinion within it does not depend on the benevolence of any one enquirer. The entire process is strongly reminiscent of the price mechanism of economic markets. There, in accordance with the laws of supply and demand, the jockeying of rival consumers and producers looking out for their own interests, generates for each commodity a convergence towards natural price. Analogously, in a community of enquiry, the clash of erring individuals eventually produces a convergence of opinion about reality. No one in a scientific community needs to feel love towards the other members, not even love of the truth. Science as an ideal community can tolerate the self-aggrandisement of its individual members. The struggles, the competition among its members, the constant criticism are what make the community epistemologically efficacious. Viewed this way, Galileo struggling against the Church is just good public relations. The comparison between science and market is essential because both science and market are amnesiac communities, because both are hegemonic groups that force products, processes and communities into obsolescence. Both are seen as progressive. But what is progress but a genocidal word for erasure, for forgetfulness. One cannot talk of an ethic of restraint without confronting the perpetual obsolescence that science and markets impose on a community. Science has no internal filters of control to decide about this.

One recalls in this context the fascinating debate between the chemist P.C. Ray, and the geologist and art critic Ananda Coomaraswamy. Ray, in an article full of fear and trembling, comments that synthetic chemistry would destroy a whole trade.

Already, chemists in German laboratories had destroyed the madder dye, and indigo was soon to go the same way. Ray advocated a set of savants to pursue synthetic chemistry, to confront the impending obsolescence of these trades. Coomaraswamy, in his response, felt that such an acceptance of synthetic dyes was unreasoned. Synthetic chemistry, he said, would destroy the diversity of colour in India, where each family had its own way of producing the dyes. He argued that, disembedded from the local community and civilisation, lacking adequate cosmological principles, modern Western science had no way of deciding which invention was important and when. It lacked within itself the cognitive, aesthetic choices that would control such destruction.

Further, external systems of restraint like the bureaucracy and market are poor models. These might, in fact, encourage the monocultural trends in our society. If markets and bureaucracies encourage standardisation, bazaars smack of diversity. They create a world of mosaics, kaleidoscopic in variety. Scientists, I feel, should work more with the products of the bazaar than the market. Let me give an example. A group of people around Uzamma at Dastkar are attempting to revive traditional dyeing, including that of indigo. There is a poignant irony to the recovery – it is based on old memories and an examination of India Office Records. It seems British officials sent detailed information of some of these processes to England. Restraint, I feel, is not just a question of limits. It necessitates an invention of possibilities and, in this sense, science, by recovering these processes, aids what Kundera in a different context has called the struggles of memory against forgetting.

Science, because it is a hegemonised form of knowledge, cannibalised a whole series of 'Others'. In fact, the history of science has been the history of the appropriation of the discourses of the 'Other'. Consider the institution called the museum. The museum reflects the 'sensitivity' of science that meets the 'Other' only in death and dying. In that sense, both the museum and reservation objectify the 'Other', silence its voice, enframe it for objective study. One recalls Coomaraswamy's poignant words that the museum smells of death and formaldehyde. He went on to ask: 'If God were to ask where the Aztecs and Incas, the American Indians and Aboriginal Australians were, would civilised man take him to the museum?' (Coomaraswamy 1972).

The relation of science to a series of suppressed 'Others' is one of the fundamental questions today. Science, in its encounter with the patient, the worker, the madman, the woman, the tribal and the peasant, has redefined and appropriated these worlds, reduced them to lesser orders of being, subject perpetually to the gaze of science. It is not restraint that science needs, but a celebration of the plurality of these worlds.

In fact, by contending that science is value neutral, one perpetuates a lie. By claiming that science is universal, one fosters a deep ethnocentrism. One should restrain such claims to universality, yet an ethic for science has to move beyond the language of restraint.

The second lie is that science has nothing to do with politics. Science is politics, science is government. In fact, what science does, is to demonstrate that the view of politics that restricts itself to legislatures, courts, multinationals and revolutions is not political enough. Science creates its own 'microphysics of power', its own capillaries by determining discourses, by pre-empting the ways one thinks. Sociologists have shown how an array of institutions: the school, the laboratory, the factory, the army, the asylum, the clinic, have been transformed into structures of surveillance, miniature panopticons, by science. The relations of power within these organisations are no longer confined to their boundaries, but float outside them to determine general relations. The picture of the world that science has created looks like this:

- Nature is no longer nature; it is wilderness, park, gene bank, garden, plantation, biosphere, reserve, Watts Economic Dictionary.
- The body is no longer a body; it is a corpse, robot, witch.
- Its politics of power is caught in the Gaze as: map, survey, grid, taxonomy.
- It has appropriated the voice of the 'Other' (i.e. the voice of the patient, tribal peasant, worker, woman, madman).
- It has also panopticonised the following into institutions of surveillance: the laboratory, museum, prison, school, factory, army, clinic, and modes of organisation that, as modes of thought, escape into the wider society.

Restraint alone will not do. Such a way of posing the question carries only a limited range of solutions. We are caught in some notion of puritan morality on Freudian psychologising about repression, restraint and sublimation. The notion of restraint introduces a sense of limits rather than of harmony. There is a world of difference. It is equivalent to the difference between dieting and fasting. Diet is the world of calories, of measure, of nutrition. Fasting is the world of food, of rhythms, of harmony. You can diet to lose weight, but you can fast for peace. The world of fasting is more polyphonic than the world of dieting.

How, then, does this homeless hegemonising science recover its sense of questioning and dwelling? We have to move from the glossary of restraint to a language of celebration. Let me list the dance of possibilities:

- **Crying:** Crying is essential – for the earth and for what science has become. Crying for Bhopal, for Narmada, for Hiroshima, for the victims of every dam and every holocaust. There is more truth in crying than in any Cartesian meditation. Crying for the death of the apple, crying for every seed that disappears, for every language that is lost; crying for science which seeks mastery, certainty, hegemony. Crying is essential. It is the speech of powerlessness and helplessness. Every laboratory maybe needs a wailing wall of remembrance. As an exercise, carve, scribble or paint what you like on it. Crying is not a mere reflex activity: When you cry you care, and caring and crying may inaugurate new social prac-

tices. Crying creates the need for openness, for contact. The tear may transform the scientific 'eye/I'.

- **Renunciation:** Science smacks of power and of violence, and one possibility that has not been explored fully is the role of renunciation. I am always surprised that one sees so little of it in science. One expected it most around the issue of the atom bomb and of genetic engineering. Yet Robert Jungk in *Brighter Than the Thousand Suns* remarks that almost no scientist ever thought of this as a possibility. The only one who did so in the immediate aftermath of the bomb was a woman, who took to law.
- **Cognitive indifference:** Science is hegemonic knowledge and, if one realises that 'scientification' creates as it were a disenchantment of the world, one could practice today a cognitive indifference to science in some aspects of life, and keep it out of certain domains like old age, child-rearing and schools. One needs to practice a playful indifference to it. I am reminded of Raimundo Pannikar's story of the technological American and the native Indian. The American told the tribesman greeted it with sheer delight, thrilled that both were where they wanted to be. Cognitive indifference is also a strategy, given that science and technology have become iatrogenic. Iatrogeny has been defined as doctor-induced illness. The term today can extend from medicine to town-planning, agriculture, even energy domains, where the scientification of the problem has added to the quality of violence.
- **Alternative cognition as an imperative:** This viewpoint was articulated beautifully by the great English socialist and scientist, Alfred Wallace. A man with theosophist leanings, Wallace wrote a remarkable book titled *The Wonderful Century*. The first two-thirds of the book is an accolade to nineteenth century science. But the character of the last third changes radically. Alfred Wallace argued that a science, in its moment of victory or dominance, becomes intolerant and dismissive of dissenting imaginations within it. These defeated imaginations carry the crystal seeds of future or competing truths, and Wallace hinted that it was cognitively imperative for science to keep them alive. The book includes critiques of vaccination, a case for spiritualism and a defence of phrenology.
- **Self-experimentation:** The distancing between scientist and object often allows the scientist to vivisect the object without qualm. Now that science has escaped the laboratory and become incorporated into models of social work, economics and development, science practices an everydayness of violence on the people. Self-experimentation can be a tremendous antidote to this. There have been examples of self-experimentation in science. One recollects the names of Jenner and J.B.S. Haldane. But such a practice needs to be much more extensive, using one's body as a source of insight. Such revelation can add to the richness of the experiment. Self-experimentation goes beyond observer-participation of anthro-

pology and quantum physics, but stops short of life-style change. The scientist can bring about an even more ecolate knowledge of science and self by altering his or her life-style.

What I have listed above are sets of spiritual exercises. One wishes one had a Gandhi or a Loyola to construct such a book for science, with exercises which, while spiritual, are also deeply cognitive and political. I think in this lies the real answer to the Cartesian meditations or to Bacon's *Novum Organum*.

If science eventually is to be a spiritual exercise, it needs to be playful. A pilgrimage always needs the carnival and its *communitas*. Not since Rabelais has science produced a medicine for its melancholy. One needs laughter, the playful inversions of the clown, the surrealism of Dali to enter science, because at present it is too pompous and too burdensome: it is over-serious. Only laughter can break the brittle authoritarianism of science, dissolve the methodological pomposities, the dullness of the cardinals of Indian science like Swaminathans, the Menons, Iyengars, the Ramannas, with their cuckoo-clock pronouncements of boredom or their clichés on the scientific temper.

The tragedy of science is that it has lost its sense of play. I think this is the basic testimony of a work like Paul Feyerabend who laughs at the heaviness of science and the even more empty weightiness of its cardinals, the theologians of science like Karl Popper or his minions like Agassi et al. This same sense of playfulness is captured in James Lovelock's Schumacher lectures. Complaining that science was something to be done at home, like writing, painting or composing music, Lovelock remarks, 'No report of a science laboratory asks how many children played there, how many students entered willingly to work in it. No report ever asks how many scientists can name the flowers in their garden.'

It is this same sense of play that ecology restores by multiplying alternatives, life-styles, life-forms, by showing that science should mimic nature in its playfulness. Today, the clown, the fool, the jester are no longer exemplars of science. Even dissent by the Greens is so utterly heavy and melancholic, as if life were a string of Chernobyls. If science were playful, it would show the possibilities of the harlequin in Einstein or Feynman.

The role models would change. Possibly because science sees nature as dead, science too becomes deadening, incapable of infusing life-giving metaphors into itself. From Chernobyl to Star Wars, from cancer to AIDS, science obtains its grants through fear or greed or insecurity. Play can bring genuine seriousness into science. The comic is rooted in faith – a faith that equalises and pluralises, moves away from the sober, monolithic world of modern science. I think it is time science goes public, like the old lectures that Faraday or Raman gave. Then science will begin again in wonder and not in doubt. Just imagine doctors laughing with patients, treating them as peers, or scientists emptying every experimental animal from their cages in sheer

relief at abandoning the dowdiness of vivisectional science, of science congresses with the style of *melas* or bazaars or circuses.

If science discovers its roots in the sacred and loses its sense of homelessness, the moment of return can begin. If science as pilgrimage captures one part of my view of science, the idea of citizenship encapsulates the other part of the problematic – the relation between science and democracy.

Science and citizenship

Democracy has become a moribund vision today. In fact, if one looks at social science, one notices it is totalitarianism that has generated the best of political theory from Adorno to Arendt, from Zinoviev to Vaclav Havel. The citizen as actor has been reduced to either the role of voter or consumer, and both are amenable to domestication by rational choice. Third World countries seem utterly captive to the Trojan horse of development.

The only real questioning comes from grassroots groups across the world, struggling against large dams and nuclear projects, fighting to save forests, dying tribes and dying languages, and searching for a new language of politics to articulate these struggles. These grassroots groups have raised the question of the relation between science and democracy, blackboxed or whitewashed for too long. It is they who have raised, in an everyday way, the fact that too much is made of the separation of church and state, and too little of the incestuousness of state and science. For these groups, ecology is an attempt to expand the imagination of a democracy. For these groups, the naïve view that science promotes democracy has to be bracketed phenomenologically and politically.

We realise today that knowledge is a life-form; that knowledge of a culture is tied to a people. When you destroy a forest, you are not just destroying nature, you are destroying a way of life. We often separate the tribe from its forest, but nature and culture are interwoven in myriad ways to create diversity, and democracy needs diversity today. Paul Feyerabend in *Farewell to Reason* argues that the rights that democracy talks about are rights of access to one standardised way of life. What we need are rights of different traditions to exist, the right of different knowledge-forms not amenable to science, to thrive. Modern Western science has become the equivalent of an enclosure movement. When you convert the forest to a plantation, when you mechanise trawling, when you reduce a traditional field to a monoculture, you are recreating monocultures of the mind. When you standardise the mind you destroy the fecundity of citizenship.

Since the French Revolution, democracy carries with it a deep technocratic bias. Deep in democracy there is a fear of the mob, of anarchy, of the irrational crowd. We counter-pose with it technocracy, the rule of the rational expert. The modern citizen as a role is caught in the pincers between expert and mob, between being 'ascientific'

and 'a-rational'. The citizen as layperson frequently loses out to the expert, who is allowed to pre-empt his or her life-chances.

Democracy today faces three fundamental challenges, the first of which is to create an ecology of knowledge-forms. The present power system of knowledge that privileges modern science, modern medicine and modern agriculture over traditional systems of knowledge will not do, because it means that the person in the city or the school-going child has more value, more rights, than a peasant or a child of a nomadic family. This hierarchy enters into science itself. For example, energy institutes privilege research into electricity over studies on firewood. The world of biomass is allegedly for the second-rate scientist. Secondly, one has to realise that science as an enclosure movement is destroying or museumising alternative knowledge-forms. Within the current discourse on democracy, all we have to resist it is the language of rights. But this is fundamentally the discourse of individualism. The defence of nature and the defence of dying cultures are inadequately conceptualised within such a notion of rights. This is one reason why the notion of rights has proliferated to include the right to food, the right to nature and rights to culture. The world of heritage and the common needs something more potent than the notion of rights. When a bacterium is patented or the *neem* is declared to be the latest invention of some illiterate and philistine multinational, as protesters we can speak only the discourse of property. *Neem* is not our property; it is our heritage, our tradition, a part of the cultural common. It is us. To speak of it as a right to property already is the language of the depredator. Knowledge is a gift and we have to respond as Fidel Castro did by saying we never charged for our dance or music. No one even thinks of copyrighting Cervantes or Shakespeare. In fact, Castro, in one of his early speeches, claimed that knowledge about Cuban sugar would be free. We need the confidence to say with Gandhi that we believe that knowledge is a gift, or claim with one of our most respected scientists that if you want to patent *neem*, we will deduct 500 million dollars from our current aid repayments.

The third challenge demands that we stop looking at the citizen as a layperson before the priests and experts of science. The citizen is a person of knowledge. In fact, I would go to the extent of insisting to contend that every person is a scientist, every village a science academy. Narmada and Bhopal have shown that no citizen can give up his or her claims of knowledge to an expert.

The above three steps also create a more fruitful interaction between the citizen and those currently designated scientists. We have to institutionalise mechanisms whereby major scientific and technological projects are brought within the democratic process. Let me suggest five measures as a first set of tentative steps, which I feel scientists should initiate as a process with local communities rather than have it imposed on them.

1. For every mission in technology, we need some kind of institutional ombudsman. This should be instituted at the beginning of each dam and forest project.

2. Processes of referendum and recall should be employed for all public works projects.
3. Civil rights teams should have, along with local communities, full access to all reports on these projects. Scientists should participate actively in these groups, rather than pretending to be neutral experts or professionals. The conspiracy of silence over Bhopal should not be repeated.
4. Citizens should have access to institutions like the Indian Standard Institution, and help formulate safety and health standards along with alternative technological scenarios.
5. The process of auditing has, so far, been encapsulated in cost-benefit analysis. There is some talk of environmental audits, but there is little or no participation in these. These are technocratic exercises. We need social audits done by villages and slums, where stages of the life-cycle and questions of de-skilling are considered. These need not be done with standard economic indicators, but through story-telling. The scientists should develop the honesty and sense of hearing required to listen to these stories.

Once the citizen becomes more active as a scientist, we can think of people's science institutes outside the market and government. Why can temples, *Waqfs* or *Gurudwaras* not float institutes? Not every discussion of religion has to be swept under the carpet of communalism. Why can we not have *ashrams* for science, where scientists look at basic questions and live a life-style in consonance with it? It is true that a large part of the scientific community is vociferously middle- or upper-class, but we must create opportunities for our own dissenting academics.

What we need more than restraint, is to encourage whistle-blowing. We must see the scientist not as a value-neutral monster, but as a 'person' of conscience. The citizen must help the scientist to see the availabilities of the democratic self. In fact, in times to come, we might have to adopt scientists as prisoners of conscience and create opportunities to pursue such dissent.

Once the citizen takes the sciences seriously, as a part of his or her citizenship, the scientist in turn may respond to issues like Kaiga, Narmada, Tarapore, Bhopal and the innumerable everyday Bhopals and Narmadas in housing, farming and energy.

It is obvious today that science is a part of the state, and the scientist must use such money creatively for welfare activities. Something like the Tamil Nadu midday meals scheme for children demands a salute. But as the citizen becomes a person of knowledge, the scientist must become more of a citizen.

Modern science began as a powerful dissenting imagination, and it must return today to becoming an agent of plurality, of heretical dissent.

Dissent against power or even the misuse of power is like an initiation rite. It is the ritual one must take most seriously. It must be clear-sighted, open, always respectful of the opponent; it must become alive to selves long suppressed. Given that over 50% of science is committed to defence, and given that, of the remainder,

much goes to the world of the modern market, how does the scientist set about the task of creative resistance? How does the scientist begin his or her experiments with truth? The answer is obvious, it is to begin with the greatest inventor of them all: Gandhi. Gandhi insisted that both morality and science demanded inventiveness.

The scientist as analyst becomes his or her own case-study and takes him or herself seriously. Science must not become a role or a mask behind which he or she hides. It must be part of the person – not just the office. Begin with small things of self and life-style. Make your diet or the way you travel an act of empathy. Clean your own table. I wish there were a survey to find out how many scientists or university people clean their own tables. Listen to your dreams seriously. Try to make fasting a part of your scientific discipline. Help children come alive to nature. The small things, these little acts, will prevent science from becoming an act of thoughtlessness, something so mental or cognitive that it refuses to talk to the rest of the soul. Language is crucial. It was America's first historian of science, scientist Charles Pierce, who demanded an ethics of terminology. Add to these ethics a concern about language. Explore the genealogical roots of every term – mass, energy, efficiency, productivity and time – and find what its cultural roots are. Examine the biases it contains. Create a little book, a philosophical dictionary of terms that one employs so unconsciously. Realise that modern science desemanticises entire worlds. Take food, for instance. Do not reduce it to calories and nutrition. Link food to rituals, cuisine, waste. Only connect. Gandhi did it for *khadi*. He claimed that, around *khadi*, one could create a kaleidoscope of community programmes, programmes for animal improvement, malaria control, *panchayati* activity. Link in a similar way one's science and one's life around such focal points.

Such initial preparation is essential for the harmony of resistance, for dissent – like fasting – is not disruption, but a search for harmony, a oneness with nature and the community.

We can now think of the more important transition from resistance and dissent to something more creative.

Non-participation is also important. Refuse to participate in any project that does not make sense. Invent forms of resistance in the laboratory. Remember, morality like science has to be invented individually. With such basic preparation I think scientists should be ready to step out of the official laboratories and take positions on Bhopal, pesticides, the Green Revolution, computers, information, on quantum physics or theology. Around these groups, we must multiply the communities available to us.

I feel, however, that the structure of official science is such that scientists across the board must speak openly about major issues in science. There is no debate in science about defence expenditure. The Indian scientist can do more for *rapprochement* with Pakistan by calling for a complete abandonment of Indian missile

programmes. *Baliapals* of protest must come from within science and technology, not merely from villagers, poets, housewives and schoolteachers in Orissa.

The ossification of the Indian state and the scientific élite is such that I believe a civil disobedience movement is necessary. I think that is the most meaningful experiment of all. Scientists must step outside the laboratory to show that there is a more gentle medicine, a more caring technology, and a more visionary way of managing forestry.

If play at the cosmic level and play at the social level redeem the notion of science as pilgrimage, then the idea of civil disobedience in search of an alternative science shows that science is truly political.

For years, I have dreamt of a *Satyagrahic* science, a style of doing, dreaming knowledge that is at once cognitive, political and ethical. I feel that, by looking at science through the twin metaphors of pilgrimage and citizenship, the rudiments of such a science can be born. It dreams of a cosmos as God's play, of nature alive as *anima mundi*, of a technology as powerful as prayer, around myths of sacrifice that have a deeper poetry than the stories of Faust or Frankenstein. I believe that playfulness is the real grammar of restraint. For me, democracy is also the most creative form of politics. When science as pilgrimage combines with science as democracy, the rudiments of a *Satyagrahic* science may be discerned.

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Indigenous Knowledge Systems and the African Renaissance

Laying a foundation for the creation of counter-hegemonic discourses

P. Pitika Ntuli

If you do not know where you come from, you cannot know where you are going. If you do not know where you are going, any road will take you there.

African saying

The wise have said, to know who you are is the beginning of wisdom. Africans are a people of the day before yesterday. In potential, we are a people of a day after.

The Africans: A Triple Heritage

Introduction

Africa is neither Europe nor America. Africa's problems are not European or American problems. Africa's solution to her problems cannot be anybody's but Africa's. If we accept these truisms, we then accept that Africa has to find her own indigenous ways to define, identify and address her challenges. The clarion call by Ngugi wa Thiong'o (1987) to decolonise the (African) mind has been with us for time immemorial. It is now time that this call be converted into action. It is my aim in this paper to explore and suggest a programme utilising Indigenous Knowledge Systems (IKSs) as a counter-hegemonic tool. To do so we need to deconstruct the very notion of IKSs and expose the double standards that both Eurocentrism and its African converts practice.

That Africa has been balkanised into Anglophone, Francophone and Lusophone, confesses to the denial of Africa's own languages. Language as a conveyor of thoughts, philosophies and ideologies, was deployed to empty African people of their right to define and express themselves and their sensibilities.

A language represents a specific world-view and ontology. There are words and concepts that elude translation. We will examine in detail the consequence of this denial. Centuries of Eurocentric indoctrination has resulted in many of Africa's 'intellectuals' believing that there is only one way to think, act and express themselves, and that way is the Western way. To speak to these 'intellectuals' about rethinking their models and embracing the African way, is to place one's head on the parapet. Yet the life of an academic is always predicated by this head-on-the-parapet factor.

We would like to argue that, unless African thinkers agree to carry out the archaeology of their origins as well as their thought systems and to examine the route taken by other nations in their drive from underdevelopment to development, we would remain captives within the citadels of Eurocentric thought. For instance, Japan did not attain its status as a leading industrial state by aping the West. From 1868 onwards, Japan, under the Meiji restoration period, chose to utilise and improve on Western technology under the guidance of their Japanese spirit. In Asia, all nations resorted to their languages, their culture and traditions to guide them in their drive toward development. It is only Africa that is trying to perfect its aping antics.

Africans were told that they were backward and savage, that they had no history until the West discovered them. They accepted the lies that they had no history and no knowledge systems; at best their knowledge systems were nothing but a set of superstitions. We are going to argue that underneath those denigrated superstitions lay layers of thoughts that have eluded Westerners. We will also examine how intellectuals and others in different countries have used their belief systems in the service of development, and what lessons can be learned from them.

We have entered what is now described as the 'African Century', the century of the African Renaissance. The renaissance as a rebirth requires of us to re-examine our knowledge systems anew, with a view to extracting some lessons from our past to distil what can be of use at this current moment and what has to be jettisoned. Colonial discourse framed and fixed the African as a *tabula rasa* that needed to be filled with knowledge necessary for the West to control the world. Christianity, education and culture were used as instruments of control, until they reached a hegemonic stage where the natives believed that what they were taught was the truth, the only truth, and nothing but the truth. However, those natives who were not so exposed to Western education held on, as best they could, to their world-views and belief systems, which we hope to examine and use as counter-hegemonic tools.

Finally, we will argue that the world-view of traditional Africa, and indeed of all traditional peoples of the world, bear striking similarities with some of the aspects of quantum physics as articulated by a growing number of thinkers like Capra, Zohar, Feat, and others.

Let us now embark on a journey of self-discovery. Let us begin to lay a foundation for the reclamation of our own minds, held captive by foreign concepts we churn out

with alacrity. Let us pause and consider if we are equipped to undertake this task. Let us prepare to remove cobwebs of ideas from our brains and minds. We have traded our African gods and goddesses for plastic white gods; our black spirits for insipid Eurocentric ones. We have sacrificed our ideologies on the unholy altars of Eurocentric convenience. We have lost our souls, which roamed freely in the intricate jungles of thought, in the symmetrical streets of European thought. Is it not time, within the silent spaces of our beings, to return to the citadels of our past, to rummage for lost answers to the path of progress? Is it not time for us to reclaim our losses, to speak with confidence in this new globalising world? Time to forge new knowledges in this era of knowledge revolution?

To invoke African knowledge systems as a basis upon which to build new knowledge systems for the purposes of contributing to the task of bringing about Africa's rebirth requires of us to embark on a journey of reclamation. The term 'reclamation' has a long and varied provenance. In 1486, it referred to the act of recalling a hawk or falcon let loose to kill other birds and bring them back to the falconer. In 1590, it included recalling a person from wrongdoing, and by 1799, ten years after the French Revolution, it referred to the recalling of the land. In 1760, it meant to bring (savage people to) a state of civilisation. By 1865, it referred to a fair field with no aborigines to be protected or reclaimed. (They were probably all killed in one of those genocidal pogroms!) Finally, in 1833, the definition referred to 'the action of protesting, calling for or bringing back from wrongdoing', it referred to a reformation, and, in 1868, it referred to the action of claiming the return of something taken away. In our context what do we mean by 'reclaiming African culture, religion and values for African development'? What culture? What religion? The answer to these questions will form part of what should constitute the agenda for the African Renaissance.

Creating the context

We now live in the world of quantum physics. It is the world of nuclear power, laser beams and the microchip; the world in which the transformation of technology has developed side by side with extreme deprivation and poverty. It becomes clear, therefore, that poverty is not a matter of technological advance, but that of political and economic machinations. Our perceptions are fundamentally affected by this revolution, in the same way that both the Cartesian and Newtonian world-views changed our view of the world we live in and our roles in it. Quantum theory permits us to conceive of the world in which yes/no and either/or can exist simultaneously. It frees us from the world of binary opposites as an organising principle so prevalent in Eurocentric thought. Quantum theory provides us with a conceptual framework with which to examine our world from a new perspective.

We would argue that the wave-particle duality, the principle of complementarity, the uncertainty principle, interconnectedness and non-local co-relations affect us in our daily lives in the same way that Newton's mechanistic language affected us. I will argue that this world is consistent with our own African belief systems. Where Europe conceives of Body and Mind, we see Mind-Body. Note how Western thought applies this division in practice. Note the list of words derived from Newton's mechanistic world-view: it is a world of 'cogs and wheels of power', 'the machinery of state', 'engine of power', 'driven by', 'geared for', and others. The Newtonian world-view typifies that of opposites *par excellence*. It refined Platonic logic in which mind and body are totally separated. It offered us the world of 'positive/negative', 'either/or', 'yes/no'. It completed the separation between thought and feeling, privileging thought over feeling as a guiding principle. This was the world-view that privileged white men at the expense of women and black people.

The separation of mind from body led to the world in which the following phrases were generally accepted and used: 'head-office', 'headquarters', 'head-hunted', 'headmistress', 'headlines', 'headed for', 'headlights', 'letter-headed paper', 'head-chef' – the list is endless. The implications of this kind of language are incalculable. Our attitudes and social perceptions, the way we think about ourselves and the world around us, how we relate to each other, reflect our deep immersion in mechanistic thought. To bring about the renaissance we need to change, in fundamental ways, the way we order our thoughts and ideas, and to think in a totally new and radical way.

We will briefly examine the philosophical construction of Western thought to lay a sound foundation for the discussion of African thought. The process began with Plato's separation of thought and emotions, decreeing that to study a phenomenon, one must remove oneself, at least emotionally, from it. To remove oneself emotionally from something or somebody is to view that thing or person instrumentally – as something that one can use and/or exploit. To separate one's self from the phenomenal world is to objectify that world. This is what an African world-view rejects. It perceives human beings and the phenomenal world as extensions of each other. And it is through this that a harmonious balance between humans and nature is maintained.

The Platonic world-view was further refined by René Descartes and Isaac Newton, and these world-views had an incalculable effect on relations between human beings and nature on the one hand, and Europe and the rest of the world on the other. Once this division began, its logic would continue to fragment and split humankind into the 'good and the bad', 'the rich and the poor', 'the colonised and the coloniser', and Nazism and apartheid became the climax of this logic. Resulting in the objectification of 'non-Europeans', F. David Peat (1996) writes: 'Quantum theory stresses their reducible link between observer and observed and the basic holism of all phenomena.' He continues to stress that indigenous science recognises no separation

between the individual and society, between matter and spirit, between 'each of us and the whole of nature'.

Whereas Newtonian physics saw dichotomies, quantum physics perceives interconnectedness. In the world-views stated above, dualities were graded. Class society is a typical example of such a grading. In the wave-particle duality, neither wave nor particle is considered more real. They complement each other. Both are also necessary if we are to get a proper understanding of what light is, for instance. Therein lies the Principle of Complementarity. The African world-view permits endless alliances to be maintained by cultic acts that invoke energies, spirit powers and life forces, through masquerades and carnivals. Through these, the spirit of endless renewal is guaranteed. The notion of the African Renaissance can be located in these acts. For us to be competitive, we need to harness this spirit and direct it toward new forms of productions.

The examination of Western thought points to a philosophy of division and control in a world governed by hierarchies of value. The encounter between the West and the rest of us resulted in us losing sense of who we were, what our purpose in life was, and what our ultimate destiny was. Our world-views were partially erased and distorted. Our history was either denied and/or grotesquely distorted beyond recognition. We have to reclaim our history, for the reclamation of history is the path that leads to the recovery of national pride, without which no nation can compete in the global market of ideas and products.

There is a marked difference between a Western and an African cosmo-vision – how we view our assumed relationships between the spiritual world, the natural world and the human world. How each society describes the role of supernatural powers, the relationships between humans and nature, and the way natural processes take place. Embodied in this are the premises on which people organise themselves and determine the philosophical basis for intervention in nature. In South Africa, the land question has a lot to do with our diminished intervention in the pursuit of a clear cosmo-visionary project. However, there is much extant knowledge still to be examined.

It is in Africa that humankind first saw the light. Recently, a new discovery was made – that of a 3,5 million year old full human skeleton at Sterkfontein; underscoring the fact that it is here in Africa that civilisation first kissed the fragrance of dawn. That civilisation and all that it implies began in Africa, is now also beyond dispute. What is being disputed is whether Egypt or Nubia is the cradle of civilisation. For the African Renaissance to succeed, first we have to remove the distortions that surround African history. This is the project that Cheik Anta Diop, Ivan van Sertima, Maulana Karenga, John Hendrik Clarke and other Africans have undertaken to do. This is the task we must all join and train more scholars to pursue. The African saying, 'As long as the history of hunting is written by hunters, it will always favour human beings', holds true. Whoever controls the image controls the person. The

image of Africa as the veritable cesspool of civilisations has debilitating effects on all Africans and in all what we do.

We must now turn our attention to the examination of African value systems that we seek to see reborn. Contrary to Western thought, African thought sees life as a cycle; the world as an interconnected reality; human beings, plants, animals and the universe as one interconnected whole, and that our survival depends on how these forces interact with each other. In all societies, the beginning and meaning of life lie within the world of myth, and these myths are given form through rituals. For these rituals to be effective, dances and other cultic acts are performed, and art objects are created to give form and potency to the ritual. In other words, songs are composed, dances performed, and sculptures and other art objects are created to support rituals.

These rituals accompany us throughout our lives, from birth, through initiation ceremonies, weddings, festivals, funerals and many other events. The purpose of the events is, in the case of African people, to secure the place of humans in the wider scheme of things. The African believes that the world we live in is sacred in nature and that our role is to preserve and protect everything in it; that when the umbilical cord of the child falls off (not cut off), we consecrate the spot where it fell to create a sense of place. Hence, the land question is more than a matter of agriculture. It is agriculture with a difference. It is a link with the supernatural forces that guide our destinies. Traditional Africa provided us with a world-view that recognised our sanctity as people and sought to secure our place in the wider spheres of life; to help give meaning and form to our strivings for oneness with the cosmic spirit that guides us.

Traditional African society and other societies in the so-called Third World and Fourth World hold a view similar to quantum theory. The view that an individual is no more important than a community inasmuch as a particle is no more important than a wave, is central to African thought. They attest to their mutual independence. They demonstrate the Principle of Complementarity. The civilisations that our ancestors created were premised on the maximisation of human potential. Initiation ceremonies sought to help the initiates to order their lives in line with the dictates of the universe they inhabit; to influence it in ways that will ensure life, continuity, stability and prosperity for all. They existed to reinforce group cohesion where, today, we see only wanton violence, death and destruction. It is this spirit of mutual benefit and co-existence that we must nurture in the rebirth of Africa.

The following points schematically represent the fundamental bases of an African harmonious unit of society: the family as a basic unit of a clan, the clan as a unit of a nation. Through these units, structures for the maintenance and preservation of peace were introduced.

- (a) The family had to ensure that its members married and procreated. These marriages were well and subtly arranged between families to ensure that, in moments of crisis, the resolution of conflicts was as smooth as possible.
- (b) Mentorship programmes (the *amaqhikiza* system) within society;
- 3. Harmonious existence and the resolution of conflict:
 - (a) The role of festivals and carnivals in the maintenance of peace;
 - (b) Masquerades and the use of art, as in masks;
- 4. Organs for the maintenance of peace and harmony:
 - (a) The role of secret societies (women's and men's secret societies);
 - (b) The role of the councils of the elders.

In all these, land and the raw materials were central to the success of the group. In societies in Nepal, Colombia, India and other centres, people's cosmo-vision are being utilised for development. Hence, it is important for us to diversify our search for paradigms for change and to realise that the West is not always the best. We will examine these paradigms later in the paper, suggest how these can be adapted to fit our local conditions, and also to draw similarities based on our knowledge.

The West expropriates our raw materials, packages them, and then returns to sell them to us at exorbitant prices. And we become fascinated by their 'genius'. They exploit our intellectual materials and turn them against us. Our 'barbaric' rituals that attempt to maintain ecological balance are returned to us by Western ecologists who design courses to 'help' us to respect nature. *Izangoma* and *izinyanga nezanusi* (traditional healers) who long resisted the fragmentation of their vision of health, who always insisted that healing involved the whole person (body, mind and spirit), are today joined by Western physicians who have come to realise the wisdom of indigenous science.

Initiation ceremonies, festivals of the first fruit, *ukubuyisa* (the Ceremony of Return performed a year after death to welcome back the deceased into the community), *ukuphahla* (to thank the shades by sacrifice) and other such communal activities, were about renewal and the revitalisation of people. This is what the renaissance is about. Initiation schools taught youth survival skills, communication skills, safety, conflict resolution and prevention, and ecology. Would these not be good models for youth programmes?

Rethinking ubuntu

An African-centred world-view recognises the cyclical nature of events and of the nature of existence, hence the rituals alluded to above. Practically, let us trace a typical life of an African after he or she 'dies'. First we are born, which means we join the world of the living. We die to join the world of the ancestors. Between the time of death and that of joining the ancestors, we occupy the world of the living-dead. After *ukubuyisa*, the dead exist in our midst and are referred to as if they are visible.

The cycle of being is completed. In a world-view like this, the issue of the rebirth of Africa is essential. For a people whose major or main activities are about constant renewal, it is surprising that it is only now that the matter of rebirth has become so hotly debated. On the other hand, it is not a surprise, because as people who were under occupation, we were denied the opportunity to be ourselves.

The African Renaissance is therefore about recapturing the spaces we need to reinvent ourselves, and to fashion ourselves with knowledge systems and strategies to lead us into the next millennium as independent people, capable of producing goods and value systems worthy of our dignity. In the past, we produced goods and traded them with the Chinese, Indians and Arabs. The archaeological finds in Thulamela, South Africa, provide us with plenty of evidence to prove this. Through the African Renaissance project, we seek to recapture the spirit that based its existence on production and consumer levels that were equitable and fair. It must also seek to help us distance ourselves from some of our unsavoury past. The notion of the African Renaissance is not a new one – it has a long and varied history.

The African Renaissance project seeks to create an ethos that will help reshape our educational models. It aims to re-focus our intellectual and emotional energies towards a more holistic vision of society, to bring about new methods of socialisation – methods that will help break the stranglehold of Eurocentrism and usher in an African-centred one – mindful that the way we think and act is a result of our socialisation. It is a result of our upbringing and behaviour patterns inculcated in us. All our actions are an expression of our way of life. In other words, we shape and are shaped by the way we were brought up. And we are products of our culture, for it guides our actions, helps us set out our priorities and sets up the methods of achieving them. When we look around us, the houses in which we live, the schools and offices in which we work, our modes of transport, our manner of dress and many other things are products of specific cultures. The newspaper headlines are another expression of our achievements or failures.

A culture based on violence and confrontation will breed violence and confrontation. A culture that emphasises respect will breed respect. For us to begin to understand what is happening in our schools today, we need to examine the paradigm on which these schools are based. We have to examine the world-view that informs them. We all agree that, in the world today, the rich get richer and the poor get poorer, that death and violence pervade our streets, and that drug peddling and the spread of AIDS are expressions of moral decay, an indictment on our current culture. To put a finer point to it, we are Westernised. Do we not have a moral right to say that if we were not colonised we would, probably, not be so decadent?

The African Renaissance project offers us an opportunity to reflect on our condition, to re-examine our rudders and to develop new paradigms that can pull us out of this morass. It affords us a moment to pause and reflect, with the benefit of hindsight, on the benefits of Westernisation, the insights we have gained from it and the

losses our culture has sustained; what to retrieve and what to jettison. Our past was not perfect. No society has ever produced a perfect culture – not even Atlantis. However, there were cultures that attained standards worthy of emulation. We propose to examine pre-colonial Africa and its institutions, especially educational institutions, with a view to comparing it with what we have today and to ascertain if there are models we can adopt in order to move forward.

We are not suggesting that Africa is one monolithic block; however, we would like to stress that pre-colonial Africa was characterised more by variations than by differences in cultural expressions. African people sought to create societies that were based on interdependence, interrelationships and the interconnectedness of all phenomena. African myths, like all myths, were expressed and made manifest by ritual acts. For these ritual acts to be effective, people needed songs, dances and works of art. In other words, rituals stimulated creativity. It was the creative act that brought people together for a common purpose and instilled the spirit of harmony among the people.

In pre-colonial Africa, education, like religion, was an integral part of everyday life. Worship was not a once a week affair (we use the word 'affair' very advisedly). It was a complex affair, both subtle and direct. Education was linked to morality and material production. Respect for the elders was given priority so that, among other things, the old would not fear ageing, as many do today. To the contrary, in the Zulu culture, when people aged, they graduated and were 'capped' with *isicoco*. The saying, 'When an old person dies it is like a library burning down', best expresses this. Respect was due to everyone and to all things.

Education was also carried out through secret societies, initiation schools and through the *amaqhikiza* system – a type of mentorship programme where older girls mentored younger girls to ensure sexual abstinence until the girls were ready to take full control of their affairs. Both male and female initiation programmes sought to prepare youth to take control of their lives within the broader community.

In these educational programmes, group learning and group solutions for problems were the norm. There was more emphasis on horizontality than verticality in the learning process and learning was outcome-based. The outcome carried with it the prize of a well-rounded person who was people-centred. The ethos was 'I exist because I belong; I belong because I exist'. It is this re-enforcement of interdependence that marks traditional African educational models.

The current revival of *ukuhlolwa kwezintombi*, the so-called 'virginity testing' in KwaZulu-Natal, seeks to achieve the goal of purity in the context of the spread of HIV/AIDS. The debate that attends this revival needs to be seen in its proper perspective, both from those who oppose it – mainly Westernised Africans and Westerners who read their own fantasies into it – and those who seek to instil a new sense of morality into our youth. Time does not allow us to address this, but we will leave you with a few pointers. In the Nguni culture, for instance, the celebration of the first

fruit, *incwala* or *ukweshwama*, and *umhlanga*, are marked by a dance by 'topless' young maidens and traditionally clad male youth. In the ceremony honouring Nomkhubulwane the 'goddess' of the rainbow and daughter of Mvelinqangi (God), maidens dance topless. Even in ordinary dances they dance topless.

In Western society, topless dances are often reserved for perverse males who pay for sexual titillation. The West's penchant for sexualising everything, from adverts to every other aspect of life, was licensed by Freudian psychology. By naming and giving itself the power to name, the West imposes its control on all discursive formations. To name the moral revival alluded to above as 'virginity test', the Westernised seek to create a specific framework through which to debate this practice. This ignores the point that has been made many times – that the future success of our country depends on our children and adolescents making the successful transition into becoming responsible adults. To conclude this point, it must be stressed that a critique of any discourse needs to ground itself in the understanding or grasp of the fundamental premise of the object to be examined or critiqued. To impose one's prejudices on any discourse can only be an exercise in futility. Westerners are past masters at it.

To deal with the notion of the African Renaissance then, we must begin by acknowledging that this exercise involves the interrogation of the Eurocentrism that we have internalised. In some cases, the internalisation is so thorough that we cannot even begin to think against it, least of all think straight and act to change this sad condition into which our minds were systematically colonised. We need to systematically decolonise our minds. In doing so, we will help to liberate many of our people from distorted histories.

African history is a vast terrain of distortion, confusion and suppression. It is a convoluted affair. Despite efforts by the United Nations Educational, Scientific and Cultural Organisation (UNESCO) to commission a nine-volume history of Africa by African scholars and other Africanists, our ignorance still persists. Those volumes are still unknown by African educators and, where they are known, they are not prescribed; where prescribed, they are not taught; and where they are taught, they are taught from a Western perspective, thereby negating their very existence. Africa has a history. To state the obvious is either to assure those who know but are prone to either forget or doubt, and to tell those who do not know is to undertake a serious project. This is the project that we must aggressively undertake as a contribution to the decolonisation of our minds. Where do we begin?

Linkages

Central to the success of the African Renaissance must be the recognition that, without establishing and maintaining links with the community, it will, like its predecessors, fail to deliver. In fact, it is the community that must direct the

programmes of the renaissance, since the renaissance project is the vehicle for community empowerment. It is the community that will identify its needs and priorities. The task of the African Renaissance will be to help facilitate the process of meeting these needs and priorities.

It is important that we examine how intellectuals and other members of the community in other parts of the world address the problems of development. Here, we will use the examples presented to us by Compas, an initiative in which field-based organisations work together with rural people and traditional leaders, with the aim of supporting endogenous development by means of ancient visions and new insights regarding the management of agriculture, health and natural resources. According to Haverkort, Hiemstra and Van't Hooft (1999), Compas is a collaborative undertaking of fifteen development organisations in ten different countries in South America, Africa, Asia and Europe. In their words: 'They want to understand the world-views of the rural people with whom they work and seek opportunities to support the dynamics of indigenous knowledge and traditional institutions.' The project began in 1995.

Central to the project is the respect for the people's world-view and its use as a base from which to interact with other knowledge systems – one of the major objectives being to attempt to create the 'space necessary to reach a deeper understanding of farmers' visions and enabling a dialogue between development organisations that share this concern' (op cit).

Any development initiative that fails to address people's cosmo-visions is doomed to fail, and history bears witness to this in Africa. For any development to succeed when dealing with rural people, and even with many township dwellers in South Africa, the role of divine beings, ancestors, sacred places (like *isivivane*), sacred people and sacred objects needs to be addressed. To touch on these issues is to compel our Westernised intellectuals to experience severe conceptual violence, and yet many of them secretly subscribe to these beliefs.

To be able to effectively deploy indigenous knowledge systems in our educational institutions and in development programmes, we need to pose some serious questions. The Compas team offers us some guidelines in this regard:

- What are the important practices relating to the management of natural resources, agriculture and health?
- How do they relate to Western explanations and concepts?
- How do people learn, teach and experiment?
- What experiments have been undertaken and how were they done?
- How has indigenous knowledge been used in learning, teaching and experimenting, and influenced by external and internal change?
- What changes have taken place in the traditional cosmo-vision?
- Which of these changes are the result of adjustments to ecological, technological, commercial, political or demographic change?

- To what extent is experimentation influenced by the Western world-view?
- What are the contradictions and tensions?
- How can local communities decide their future, maintain their cultural identity, use their local resources and carefully consider opportunities for the use of external knowledge?

Had these questions been raised earlier and ways found to answer them, we would not be caught in the predicament of the proliferation of squatter camps or informal settlements, and the subsequent rise in the crime rate in our country. Our problem in South Africa is that we behave as if the rural areas do not exist. Professor Herbert Vilakazi tirelessly reminds us of this, but his views inevitably fall on deaf ears. In like vein, Professor Ali Mazrui's view that development is modernisation without dependency is instructive. Dependence on other people's language to articulate one's concerns and to address one's problems, is to court failure and frustration. The process of indigenisation is, at the same time, the process of freeing oneself from dependency.

Harriet Ngubane, in a paper titled 'Indigenous Agricultural Knowledge in Southern Africa', delivered at the Colloquium in Johannesburg, demonstrated the need for indigenous knowledge based on her six-year research in Swaziland. Her findings correspond with those of the Compas group in many respects. The difference, however, is that whereas Ngubane researched the area, wrote her report and left, the Compas intellectuals remained and worked with the rural people to produce tangible results in an ongoing manner. This is not to denigrate Ngubane's findings, but to suggest that a more engaged process needs to be pursued by those suited to do it or those we need to train to do so. In South Africa, we need to cultivate a new type of intellectual if we are to contribute meaningfully to the development of Africa in line with the African Renaissance ideal.

Where do we begin? Is our education suited to the needs of our society? To answer this question we need to raise another question: What are the needs of our society? To answer this question, we need to raise a further question: What is the nature of our society, what are its components and how do these components coalesce or conflict? Should it include a component of reconciliation? Ours is a divided society, along lines of race, class, colour and ethnicity. These divisions can either be dividing lines of conflict or part of a tapestry that makes our country the rainbow nation. Are these divisions natural or are they constructs? Should our education system consolidate these divisions or should it strive to eradicate them? Are there features that are unchangeable in this cauldron?

In South Africa, the education transformation process has been reduced to cost-cutting, redundancies and retrenchments. Very little seems to be done to transform the content in line with the notion of the African century. Our emphasis is on training students for employability rather than entrepreneurship. Our education system seems to move farther and farther away from indigenous knowledge. Issues

of language so crucial in education are marginal. There is no attempt at any level to examine the indigenous knowledge systems' awareness of the essential interrelatedness and interdependence of all phenomena – physical, biological, psychological, social and cultural. It transcends disciplinary and conceptual boundaries, and will be pursued within new institutions. Part of our present enterprise will be the formulation of conceptual and institutional frameworks to bring about the realisation of this new vision; hence the African Renaissance project with the indigenous knowledge systems' drive as one of its critical weapons.

It is important to note that efforts to recapture and harness indigenous knowledge to help find solutions to current practices are not new. Other African countries have experimented with varying degrees of success. In Kenya, for instance, a workshop on 'Traditional Medicine, Its Practice and Law in Kenya' was held at the Lake Bogoria Hotel on 4 November 1992. The objectives of the workshop, in summary, were:

- To explore traditional medicine, its practice and organisation;
- To review the utilisation of traditional medicine;
- To examine the legal aspects of traditional medicinal practice, including criminal and civil liability and protection under the law;
- To sensitise policy-makers and scholars about previous and ongoing research in traditional medicine; and
- To provide recommendations to guide future policy, legislation and research on traditional medicine.

Proceedings from the workshop were published in a book by Sindiga, Nyaigotti-Chacha and Kanunah (1995) with about thirteen contributors covering an impressive range of issues. Unlike the Compas group, the workshop does seem to have created lasting partnerships between the community, intellectuals and government departments – structures necessary for sustaining these initiatives. In South Africa, we have a number of initiatives that need a coordinating structure that will highlight specific indigenous knowledge systems' issues. The major problem facing us in South Africa is that academic associations that once stood firm against the apartheid regime have disappeared, and those that still exist are silent on a number of issues related to the radical transformation of our educational system.

To formulate conceptual and institutional frameworks that would be effective and able to deliver on the programmes towards the reclamation of African indigenous knowledge systems, new academic associations have to be established. However, they would need to be reconceptualised as people-centred rather than along the previous élitist lines. Put differently, academics and intellectuals have to rethink their roles anew in line with the principles of reclamation.

In conclusion, colonial discourse marginalised African knowledge systems with adverse consequences for the colonised. The colonised ceased to be the subject of

their own histories and became the construct of the dominant coloniser. During this hegemonic phase, the African accepted the colonisers' entire system of values, attitudes, morality and institutions. Even after the attainment of independence, the new regimes maintained disdain for indigenous knowledge and values. In the search for new paradigms for change, it is crucial that sources of knowledge are recovered and diversified. The reclamation project we are suggesting acknowledges that no past can be recovered in its pristine form. Any post-colonial study of colonialism and the process of decolonisation points to the fact that the African was not completely pacified and silenced, and that reverse-discourse as an oppositional practice continued to exist, especially among the rural masses in the interior. These reverse-discourses are now being explored. Even as we enter the era of globalisation, it becomes clear that we need to rethink ourselves anew, and bring in new ideas if we are to be a significant part of the information age and an era of knowledge industries.

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Establishing Protocols for an Indigenous-directed Process

Perspectives from Australia and the region

Scott Fatnowna and Harry Pickett

Introduction

*You people try and dig little bit more deep –
you bin digging only white soil –
try and find the black soil inside*

Paddy Roe (Benterrak, Muecke and Roe 1996: 189)

The most exciting – and unsettling – periods in culture are those uniquely creative times when humanity's fundamental story becomes inadequate to its critical questions. By all evidence, ours is such a time . . . New ideas take things that before seemed separate, even opposite, and invite us to think in terms of some larger, more dynamic whole . . . bridgings of once established distinctions . . . creating . . . whole new ways of understanding, new ways of being . . . a new cultural maturity.

Johnston 1991: 1–2, 6

. . . the burial of grievance and the birth of a new relationship require expression in a form which can lift us beyond immediate circumstances, to express our resolve and to give vision to our common future

Social Justice Report 1998: 14

Preamble

'Knowledge systems' are here taken to be both the contents and the processes of that domain of experience we refer to as 'knowledge'. This paper also addresses values and practice. Dynamic diversity and development within knowledge systems are acknowledged, as are the non-categorical inter-determinate aspects of the nature of the contemporary knowledge systems

of Western cultural and indigenous lives, as well as those aspects deriving and protected from within those separate traditions.

Focusing on an indigenous-directed partnership approach to ongoing negotiation of the recognition, privileging, positioning, decolonising, protection and involvement of indigenous knowledge and practice, this chapter situates in a bringing together of some of the issues raised in discussions, presentations, publications and practice by the Centre for Aboriginal Studies/Curtin Indigenous Research Centre and others in Australia and the region. It aims to present them in the wider and historical context of discourse on these and associated matters.

Through a mix of voices that privileges the strengthening indigenous viewpoint and experience, this paper 'walks the talk' and the emerging protocols in this development, as we have done since the establishment of the Centre for Aboriginal Studies as a 'space' for the self-determination and empowerment of contemporary indigenous perspectives, knowledge and practices, and its managed relationship with those of non-indigenous society.

The dialogue, action and struggle occurring together over this time have been very much shared, together decolonising space from both angles in the domains of knowledge, education and practice, for Aboriginal empowerment and self-determination. Historical and contemporary indigenous realities and futures are increasingly articulated, controlled and developed by indigenous people. From this base, indigenous management and staff negotiate partnerships and develop protocols with non-indigenous colleagues. These are expressed in policy and practice, and are managed in ways that continue to privilege, preserve and strengthen the development of core indigenous realities appropriately, while at the same time facilitating critique, connection, choice and capacity within the wider society.

The value of this approach to the way of life of both the indigenous and non-indigenous population nationally, has been, and continues to be, considerable. The main gain, however, is in the transformation to an increasing mutuality of enriching sharing and difference in indigenous and non-indigenous relations. This is essential in effecting encompassing transformation in world-view and ethics of humankind at this critical, challenging and pregnant stage in history.

This is not an accommodation, but amounts to a forward-moving liberation of substance, a shared paradigm shift in the life-styles and values of both groups, and in governing ideologies and practice. Together, we participate in the beginning of a future emerging from reflective decolonising critique and constructive change that privileges the protection and development of diversity and growth in the context of achieving a just and equitable conviviality.

This paper derives from the experience gained over the past two decades, as indigenous and non-indigenous people together have engaged in developmental conceptualising in action of how indigenous knowledge, understanding and practices can be centrally positioned in creating culture-based programmes in tertiary education,

and in extending these to professional training, and community research and development with the indigenous population. This complex domain of the understanding and practice of contemporary indigenous Australian culture, informs a wide range of academic and professional endeavours with indigenous people and communities nationally. In an ongoing way and typical of action research, it involves the community as participants in its continuing shared development and application.

Secondary to this important internal intra-cultural core dimension of development, is the re-negotiating of mutuality in ways of working, living and sharing with non-indigenous people – a developing engagement with non-indigenous society that protects, yet also informs and allows for the development of both and the relationships between both. In the academic, professional and community arena we have together developed the notion of '*directed partnership*' (Dudgeon, Collard and Pickett 1997), which is an arrangement wherein Aboriginal matters are determined and managed by Aboriginal people, and interrelated matters negotiated with the accessible and equitable wider society.

The 1993 International Year of the World's Indigenous People adopted the slogan 'a new partnership'. Earlier, Gilbert (1973: 187) attributed to Perkins the defining concept – 'black control, allied with white help'. Within Aboriginal affairs, Gilbert insists that this include 'black policy-making bodies, not just advisory or consultative committees' with whites in subordinate positions, and at all levels (1973: 186). 'More and more blacks are rejecting all forms of white control and are rejecting the assimilationist ideas that demand that they give up a separate black consciousness' (1973: 188). In an equally extremist reaction, 'slowly the people are beginning to insist that the white man keep totally out of decisions that affect them. If there is to be a regeneration of blacks, it must come through self-determination' (1973: 162).

We argue, and practice, that there *is* need for an exclusively indigenous Australian forum, just as within this there is a need for the local Nyoongah forums, separate women's and men's forums, and youth forums, etc. This will, like the outstation movement and separate women's and men's 'business', provide a space for internal control and direction over identity and matters particular to that group. In addition, we argue that forms of partnership are *also* necessary for the relationship of the group with the wider community, but require the former as a protective mechanism from constructions by others of one's own identity, reality, understanding and way of being. Further, we argue, and successfully practice, that in matters affecting Aboriginal people they claim directive status in that partnership.

While agreeing with Davidson's (1998: 48) call for participation and co-ownership by indigenous people in indigenous matters, and would seek to make explicit what is implicit in that, by extending this to privilege in that arrangement with those Aboriginal people directly and locally affected, we have also been arguing for and 'walking the talk' of two essential additional parts of a just and effective arrangement. They are spaces for indigenous debate, determinations and decision on indig-

enous matters at all levels, from the local to the national, and that these determinations be directive or privileged in decision-making within the wider partnership with non-indigenous society. Both of these additions have been developed as protective arrangements to resist and reverse the continuation of the determination of indigenous matters by others, and for indigenous debate and determinations on struggling with the internalisations of non-indigenous knowledge, values and ways. In this way, the operationalisation of the rhetoric of empowerment and self-determination is explored and effected through practice.

A quarter of a century later, this battle has been won in principle, and the struggle now is in practice, in seeking and substantiating a contemporary authenticity and identity that continue to selectively decolonise, and to identify and resist the external and internalised neo-colonisations of Aboriginality; to critically and reflectively accept or reject the diversity of types and degrees of cultural interdeterminations, and to centre the restorative and creative determination in Aboriginal hands. In New Zealand, Graeme Hingangaroa Smith (Smith and Smith 1997) has been instrumental in conceptualising this action theoretically from a Maori cultural base associated with its translation into practice in the form of Maori schooling, university studies and research. Linda Tuhiwai Smith (1999; née Mead 1996; Smith and Smith 1997) also articulates this aspect of the Maori struggle as both making and reclaiming curriculum, pedagogical and institutional spaces for Maori within the processes and systems of knowledge development, authentication and transmission. At the Centre for Aboriginal Studies, this principle similarly finds effective expression in both policy and practice in a local and national context, and within the university, the professions, and the indigenous and non-indigenous community, and finds support in links to similar initiatives abroad.

This paper seeks to identify and develop the constructive aspects of the struggle, while recognising the need to be able to see, be vigilant against and discard other aspects that have been and continue to be unjust and damaging. Davidson (1998: 47–48) argues for the ethics of socially active, responsive and responsible involvement. Many indigenous and non-indigenous people have worked together at maintaining good faith in the face of intense and often shattering but searching and enabling discourse, shared reflection and mutual challenge. There have been courage and commitment in developing a no-holds-barred but constructive dialogue in establishing a workable partnership within, in the complex, diverse and creative spaces reclaimed, and in a range of changeable positionings and patterns of interrelatedness.

Determining what is taken to be knowledge

This struggle has a history that stretches from the first contact between Aboriginal people and the colonisers, who came just over 200 years ago and stayed, in ever

increasing numbers, controlling and subjugating those who had been here before for some 60 000 years.

Like today, it has not always been a constructive and positive relationship. Similarly, as is evident in Fanon's early writings, there is 'a tension between rage and reason, revolt and conciliation' (Caute 1975: 21). There have also been and still are the not so honourable or respectable motives and actions that have been part of the experience and historical context. This has often been the dominant reality through the generations. World-wide living history has often been, and still is, played out bloodily and ruthlessly as the movements, migrations and ideological, political, religious and economic hegemonies of humankind flux and wane. Anger, frustration, despair and justifiable mistrust have been, unarguably, the main effects on Australia's indigenous people since colonisation. Resistance and struggle have occurred, sometimes by non-indigenous and indigenous people together. On the non-indigenous side, this was often courageous and well intentioned, although (with hindsight) not always well informed or appropriate, but deriving from the moral and ethical characteristics, knowledge and understandings available during those times (*see* Gribble 1886; Wells 1982).

In this, the battleground and the weapons are also conceptual, and concern what is regarded as 'knowledge' – who is making that knowledge about whom, in what epistemological context and for what purpose. This has a history in that what has been seen as indigenous knowledge over this time, has been largely derived through the gaze of non-indigenous people and has varied with the changes in the nature of Western knowledge itself, its knowledge-making process, ideological frameworks and its purpose.

In a critique of European Australians' ways of knowing 'the Aborigines', following Said (1994), Attwood (1992) and others, this is seen as involving the external construction of 'Aboriginality'. From Foucault, this is with hindsight seen as being interpretative, contingent, situational and political – 'power, knowledge and Aborigines are mutually constitutive . . . they produce and maintain one another through (various) discursive practices' (1980: ii). Aborigines were situated as voiceless 'Other' and an 'Aboriginalism' constructed within the social and political theory of the times that rationalised colonisation and its practices, and continues to sustain both the blatant and more structural/symbolic modern expressions of racism still evident today (Augoustinos, Ahrens and Innes 1994; Pedersen, Griffiths, Contos, Bishop and Walker, 2000). Walker provides an insightful historical analysis showing the continuing (rather than serial) presence of both forms of racism towards the Aboriginal population in Australia, and stresses 'the important roles played by institutions and cultures in reproducing racist social relations . . . the social, structural, institutional, historical and cultural forces' affecting individual attitudes (2000: 23). This analysis supports Foucault's notion of the interdeterminacy of both power and

what is taken for knowledge, especially regarding those subjected, and even regarding themselves.

Now, however, the situation has radically altered in that the objects of earlier analysis have become speaking subjects. Aboriginal authors now provide a powerful challenge to the writings of the old 'experts'. This also brings popular knowledges, together with that held by Aboriginal people, into dialogue with academia, substantially broadening the base of what is taken to be knowledge, as well as the processes of knowledge development, transmission and authority. 'The authority of such (previous) texts tended to silence the independent and discordant voices of those being represented', they 'being generally (then) outside the institutions which control(led) such knowledges'. Also, 'the narrow focus on "traditional Aboriginal society" allowed anthropology to collaborate in the erasure of colonial relations from critical scrutiny, and ignore or even support the aggressive assimilationism which was the real threat to Aboriginal culture' (Cowlshaw 1992: 20, 21).

A rewriting of the last 200 years of history is necessary and is happening – one that both creates the spaces for indigenous viewpoints and is a re-examination of denial and other themes providing hegemony in history as metanarrative of domination and disempowerment. 'There has been a transformation in the way non-Aboriginal Australians think about both the past and the construction of the nation' (Brewster 1995: 1). This has included indigenous empowerment 'to rewrite our history', so that 'we have once again reunited our past with our present' (Yavu-Kama 1988: 97), reclaiming 'Aboriginal remembrance as the "*living* experience of the past, regenerated through stories" which sustain relationships with it" (Rose 1992: 15 in Brewster 1995: 3). From this base, indigenous Australians can 'write policy, and plan strategies for our future generations . . . as a people free and empowered at last' (Yavu-Kama 1988: 97).

Something else that is essential is the way in which indigenous writers are re-examining what is taken to be 'Aboriginal' (Oxenham, Cameron, Collard et al. 1999) and in general 'challenging the "right" of "experts" to write and speak on their behalf' (Cowlshaw 1990; Finlayson and Anderson 1996: 46). In an indigenous context, this concept seems to have hardly existed before, if at all perhaps, through self-differentiation and comparative self-referencing in relations for several hundred years along the northern coastline with Macassans. Like the concept of 'community' later (Dudgeon, Mallard and Oxenham 2000), 'Aboriginality' was an imposed concept, used by non-indigenous colonisers to refer collectively to a people who referred to themselves largely by local identification. From there, the construction of 'Aboriginality' by others began.

Nakata (1998) traces this process by anthropologists, with reference to the indigenous peoples of the 'Torres Strait Islands'. This in itself is a geographical then ethnographic concept, an imposed collective identification or identity regarding local systems of identification that still exists today for political convenience. This is

related to the more recent overarching political and administrative concept of ATSI (Aboriginal and Torres Strait Islander) to refer collectively to the indigenous peoples of the mainland and those islands to the north. This acronym has since become to imply a cultural and social dimension of commonality that has been resisted by both Islanders and Aboriginal peoples.

On the mainland there is a similar resistance to the use and over-use of the imposed identifier 'Aboriginal', with local groups protesting to preserve or preference their traditional differential identifications within this overall concept, while at the same time acknowledging, in practice, an emergent additional level of identification, a 'pan-Aboriginality' of common cause and collective similarity relative to differences from the colonising Western culture. Mead expresses a similar resistance: '... the pan-Maori approach to all things Maori was an identity imposed externally upon all Maori people' (1996: 211).

Between these two there has also been a 'cultural bloc' identification that may have had a reality in semi-shared geographic, economic, linguistic, kinship and cultural knowledge practices, that attracted imposed identifiers derived from indigenous languages and concepts of the areas concerned – such as Nyoongah, Yamatji, Wongi in the Western Australian Southwest, and likely Murri and Koorie along the east coast, as for the various local peoples now known collectively as Yolnu in Arnhem Land (Keen 1994).

These levels of collective naming led to levels of collective treatment administratively and politically, mainly just simply as 'Aboriginal' or 'Torres Strait Islander' or 'ATSI', with little recognition or attention given to the strong local identifications of the people themselves.

This inevitably led to a generalised essentialist 'psychologising by the other' at each of these levels, such as that beginning with the Cambridge Anthropological Expedition to the Torres Strait (Nakata 1998).

Complicating the picture and breaking down local identifications was the purposive dislocation of Aboriginal peoples from their local domains. The traditional roots of identity were mapped on and resided in place, story and spirituality (Bourke 1994: 132; Strehlow 1970). Associated with this was the breakdown of kinship identification through the separation of children and families (*Bringing Them Home* 1997), the imposition of Westernised names on people and country, and the repression of language and cultural practices (Rowley 1972). After speaking with elder Paddy Roe, Benterrak and Muecke wrote that, for him, 'Australia is still not divided into eight "states" or territories, it is criss-crossed with tracks'. These are the tracks of the Dreamtime creation beings that, in daily life, form the lines of association between local Aboriginal groups and structure the narratives of the myths and stories that hold cultural knowledge and its sharing in the larger tapestry across the country. This has been 'violently assaulted by the public chequerboard of the states' (Benterrak, Muecke and Roe 1996: 243).

At the same time, the aggregation of diverse groups into 'settlements' run by state governments under 'Native Protection' legislation, then by the various churches as missions, and finally becoming self-administering, provided an intergenerational history of a new level of association among indigenous peoples that served to give the regional and overall cultural collective identifiers an internalised reality. This breakdown and reconstruction were reinforced by the high rate of confinement of males together in regional and centralised prisons, and children, men and women, separately, in what amounted to 'labour training camps' and then deployed together in rural work.

These circumstances weakened the salience and capacity to maintain and pass on local knowledges. Bourke talks of 'a gap in the knowledge of many Aboriginal people who were denied cultural continuity, through past policies' (1994: 135), of banning language and cultural practices, and the forced removal of children.

At the same time anthropology, especially from the standpoint of 'objective' observer and inquirer, was constructing an identity of the indigenous peoples as 'Other', both cultural, social and psychological (*see* for example, Nakata's 1998 analysis of the Haddon Reports of the Cambridge Anthropological Expedition to the Torres Strait). In Australia, the coloniser's descriptions, attributions and theorising of the 'Aboriginal Other', reified in popular understanding out of daily experience at personal to political levels, became the dominant discourse subjecting marginalised peoples to external identification and characterisation. Finlayson and Anderson (1996: 52) describe the 'essentialism' of such characterisations, but 'Aboriginal people today construct, describe and represent themselves in ways that uphold their autonomy' (1996: 55). Bhabha, however, identifies the persistence of these mechanisms of alienation even today, in the case of migrant cultural groups in Britain, describing its effects as 'the lasting tension of our freedom and the lasting impression of ourselves as others' (1986: xxv).

The 'Other' is defined by reference to the observer, an imposition of world-view that sees everything in terms of the observer rather than as 'itself'. 'Fanon wants to find Man, but he keeps bumping into White Man' (Gordon 1995: 11). This 'signal(s) the importance of de-centering him as designator of human reality' (1995: 103).

In situations of dominance, this is also not benign. 'While looking ethnocentrically from the inside of one's knowledge, the "Others" have only been defined in negative terms' relative to that knowledge (Benterrak, Muecke and Roe 1996: 244). The subject observed as object is defined as 'lacking' by reference to the yardsticks of the culture of the observer – including knowledge. As typical of the psychological dimension of colonisation everywhere, this is extended in the 'dynamics of domination' (Gordon 1995: 61), like other acts of violence such as outright warfare are enabled, to a dehumanisation of the victims through both attitude and practice (Fanon 1963, 1967; Bulhan 1985). This denigration is taken as knowledge of the 'Other', including knowledge of the state of the knowledge systems of the 'Other'.

From daily experiences of racism over generations, with its imposed and implied attributions, and even by Aboriginal peoples being instructed ('educated') in 'Aboriginality' by non-Aboriginal people from these texts in schools and universities, there has been a degree of internalisation of these constructions (Dudgeon and Mitchell 1991). This emphasises the need for indigenous peoples not only to regain control over knowledge production and transmission about their 'indigenality', but also to decolonise this knowledge internally as well as externally. Nakata talks of his position 'to develop an intellectual standpoint from which indigenous scholars (as himself) can read and understand Western systems of knowledge' and 'speak back' to the knowledges within those systems that have formed around what is perceived to be indigenous, and 'negotiate with representations of themselves, their ancestors and experiences. Negotiating these texts is not simply an intellectual process. It is also an emotional journey that often involves outrage, pain, anger, humiliation, guilt, anxiety and depression.' This is especially so when faced with the dilemma of doing so in the context of 'the same systems of thinking, logic and rationality . . . that have been instrumental in producing our position . . . not served indigenous interests at all' (1998: 4). It is not just knowledge itself that needs to be decolonised, but also the systems of knowledge production and legitimation.

'Each society has its regimes of truth, its "general politics" of truth: that is, the types of discourse which it accepts and makes function as true' (Foucault 1980: 131; Bentrak, Muecke and Roe 1996: 196). 'Truth and power are co-productive' (ibid. 1996: 197). To determine the 'truths' of another is to assume power over the 'Other'.

The Native Title issue and process in Australia has brought into focus the differences of not only non-Aboriginal and Aboriginal interpretations of knowledge, of what are the 'facts' in any given situation, but also the differences within each. Edmunds (1994) discusses the issue of what constitute 'facts' within the native title arena, and the possible multiple meanings ascribed to them - 'the sequence through which they change from being Aboriginal, to anthropological, legal, or policy facts, remains problematic'. The points of interpretive translation that occur in this sequence are highly politicised. The result is that the meaning of 'facts' is subject to contested representations (Smith and Finlayson 1994: xiv). Edmunds (1994) refers to 'different anthropological interpretations of the facts, as well as those of different groups of indigenous people involved', noting that the issue goes beyond 'bad ethnography' and vested interest, and implicates 'indigenous political dynamics as well as histories of displacement and resettlement' (1994: 1, 6).

Critical awareness and action

The realities of history are composed of individuals, and people together, who are, even in the direst of circumstances, not all without any 'agency' of any kind. Both

perpetrators and victims are not just pawns in the tide of an objective and inevitable outplaying of fate. As human beings, both are also *subjects*, personally and collectively, implying a degree of awareness and responsibility within the determining effects of circumstance, to 'aspire to be moral agents not servants of power' (Chomsky in Said 1993).

This balance of individual freedom with social determinism is a tension in the field of knowledge that positions itself differently at different times and in different cultures. The two are, of course, to an extent interdetermining. In developing the case for a 'critical sociology', Hansen (1976) describes 'a general confusion and discontent, that rest at the heart of the problem of freedom and responsibility. For in the modern world, we seem to be losing our faith not only in gods but in ourselves . . . In the modern world, the human was to replace god, and reason would show the way'. But as 'inhumanity and technical rationality' were experienced to 'thrive side by side' there was 'disenchantment with life in modern societies . . . a crisis of culture . . . In a culture that fails to offer believable meaning and direction, how is it possible to know what is of value? . . . The old worlds were dying and with them died the points of security they had offered, the positive reference points . . . Belief in reason has eroded' and an alienation grown, 'as the inability to feel one's self a "whole person" in the modern world' (1976: 3-9). This is an age of anxiety.

The answer is not a return to the knowledge and security of some 'golden age', but a transformation to new futures of a very different kind, of an integrative kind, that bring forward the non-rational with the rational. Rationality, despite its great achievements, notably through science, has not proven sufficient in itself to sustain and provide for human meaning, purpose and quality of life. For Hansen, a viable way forward is achievable through becoming 'an involved, critical explorer of *human* and *societal* possibilities' (1976: 12).

But uncritical awareness perhaps characterises most in any group or population. Most of us, are more or less, well socialised into implicit acceptance and maintenance of the norms of the culture, circumstances and times in which we find ourselves. To various extents we are all complicit in the hegemonies of such cultural knowledges, understandings, beliefs and practices, as perpetrators and beneficiaries, or as exploited victims of such. The development of critical awareness informs resistance to being either.

There is a natural altruism and humanitarianism that characterise all peoples, just as it seems do other traits related to power and advantage. They are not necessarily mutually exclusive, with particular combinations for particular purposes at particular times frequently seen as appropriate or not.

The balance in both personal and historical moments has a volatility for most, yet some also characterise over time as more predisposed one way or another. Yet, in the personal as well as the larger field of actors and actions, of ideologies, beliefs, policies and practices, a genuine attitude of 'for their own good' (Haebich 1989) can

prevail in our relations with others, yet be misinformed as a distortion that is often only partly innocent. Both governments and missions, as well as science and social policy, are frequently a complex mix and struggle between hegemony and altruism. Reynolds traces this in the Australian context relative to the continent's Aboriginal people. However, although 'unease about the morality of settlement has been apparent throughout the two centuries of European occupation of the Australian continent' (Reynolds 1998: xiv), and 'all over Australia there were men and women who stood up and demanded justice for Aborigines' (ibid. 1998: xvi), in doing so they frequently courted 'the anger, hostility and the hatred of their contemporaries' (ibid. 1998: xiv). While this tension persists within the attitudes and reactions of the non-Aboriginal population, in general the international civil rights struggles of the 1960s saw a reversal. The White Australia Policy was removed, citizenship was conferred on all Aboriginal people, in the 1970s the assimilation policy abandoned, and institutions and processes of self-determination were begun.

These matters play themselves out not only at personal levels – the struggles and achievements at political levels are also critical. Nakata emphasises that 'we need to be *critically* literate, not simply in any liberal sense but in a political sense' (1995: 73) of 'history, material practice and subjectivity', at the same time realising that 'there is no correct version of criticism' (1995: 70). Of the many essential dimensions in achieving a satisfactorily 'critical' perspective that does justice to one's own position, it is necessary firstly to position one's self (and one's selves) in all discourse about one's self (and one's selves), as *subject(s)* in developing those understandings, not as alienated and marginalised *object(s)* of the discourse of others. The 'conscientisation' of one's critical awareness needs to include not only concern for the subjugation of one's economic and social realities, but also of one's systems of knowledge, understanding, beliefs and cultural practices, one's identity and one's self (Freire 1972; 1985).

Opening the discourse 'beyond the contestation of content' to critical discussion about knowledge production and protection, in a context of the historical and contemporary socio-politics of cultural relations, informs the way that knowledges can work to discount, diminish, or misrepresent. This allows such knowledges to be recognised, and either corrected or defended. Perhaps more importantly, it provides a basis for us all to question our practices concerning theory and methodology (Nakata 1998: 4–5), and to move to more shared and co-operatively collaborative and less oppositional discourse, through involving the protective practices and safeguards of critical awareness.

In the struggle of indigenous Australian knowledge systems, a great deal is made, necessarily, of liberation from the initial and deeply pervasive dominance of the cultural knowledges of British colonialism and, importantly, of the ideologies associated with and enabling and rationalising colonisation itself. But in the contemporary scene, there are new colonisations that impact on this struggle. These range

from internal colonisations within regional local indigenous knowledge systems, such as within Australia, to the importation of other indigenous knowledge, understandings and practices from overseas, such as the influence of North American and Canadian and Maori practices in indigenous Australia, to the re-invasion of Aboriginal life by Australian non-indigenous professionals, and their paradigms and practices enticed by the funding and associated opportunities in the 'Aboriginal industry', to the encroachment of literary and market interests on the international scene.

Said describes American imperialism and the replay of the subjugation and exploitation by British and other nations earlier, but on an even more global scale. 'American expansionism is principally economic, it is still highly dependent and moves together with, upon, cultural ideas and ideologies about America itself . . . One can see this . . . full blown with the emergence in the United States of the discourse (and the policies) of Development and Modernisation . . . the unexamined drive to global reach had the effect of de-politicising, reducing, and sometimes even eliminating the integrity of overseas societies' (1994: 350, 351). There have been examples of this in Aboriginal Australia, just as it is of concern in Australia generally.

Sharing, borrowing, adopting, copying, co-developing and influencing are not in themselves 'colonisation'. That implies coercive domination, subjugating, disempowering, displacing and denying. The difference is one of maintaining control over change at all levels and exercising discriminative choice with conscious awareness.

Cultural colonising and imperialism involve not just the denial and subjugation of the knowledge systems of others, but also the distortion and constructing of identity, knowledge and values of the other, to facilitate the purposes of maintaining domination. Racism is commonly linked with imperialism and colonialism, and its continuation in the structural forms of neo-colonial domination. Fanon's critical stand or philosophy, for example, 'demands a high-level, rigorous, . . . self-reflective praxis, . . . an existential phenomenological standpoint of analysing racial phenomena from the standpoint of bad faith', a Sartrean bad faith, which is a form of lying to oneself in an effort to escape the responsibility of being human (Gordon 1995: 34, 35, 44).

The discrimination, disempowerment oppression and marginalisation that colonialism and neo-colonialism entail, are still sustained by 'racism (which) is a living force which is deeply embedded in Australian culture and institutions' (McConnochie, Hollinsworth and Pettman 1988: 243). 'Racism will not simply go away. The elimination of racism requires the active participation of Australians from all parts of our society to challenge racism in all its forms' (1988: XI). In this way, *anti-colonialism* and *anti-racism* are essential conscious attitudes and actions that will remain necessary until dismantled, and will be required to continue then in the form of a permanent vigilance to guard against their return.

At the same time, attitudes of *post-colonialism* and '*post-racism*' are essential to put attitudes, behaviours and structures in place, to replace those dispensed with – a positive and constructive progression beyond those constructs and their manifestations and consequences. Although it is essential to push ahead with post-modern discourse (Bhabha 1994) in this context, to create and acknowledge the gains emerging in post-colonial space, Fanon would likely warn that 'asserting our contemporary neo-colonial historical situation as a post-colonial one is a form of bad faith. Post-colonial discourse in colonial and neo-colonial times serves, ultimately, as sustenance for the status quo' (Gordon 1995: 111). Especially, he warns that 'any unilateral liberation is incomplete' (Fanon 1963: 11; Gordon 1995: 34); the critical enterprise and deconstruction of relations of dominance are essential for both oppressor and oppressed, and must proceed at both personal and social levels. There can be no true reconciliation without this process.

Identifying local cultural methods of 'critique'

Finally, even accepting the necessity for a political dimension to critical awareness, there is a question of the historical-cultural origins and appropriateness of the critical enterprise itself.

First and foremost, what are the processes of cultural protection and development of the indigenous culture? In other words, what 'critical' processes have been and still are used? There is considerable diversity within Aboriginal culture from locality to locality, even within regions, with local groups employing a range of mechanisms to facilitate shared dialogue in co-operative relations with others, balancing that with knowledge mechanisms that serve to maintain a sense of difference and identity (Keen 1994).

In articulating an indigenous 'critical' practice, one can begin with the recognition that, within cultural groups, there are mechanisms to protect the authenticity of the body of knowledge, understandings and practices from uncontrolled inclusion of emergent creativity within, as well as from without. For example, from the earliest times, new 'dreamings' have been subject to approval before incorporation into the body of stories and practices of the local group – *warranted knowledge* – and the use, 'ownership' and transmission of such is negotiated. As traditionally an oral culture, with many of these practices persisting, knowledge was held or kept by people. People were the repositories for the storage, transport and transmission of cultural content. With knowledge, went a responsibility for its safe-keeping, continuity and proper use. The nature of that knowledge and the person involved determined the who and what of this process. The transmission of this knowledge within and outside the group was also subject to many different considerations and protocols of internal and external management of knowledge. Rights in knowledge were polit-

ical, economic and religious, and mediated in large part by responsibilities attached to kin relationships (Coombes, Brandl and Snowdon 1983: 88–91).

These critical processes governing knowledge then, in the complex ways of an intricate culture, managed the systems of knowledge production and change, determined legitimation, and proscribed knowledge maintenance and transmission. Since colonisation and recent processes of self-determination, there have been both cultural resistance and resilience, ensuring the continuity of these practices, as well as change that has seen necessary adaptation and ongoing re-negotiation of knowledge issues within Aboriginal culture and in its relationship to non-Aboriginal society.

Similarly, within Western culture, critical thought and theory is not an internally consistent set of consensual practices, but a domain of intellectual endeavour encompassing a variety of discourse on the nature of knowing and how we take things to be knowledge. Similarly, this domain is developmental or at least contingent on the historically changing nature of the domain of knowledge itself and the ideologies of the time that frame and shape the character of that knowledge and knowledge processes. Out of the Marxist stable, the initial class-conflict orientation of critical theory has had to open out into other areas to maintain relevance in the post-industrial context. Bhabha, however, warns of the Eurocentric nature of current critical theory that requires vigilant examination as to 'whether the "new" languages of theoretical critique (semiotic, poststructuralist, deconstructionist, and the rest) simply reflect,' and are 'collusive with, the hegemonic role of the West', that 'reinforces its own power-knowledge equation', particularly in maintaining dominance through the First World capital-Third World labour disparity (1994: 20–21).

Bhabha (1994), after spending some time in Australia, emphasises that ethnomethodological explorations here and elsewhere for identification, recognition and recovery of indigenous processes of critique of knowledge developments in traditional contexts are important. He adds that, in the contemporary situation, there is a lively discourse that is not part of that continuum of methods of critique from the traditional cultural past into the present – nor the methods of critique that developed with the creative responses to 'contact' history that similarly exist in the present. There are also new ways of critique emerging from encounters with the opportunities for the construction of new realities beyond deconstruction of colonial and neo-colonial hegemonies. New domains of knowledge and post-resistance methods are being born into the post-colonial spaces as they are gained through liberation. (He allies this to world population movements, where migratory, diaspora, displacement and relocation experience is creating a post-national space beyond binary choice of cultural belonging, and beyond the domain of adjustment and accommodation.) The very process of taking control of constructively interrogating contemporary Aboriginality as it changes itself, comes with the insistence on validation of spaces additional to but not just derivative of traditional or colonial

experiences, but an emergent post-colonial arena that moves beyond that which is grounded as Aboriginal in those ways – a space that will generate its own knowledges beyond reference only to the deep or immediate past.

The other dimension of critique he describes, which is opening spaces to do this and is an active process in the contemporary discourse of Aboriginal with non-Aboriginal people, is the resistance to totalising containment within essentialised culture-determined categories, once race-defined and now ethnically defined. A 'displacing (of) the binary logic through which identities of difference are often constructed', moving beyond polarities and categorisations of the 'homogeneous Other', such as Aboriginal and non-Aboriginal. This is like 'the move away from the singularities of "class" or "gender" as primary (or the sole) conceptual and organisational categories' that in pre-given and fixed ways determine identities in the modern world (Bhabha 1994: 1–3, 173).

This is also a move away from 'overdetermination' and 'locked into thingness' of descriptors, from an invisibility of existence and anonymity as subject, and from alienation as object, that includes estrangement to one's self (Fanon 1967: 114–117, 218; Gordon 1995: 58–59). This implies an emancipating shift in positioning that allows a reclaiming of subjectivity and agency. Taken together, the contemporary argument is for the critical recognition of a fuller subjectivity that contains the non-consensual realities of ambiguity, conflict and inconsistency, and of overlapping and variously defined (or ill-defined) and fitting conceptual notions, in a constantly acting, moving discourse of self-awareness that interdeterminately navigates those of others, of society, and of life's changing circumstances.

Citing Jameson, Bhabha sees the essence of postmodernity not just in the reclaiming of 'subject-ivity', but a subjectivity that goes beyond existing paradigms of understanding and existing knowledges, by a positioning that realises a degree of liberation from and is not beholden to or totally captured without questioning within any such system, cultural or otherwise. Such 'trans'-positioning can acknowledge, contain and critique the contradictions, contingencies and fragmentation without the need to side, choose or belong and mobilise the strategies of false consciousness. 'The time for "assimilating" minorities to holistic organic notions of cultural value has dramatically passed' (Bhabha 1994: 175). Postmodern and post-colonial reality is that of moving beyond the need for identification with truths and absolutes, through the anxiety of relativity and modernism, to lead forward instead, by engaging the creative dynamism generated from living the reality of the spaces of in-betweenness, of transition, and of the incompleteness of knowledge, meaning, value, and of being. This opens the possibilities of recognising and developing *trans-cultural dimensions to critique* that add to and support the *intra-cultural processes of critique* built into the different existing cultural ways, with both working in the contemporary context to enable cultural protection on the one hand, and the mutuality of interrelated cultural development on the other.

Perhaps the most developed and explicit indigenous critique of its own cultural knowledge practices is that by Maori in New Zealand. Mead (1996) describes the critique aspect of Maori knowledge explicitly developed and named as *kaupapa Maori*. It 'does not mean the same as *matauranga Maori* or Maori knowledge and epistemology. The concept of *kaupapa* implies a way of framing and structuring how we think about those ideas and practices' (Mead 1996: 204). She cites Nepe as defining it as a 'conceptualisation of Maori knowledge'. She goes on to say that 'it is a way of extracting that knowledge, reflecting on it, engaging with it, taking it for granted sometimes, making assumptions based on it, and at times critically engaging in the way it has been and is being constructed' and 'the different constructions of Maori knowledge'. This she refers to as 'the critical theory of Kaupapa Maori', applying to 'Maori ways of thinking' and affirming the existence and the 'fundamental legitimacy to Maori people of Maori forms of knowledge; . . . it seeks to understand these forms . . . on their own terms and within the wider framework of Maori values and attitudes, Maori language, and Maori ways of living in the world' (Mead 1996: 205).

Although developed as a 'counter-hegemonic' and initially oppositional cultural protection mechanism against the defining, colonising and appropriation of Maori by Westerners, it has been exercised also intra-culturally, to resist mystification of Maori knowledge and the implication of this with issues of identity in practices of exclusion or delegitimation of the participation and decision-making of others within the culture.

Smith (1999: 185–186) cites from the thesis of Pihama that 'intrinsic to Kaupapa theory is an analysis of existing power structures and societal inequalities. Kaupapa Maori theory therefore aligns with critical theory in the act of exposing underlying assumptions that serve to conceal the power relations that exist within society and the ways in which dominant groups construct concepts of "common sense" and "facts" to provide *ad hoc* justification for the maintenance of inequalities and the continued oppression of the Maori people'.

On the other hand, she positions Bishop's (1994) concerns, related to the dialogue between Ellsworth and Giroux (1989) as questioning the basic assumptions of critical pedagogy and 'its failure in relation to its emancipatory goals' (Lather 1991: 186).

Seeing the way forward, then, involves constructive cultural critique of critical theory brought into dialogue with the core/centred development of a local critical approach from within the 'specific historical, political and social context' and the values and processes within the 'Maori world-view', within that culture itself (Smith 1999: 186). All argue that the living out of identity, in terms of 'look(ing) at the world through our grounding in Maori world-views', is a necessary and key element (Smith 1999: 186–187).

In Australia, discourse with a similar purpose continues to identify the core values and 'terms of reference' of Aboriginal life, in its own right, also oppositionally

as distinct from Western and other cultures, and further, relationally, in terms of its contemporary intersection and inter-determination with other cultures (Oxenham 2000; Kickett 1992; Osborne and Dick 1994). Part of this concern for protection, and both separate and shared development, are knowledges and knowledge processes deriving from and important to indigenous culture.

Ownership as custodianship of knowledge

Different types and levels of knowledge are passed on to or made accessible to members of indigenous cultures by gender, age and stage or status within the culture and its law. There are predetermined roles relative to the father and mother, and the gender of the child. Depending on who the father and mother are, will in some cases carry cultural expectations on to their children because of these roles. There are also specialists, in that different people may develop different areas of knowledge and skills to greater degrees than others. This tends to be passed down in families and can be related to localities, especially those where there is a particular resource or development of different knowledge and skills for particular reasons. Inventiveness, creativity and imagination can also confer acknowledged rights. Also, individual differences in all cultures are considerable, and interest, endeavour and capability determine idiosyncratic variability in knowledge and skills across this culturally determined pattern.

In one sense, knowledge is individually owned, yet in another, knowledge is held by individuals only as custodians, but remains the property of the collective, absolutely, and in the sense that the protocols governing the care and access to that knowledge are collectively determined and enforced (Coombes, Brandl and Snowdon 1983). This applies more or less, and in different ways, to different types of knowledge. For example, contemporary indigenous life across its diversity draws distinction between protocols applying to everyday knowledge and cultural knowledge, and to knowledge more sacred, gender-restricted knowledge, and readiness for certain knowledge according to age, maturity or law.

Interfacing with Western culture, this is contested with the strongly held notion of 'intellectual freedom', especially by academics, of open access to all knowledge (within constraints of confidentiality, privacy and security). Knowledge protection (and development) implicates the very different indigenous and Western systems of ownership and control, where protocols of respectful engagement are still to be worked through in practice and in law.

An example is the Aboriginal Research Policy of Curtin University. Other examples include access to and control of the government records of Aboriginal people – an issue raised with the Human Rights and Equal Opportunity Commission of Inquiry into the Effects of the Removal of Aboriginal and Torres Strait Islander Chil-

dren from their Families; cultural arts and designs, and indigenous knowledges of the land, flora and fauna, and medicinal and other practices.

Transmission of knowledge

In addition to controls on knowledge production and authentication, there is concern for the recovery and development of knowledge transmission practices. The introduction of schooling in Aboriginal communities initially served to train people for participation, albeit in mainly lower-level capacities, in mainstream work, economy and society. However, it has displaced Aboriginal content and ways of learning, and thereby the educative roles and authority of Aboriginal parents, kin and elders. These were actively persecuted and prohibited in the early mission-school days, until subsequent government schooling pursued an assimilationist agenda with totally mainstream education.

'The Aboriginal inhabitants of Australia had complex and successful ways of teaching children (and young adults) all they needed to know' (Miller and Davey 1988: 18), but with schooling, there was 'an outright disdain for the knowledges of Aborigines' (1988: 33), and 'Aboriginal children were expected to abandon their language and culture altogether. This amounted to cultural genocide' (1988: 25). The assimilationist agenda not only implemented methodologies which prevented Aboriginal learning styles, but tried to teach Aboriginal children that cultural knowledge was (and is) wrong, lacked substance and did not have any logical place in colonised societies.

However, since then, as with indigenous educational content, there have been some dedicated attempts to effect 'two-way' education processes, by and involving the Aboriginal community (Harris 1988). Reclaiming local cultural content, practices and roles in the educative process, necessarily different in different areas, has consistently struggled against the simplicities and arguments of mainstreaming. 'In the ideal curriculum the child learns to function in both cultures as in the model developed by Harris (1990)', with 'a dual curriculum, with the Aboriginal community planning and implementing the Aboriginal component of the curriculum and non-Aboriginal teachers teaching the Western curriculum', with 'teachers . . . trained to accept the ethnic minority curriculum as equal in status to the mainstream curriculum . . . not merely as a token acknowledgement of cultural differences' (Partington and McCudden 1992: 237). In non-remote communities, this approach has made very little headway due to the mixed cultural lifestyle of urban Aboriginal people and the mixed classes, schools and communities. More than half the Aboriginal population in Australia now reside in urban areas.

Equity in education has moved from initial definition as equality of *access* to equality of *outcomes* – recognising the considerable barriers to Aboriginal children and youth (and adults) in education (Partington and McCudden 1992: 275).

However, without cultural equity in terms of cultural content, process and structures, these remain 'outcomes of a (still) assimilationist curriculum' (Partington and McCudden 1992: 237). One would not argue against equality of outcomes of proficiency in the mainstream society, that then opens opportunities for equality in employment and careers, and informed and effective access to all mainstream services. However, there are several problems.

Firstly, as mentioned, *the neglect of educational content and process of the 'culture of origin'*, producing inequity of both access and proximal and distal outcomes in that culture, weakening both culture maintenance and culture development. The *National Aboriginal and Torres Strait Islander Education Policy* (1989) includes appreciation of culture in its definition of educational outcomes, but typically, only among the last couple of recommendations, along with providing for respect and understanding by 'all Australian students', and that (if that) is the priority accorded to Aboriginal culture for Aboriginal people in practice. The terms of reference for the subsequent *National Review of Education for Aboriginal and Torres Strait Islander People* (1994 discussion paper) similarly prioritise 'access to, participation in, and outcomes from education' (1994: 5) – predominantly general education.

Attempts are being made to incorporate Aboriginal content within the curriculum, but studies have clearly shown that this knowledge is not necessarily effectively transferable into mainstream educational facilities. The Centre for Aboriginal Studies has clearly shown that Aboriginal educative structures are valid academic structures that can effectively skill Aboriginal and non-Aboriginal people in filling meaningful roles within mainstream society.

Secondly, *the choice of nature and extent of the educational contents of mainstream culture needs to be made by the local Aboriginal community, along with their choice of Aboriginal cultural content and process*. This relates to Smith's concept of 'preferred pedagogical practices' (*akonga Maori/ako Maori*) developed from similar a struggle in Maori education in New Zealand (Smith 1997; Mead 1996: 209, 334). The policy includes the involvement of Aboriginal people in educational decision-making, teaching and support services, in the determination of planning, delivery and evaluation, from curriculum development to community-involved teaching. Progress has been similar to the situation in New Zealand (i.e. most effective where it has been possible to establish culture of origin schools in Maori communities). Apart from the very successful culturally-derived or -centred courses in cultural enclaves in tertiary education institutions in Australia, and the very successful national outreach block-release programs (Walker 2000), there are as yet little adequate Aboriginal content and involvement in urban and rural schooling, and very little resourcing of out-of-school community cultural initiatives.

Aboriginal people are perceived to have not achieved in their forced or unforced attempts in the Australian education systems. This lack of success must not be interpreted as failure, because the education structures are based on culture and identity

foreign to Aboriginal people. The Aboriginal experience in education is at times a painful journey, as the individual has to struggle with structures that do not allow an Aboriginal voice or sense of being that encourages and enacts learning that will be meaningful in contemporary society.

Thirdly, *this initial choice of curriculum knowledge, and then the continuing choice of knowledge throughout life, needs to be both informed and critical. And, these critical processes need to be derived from the indigenous culture itself.* 'Reproduction' of knowledge has always been the main agenda in education, and despite some fleeting acknowledgement in tertiary education for constructive attitudes, skills and the exercise of critical thought, education has always been in conflict with the dominant socialisation process of education (i.e. for participation as a citizen in what is, rather than participation for change). Education is largely an agent of the power structures existing in society. Subjecting minority cultures to education designed and delivered from the cultural frame of the dominant culture, is an act of cultural genocide perpetuating marginalisation, disempowerment and assimilation, despite policies of pluralism. Information and skills are necessary to identify these hegemonies and processes, to resist them, and for constructive alternatives to be developed.

From this, *it needs to be recognised that the knowledge base that forms 'individual and institutional racism' in the wider community is also implicated, and 'especially in educational institutions'* (Partington and McCudden 1992: 289). As a conforming, conservative institution with a role for acculturation and culture maintenance, schooling ensures without necessarily active intention to do so, that the racist attitudes in the general culture will be validated and perpetuated. Accordingly, programmes to eliminate racism both in the wider community and in schools are identified as important (Partington and McCudden 1992: 289). But just as one cannot easily respect what one cannot see or does not know, positive familiarisation with cultural knowledge and Aboriginal people is an important part of this process, replacing, not just removing, negative racial attitudes, opinions and 'knowledge'.

Finally, *until the transmission of knowledge is examined in a broader context than just schooling, this imposed educational process is unlikely to deliver cultural equity in content as, by its very nature, it cannot in terms of process.* Also, the trend to *knowledge as information*, mediated by schooling, further removes participants from *knowledge as wisdom*, just as it detracts from those who hold the responsibility for its transmission. In Aboriginal culture it also cuts across the law knowledge processes that are respected as the vital rites of passage to authority and standing in the culture. The personal, social and cultural consequences, including other factors, are examined by Beresford and Omaji (1996).

The development of knowledge is a holistic journey that encompasses process, content, the learner, the teacher, and the culture in which the structured learning is modelled. Philosophically speaking, such holistic undertakings must each share the

greater picture as well as maintain individual processes. Evaluatively speaking, it is about the goodness of such undertakings.

Strengthening and decolonisation of indigenous knowledge systems – and moving beyond

Indigenous knowledge is not only weakened but also colonised (Macedo 1999) through the interpretative 'writings about' Aboriginal people and culture as 'Other' and 'object' by non-indigenous experts. Pilger writes of Australia, 'the perceptions of colonisers and colonised are entwined' (Said 1993). This applies not only to one's feelings about oneself, but also to what is taken to be oneself and one's culture – much has been internalised by Aboriginal people themselves from earlier anthropological writings. Self-image and cultural ways have been weakened for many by genocide, displacement and institutionalisation, and those spaces invaded by generations of ill-treatment, depreciation and marginalisation, and with persistent negativity by the media (Sercombe 1995).

Attention has been given to recognising and addressing the personal and communal effects of these origins of self-negation and 'identity crisis' (Dudgeon and Mitchell 1991; Gilchrist 1993; Roe 2000). It has been recognised that, what may be and is often taken as indigenous knowledge, has been constructed interpretatively almost exclusively through the gaze, lenses, interests and purposes of others. Its perpetuation through curricula as indigenous knowledge is therefore of concern. So is the notion of authenticity in a dynamic intercultural context characterised by the hegemony of dominance (Rains 1999).

For example, minority resistance has often been pathologised as deviant, deficient or criminal. 'In Australian history, minority struggles have often been dealt with in this way. Aboriginal resistance, for example, was generally classified as arson, murder, trespass, theft and assault' (O'Malley 1988: 36). Excessively high Aboriginal imprisonment rates persist today, among the highest per capita in the world.

Said (1993) identifies that, while understandable as a necessary part of the discourse, neither a protective separatism nor a defensive reactionism is a sufficient response, nor is succumbing to the claims of a general dominant culture as an emergent universalism. His concern for freedom from domination in the future, emphasises a progressive and dynamically interacting and interdeterminate 'together' balanced with 'separate' (Said 1994). In the Australian indigenous context, this is articulated by Dodson's (1994) 'empowerment and self-determination' and Riley's (1995) *From Exclusion to Negotiation* in determining participatory shared futures that both redress and progress social justice. Participation not just as, and only as, within a categorised 'Other', but also and primarily as a liberated larger subject.

Citing Thiele (1984, 1985) and others, and their own earlier publications, Tonkinson and Howard (1990) critique Australian self-determination policies for the

indigenous population and describe the tension of constraints from changing political ideology and dominant culture realities that characterise the difficulties in making this transition. Example are the retreat to limited concessions of 'self-management' under Liberal/Country Party government, and the problems of transition from representation to representatives, with little of the rhetoric of self-determination translating into realities evident at the grassroots level. Von Sturmer sees this as 'concealing a discourse aimed at drawing them inexorably into the corporate state' (Tonkinson and Howard 1990: 70-71).

This concerns an Aboriginal person being able to access the shared and separate social capital of both indigenous and non-indigenous life, and an ability to do this on equal ground. Colonial history has done much to destroy indigenous social capital and to exclude access to that of non-indigenous society, except on the condition of becoming or passing as non-indigenous (assimilation). Both establishing equal process and the re-education of the nation is required.

Beyond, and as a way around this, indigenous Australians are also actively engaged with other indigenous cultures around the world in mutually supportive ways, both directly and together, utilising the United Nations as an agency of international influence, and the world media, and avenues of leverage back on the intransigence of their own national member governments (similar at an intra-national level to working with the federal government to impose or pressure for changes by resistant state governments). Said (1993) speaks of 'worldliness' in this way as a necessary condition for the globalisation of consciousness and participation – an awareness that protects, challenges and deconstructs in both ideological and practical ways the contemporary imperialistic global and regional hegemonies, and the persisting nationalistic internal excesses of unprogressed anti-colonial liberation. He proposes a perspective that facilitates 'reintegration of all those peoples and cultures once confined and reduced to a peripheral status', both protecting uniqueness and opening mutuality to shared determination of equably negotiated futures in 'the large and many-windowed house of human culture as a whole' (1993: 312).

This is part of a change on the modern world scene to a strengthening pattern of global culture-based relations. In a contemporary analysis of the world's cultures and their relationships that has aroused considerable interest, Huntington observes that 'in fundamental ways the world is becoming more modern and less Western' (1996: 78) as the age of Western domination recedes and nationalisms give way to cultures re-affirming themselves by turning their gaze within to recapture in a relevant, contemporary sense their core values, beliefs and identity. He describes this depth of cultural resurgence as a 'global indigenisation process' that will characterise the next phase of international relations.

Ways forward in protecting and developing indigenous knowledge

In order to proceed, we can summarise some of the issues thus far:

- Position one's individual and shared historical and cultural experience and understanding as the core, privileged, protected and determinant discourse – this is the key critical issue.
- Reclaim for oneself and accord to others a recognition of and respect for diversities, including diversities of knowledges, understandings and practices, and for their dynamism and processes of change.
- Recognise that, for any person or peoples, in any place, at any time, there are multiple levels of identity and belonging, and of increasingly shared knowledge, understandings and practices – all important and all inter-related.
- Engage in equitable ways, the broader identities, issues and challenges beyond containment within the categories of 'Other' that have served and still serve as agendas of domination, without participation in subjection through confinement within the limitations of living essentialisms and/or victimhood.
- Engage the struggle to decolonise this internal and shared position.
- Respond to the need for indigenous voices as subjects in their own right to address these issues and reclaim ownership and control of their own epistemological domain.
- Privilege an indigenous knowledge base through challenging external objectification with subjectification, rather than with an external gaze – acknowledging the facticity of the subjective as 'objective' in the sense of the authenticity of the actual reality of lived experience.
- Resist, challenge, reject, yet also examine 'Other' interpretations of how one and one's circumstances appear to that other, in the sense of honouring the validity of different perceptions from different viewpoints through different lenses – as long as the lenses are admitted and examined as part of the process. These differences are not necessarily incorrect or wrong, but are likely to be partial, limited and preconceived or influenced in various ways.
- Examine and expose and deconstruct the hegemony (power purpose) of other determinations of Aboriginal realities.
- Reject the attribution of 'lack' or deficit, and comparison with the yardsticks of other cultures.
- Reject the interpretation of 'loss', rather recognising historical and contemporary oppression, exclusion, denial, depreciation, dislocation and damage. Honour resistance and resilience.
- Reject containment within only the traditional as the static 'back-then' or 'exotic', and respect the diversity and changing creative nature of indigenous experience (even the imposed concept of 'indigenality' itself).
- Reject the static historical 'traditionalistic' frame as encompassing all persons and knowledges that can be regarded authentically indigenous.

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Interestingly, in his study of Maori graduates, Fitzgerald (1977) differentiates co-existing social and cultural identity, suggesting the latter as a conservative mechanism of relative stability and the source of Maori identity, while participation in the wider society adds to this a dimension of changing social (rather than cultural) identity. 'The major cleavage between Maori and Pakeha (white) is cultural rather than social' (1977: 152), with strong Maori cultural identification allowing participation in the mainstream culture without weakening the former. In fact, the presence of the 'Other' and this danger perhaps serves to strengthen Maori.

In other cultures, these processes also exist to a greater or lesser extent, with the nature of the indigenous struggle and of the solutions finding their own particular expression. The critical issue now is the emergence of the main conceptualisation of these processes from indigenous viewpoints – by 'recentering ourselves' (Mead 1996: 326) and from one's own indigenous cultural concepts, creating the space to insist on defining one's own history and contemporary realities, and for living out the implications of this in practice in all areas of life. To this end, Graham Hingangaroa Smith (1997) has developed a set of guiding principles, from within education (*kura kaupapa Maori*), as ways forward in that domain and which with details reframed, have application generally. Linda Tuhiwai Smith develops this approach in the domain of indigenous research (Mead 1996: 209–220; Smith 1999) that has implications for the protection and development of Maori knowledge, and the transmission of that knowledge. The capability of protection and development of indigenous knowledge systems therefore depends on such critical explication of protocols that proceed from core cultural values, processes and roles.

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Endogenous Knowledge in Anthropological Perspective

A plea for a conceptual shift

Peter Crossman and René Devisch

Introduction

The words of a fifty year-old South African woman, Leah Motopa, born into a family of farm labourers in Pietersburg, Northern Province, South Africa, perhaps provide a fitting introduction to our topic. Her life story was depicted in an exposition at the African Window museum in Pretoria. 'As time goes by,' she said, 'we continue to adopt the white culture. We are going to throw ourselves away. It has already started' (Liebe Grob, 'Daily Life in a Suitcase', May 1999).

From another, more academic, perspective we draw some encouragement from one of the respected deans of critical approaches to the field of African studies: 'It has also become obvious . . . that the space interrogated by the series of explorations in African indigenous systems of thought is not a void' (Mudimbe 1988).

The above citations present *emic* and *etic*, respectively, perspectives on experience. From our point of view the problem of endogenous knowledge is less a question of 'the location of culture', as in the question 'Who has endogenous knowledge?', than the articulation between the *emic* and the *etic*, which, at some point, can never be an absolute distinction. We do not assume to be able to resolve this issue so simply, but point out that we are addressing an inevitably *etic* perspective, namely that of academia, in South Africa and elsewhere, of an as yet poorly understood *emic* reality, endogenous knowledge, in a particular multi-ethnic national context, that of South Africa. In one way, the test of truth might be the question: Can the form of every statement we make about South Africa be replicated in the Brabant, Flemish, Belgian or European context, to take our own setting as an example?

The Department of Anthropology, KULeuven has undertaken previous research (Crossman 1999) on the question of 'Africanisation' at African universities, in the context of a consultation of faculties of the human sciences at six universities across the continent in 1996 and 1997. The study was based on the observation that African universities have largely been founded on European models and that, despite the widespread talk of Africanisation since the 1960s, most universities have maintained fundamentally Western curricula and structures. Basing our investigation on the calls made by Ali Mazrui, Joseph Ki-Zerbo, Paulin Hountondji, Jean-Marc Ela and others for the adaptation of education to the African context, the objective of our research was to look for new schools of thought reflecting this objective on the continent.

We in fact discovered that, apart from the efforts of a few individuals scattered here and there in the universities, Africanisation, or endogenisation, was instead generally a moot issue for most academics and university administrations, at least in the human sciences. Indeed, most people recognised the problem and believed it to be an important issue, yet stated that little has been or can be done because of insufficient resources (infrastructural limitations) or because demands of participation in the global system of education and research simply made it impossible. Only a few adopted a hard, logical stance in arguing that there was no room or reason for any form of particularistic knowledge in the pursuit of knowledge.

Focusing on the central issue of language, for example, we found that not a single university in Sub-Saharan Africa offered a full degree programme in an African language as primary medium of instruction*. Our hypothesis, rather, was that the weight of the imposed Western techno-rational scientific tradition and the pervasiveness of the national development discourse, based on a Western model of evolutionary progress towards modernity, have prevented most institutions from taking seriously the possibility of endogenous, context-specific knowledges, as has been done in India, for example. The intention, it must be said, is not at all to balkanise African education – cutting it off from global academia while supporting a romanticist reversion (or force it into a 'Bantu education' mode as South Africa has known) – but rather to promote a thriving pluralistic intellectual context in Africa as elsewhere. An integral part of the process of education naturally would derive from the local or regional context, in a sociology of knowledge perspective, while its end-products, given a sense of civic responsibility, should be of relevance to the communities to which the institutions belong.

We believe that this hypothesis is borne out in the case of South Africa, even though the socio-political conditions there have differed somewhat from the rest of the continent. To situate the problem, one might venture a gross generalisation in

*Of course the Afrikaans-medium universities in South Africa may take exception to this formulation, and we were recently told that a university in Iboland, Nigeria, did offer degree programmes in Ibo, yet even here the exceptions only confirm the rule.

stating that in most of Sub-Saharan Africa many people remain in fairly close touch with their socio-cultural roots, whereas there is little political will in support of Africanisation, even as only one among other approaches. In contrast, it would appear that in South Africa there is a certain political will to 'Africanise', expressed in various forms, but due to a history of apartheid (and in particular to the introduction of the homelands system, formal education and Christianity) people have been very much cut off from a traditional indigenous (and I use the term advisedly; in distinction from our use of the term endogenous) social and cultural context for a matter of generations already.

In the case of South Africa, there is in fact a recent politically driven discourse on 'indigenous knowledge systems', which has been taken up to some extent by the universities. We have attempted to interpret this discourse elsewhere in terms of a limited case study based on an acquaintance with the situation of historically black universities. In tracing the origins and scope of this recent discourse on indigenous knowledge systems as it is called, we discover that it by and large conforms to the norms of modern techno-rational science and evolutionary modernity, in part because it is conceived as a new form of the liberation struggle against the global monetary and commercial system, specifically with regard to the issues of intellectual property rights and economic competitiveness. It is thus very much an ambiguous attempt to demarcate and bolster an African identity and sphere of life and action – the notion of indigenous knowledge has been deliberately linked with the African Renaissance campaign – by means of a search to legitimise itself according to perceived globally accepted criteria of science. Our experience is that such a quest reflects a failure to grasp the essence of the problem that may better be evoked by the use of the term 'endogenous knowledge'.

In brief then, and apart from many scattered initiatives – most of them personal rather than structural – we have not been able to locate a comprehensive and original epistemological analysis one might expect to find on the continent. Indeed, the present project led by the Human Sciences Research Council (HSRC) focusing on indigenous knowledge systems, acknowledges and seeks to address this vacuum. Rather, we find a complex of what we may call 'competing discourses' struggling to assert and legitimise themselves in the post-apartheid era.

Anticipating some of our conclusions, and in an attempt to define the term endogenous knowledge, we must first be aware that the terminology of things 'indigenous' has had a troubled and contentious history. We have been warned by Clifford Geertz, writing in 1983, who likened the field of local knowledge to 'largely uncharted waters'. P. Hountondji (1994) and others (Mazrui 1990; Ela 1995) have pointed out the dangers and misunderstandings implied in the usage of the term 'indigenous' and specifically linked these to the many causes and circumstances leading to the phenomenon of 'extraversion' of African scholarship. This is in fact a profound problem that should serve adequate warning and provide an indication of

the complexity and far-reaching consequences of the discussion on knowledge in Africa today. Our experience is that the type of discourse on 'indigenous knowledge systems' such as one finds in South Africa and elsewhere today, often reflects a failure to come to grips with the essence of the problem.

The crux of the issue may better be evoked by the use of the term 'endogenous knowledge' (following Hountondji and others). While the term indigenous might well comprise the site-specific character of knowledges indicated here, it does not comprise that all-important nuance borne by endogenous: development determined by innate resources. We hope, through the use of the term endogenous and the emphasis on a dynamic growth process, to avoid the unproductive and contradictory discussions on identity – expressed in questions such as: What is African, native, local or indigenous? – or the irresistible tendency to situate indigenous knowledge in an archaic, ahistorical or even 'primitive' past – as often happens when one uses the term tradition – as if contemporary industrial societies did not possess their own, particular epistemologies.

In the following, we adopt the use of the current terminology 'indigenous knowledge' and 'indigenous knowledge systems', where we refer to the current discourse – one which is certainly more familiar to South African readers, but not because we wish to endorse the terminology. We use the term 'endogenous knowledge' where we believe it is more faithful to the meaning we are attempting to grasp and which may well reflect the intentions of many others who use the term indigenous. Indeed, one observes that, wherever authors introduce the term indigenous, they are very concerned to point out that the word is in one or another way inadequate. This is precisely the sort of problem, illustrated by the several authors seeking to contribute to a definition of indigenous knowledge in the 'Reactions' column of an issue of the *Indigenous Knowledge and Development Monitor* (1998: 6/3, 12–16), that one encounters. The problem is certainly not a new one to cultural anthropology and has been much implied in the debate on the status of African philosophy – one that is certainly alive and well in South Africa* – that has been waged over the last half century. This is not the place, however, to delve into these much broader discussions, but those concerned with aspects of indigenous knowledge should be aware that the problems are not new.

It is the intention of this paper then to take a critical look at the terminology of the indigenous knowledge discourse. We then make a plea for a shift to the terminology of endogenous knowledge and attempt to fill out that concept from an anthropological approach.

*See P. Koetsee for the South African context.

The discourse of 'indigenous knowledge' in the literature

A survey of the literature dealing with the theme of indigenous knowledge demonstrates that the notion has been largely appropriated by the international development sphere and applied in restrictive ways to particular fields. This is despite the positive intentions motivating the discussion, which seek to overcome the impasse of an imposed Western scientific and technological developmental orientation. It is surprising that critical socio-cultural approaches have not been more fully involved in this endeavour.

'Indigenous knowledge' in the development literature

A rapid overview of the literature indicates that the vast majority of contributions to the debate on indigenous knowledge stem from two fields, primarily medicine – or health more generally – and agriculture. This literature antedates the contemporary international political discourse on 'indigenous peoples' and there has been too little intersection between them. Although the debate on 'traditional medicine' certainly antedates the appearance of the theme indigenous knowledge in the area of development studies, it was probably the latter theme, agriculture, and to an extent environmental issues, which led to a breakthrough of indigenous knowledge as a theme of its own. This moment probably dates to the publication in 1980 by Brokensha, Warren and Werner of a book of which the title *Indigenous Knowledge Systems and Development* willingly reflected the perspective which was to dominate the discourse of indigenous knowledge for the next decades, namely development. As we shall see, the development approach to indigenous knowledge, however well-intended, has had two seriously reductionist consequences for indigenous knowledge discourse:

- It has subordinated the notion of indigenous knowledge as bearer of plural epistemologies to the modernist development paradigm.
- It has promoted a focus on indigenous technologies, only one facet of endogenous knowledge practices, in which rational processes and technological fixes receive exclusive attention and, moreover, are perceived as being 'objective'.

In both ways, we see that the discourse on indigenous knowledge has succumbed to an affirmation of the dominant Western paradigm of evolutionary progress through scientific experimentation.

'Traditional medicine'

Researchers in medical anthropology or even health issues in the developing world will recognise that the debate on traditional healing practices has a long and lively history. This is perhaps because the critical human situation of illness and the struggle of life and death is easily recognisable. Further, many observers, but not all, quickly understood that much more was at stake than the manipulation of herbs, or

phytosanitary substances. Despite the general condemnation of 'traditional medicine' as witchcraft in colonial ethnography in Africa, for example, one finds early acknowledgement that African healing techniques comprised a significant psychosocial component. Very few researchers were able to exploit these findings in terms of alternative epistemologies, however (see Johnson and Sargent 1990). Nonetheless, important strides forward have been made in various fields, especially medical anthropology, in the interpretation and legitimisation of non-biomedical health practices in Africa, and one now has associations of 'traditional healers' and legislation protecting their practice (see Last and Chavunduka 1988 for a general treatment; Chavunduka for Zimbabwe and Pejile for South Africa). The tenacity of the perspective that traditional medicine is all about inventorying and collecting the active substances in plants is thus surprising; it is in part due to the general feeling that plant-derived medicines are at any rate harmless, and perhaps even more due to the perception that it will be up to the modern pharmaceutical industry to legitimate the use of these drugs.

Agriculture, environment and development

The moment, some twenty years ago, when the discourse of indigenous knowledge broke into the academic and development mainstream was defined not through any anthropological or philosophical breakthrough, but largely through the, by then, generalised experience of the failure of all the dominant development models. Grenier (1998), for example, cites an anthropologist who had been collecting files on projects that failed ostensibly because they had not incorporated indigenous knowledge. In Warren et al (1980) and later studies, one notes a process in which development experts gradually became more sensitive to local populations' knowledge of their environment and agricultural production and marketing, as well as water and soil conservation technologies they employed. It is no accident that the term technology already dominates at this stage, and one finds many writers paying rather unconvincing lip-service to the relation between such economic or ecological practices and a community's world-view or cognitive and ethical framework.

Outside of a sizeable zoological literature (including botany) dealing with indigenous species, one is quickly struck by the fact that the majority of works employing the term indigenous in their titles have to do with development and related studies, and primarily the agricultural and environmental fields. It should be noted, however, that in recent years there has occurred a broadening of the topic of indigenous knowledge to include questions of gender, organisation, management and learning in localised societies (Grenier 1998). This development has been paralleled by the resurgence of an international and largely political debate on the status of so-called 'indigenous peoples' and their role in national development; it is not difficult to detect a payoff in this debate between catch-all environmental concerns and

perceived threats to the functions of the nation-state. I mention these fringe uses of the term indigenous in order to draw attention to ambiguous trajectory of the terminology of indigenous knowledge.

Indigenous knowledge in development studies

The extent to which discourse of 'indigenous knowledge' has become ambiguous or obscured can be observed in the manner in which it has become the latest buzz-word in development circles. This may be illustrated by the definition provided by the American Center for Indigenous Knowledge (CIKARD) which has been adopted by the South African Institute for Indigenous Theory and Practice (IITP):

'[Indigenous knowledge is] local knowledge – knowledge that is unique to a given culture or society. It is the basis for agriculture, health care, food preparation, education, environmental conservation and a host of other activities . . . Indigenous knowledge systems are often elaborate. Because they are adapted to local cultural and environmental conditions, they are often superior to modern technology brought in from the outside (Cohen 1993: 14).'

'Indigenous knowledge' has simply become a catch-all phrase for the most recent variations on the development discourse, namely feasibility, sustainability and participation.

Insofar as the original motivation for implicating indigenous knowledge in development approaches was, for many, the realisation that decades of development projects had failed, it might be noted that much of the stated concern with indigenous knowledge is actually a veiled preoccupation with feasibility and efficacy – in other words, making development efficient.

To the former may be added the more recent orientation in development jargon, sustainability, it being obvious that if the local stakeholders had no interest in projects they would in fact fail. To cite one World Bank study: ' . . . no contradiction exists between the maintenance of strong cultural traditions and identities and economic development. To the contrary, for development to be socially and environmentally sustainable, it must take into account and draw upon the values, traditions and cultures of the people in the countries and societies that it serves' (Davis 1995: 3).

It is precisely this utilitarian 'taking into account' that belies the subordination of local knowledges to a development paradigm that is largely antithetic to them.

The primary issue discussed in development theory and practice today is actually one of participation (*see*, for example, the later publications on rural assessment by Robert Chambers, 1983), sustainability in terms of local participation, involving the local actors and stakeholders and giving them ownership of the activities, and this has been reflected in the use of the term indigenous knowledge. In more politically sensitive circles this is fashionably called 'empowerment'. The discourse of indige-

nous knowledge in the development domain is then only to a lesser degree a recognition of the various forms of technologies which the beneficiary groups have practised or can deploy. Our point is not to criticise these necessary corrections to development perspectives, but to demonstrate the extent to which the notion of indigenous knowledge is in fact subordinated to an orientation which itself is something quite external to local communities.

The role of anthropology in question

One could hardly ignore that social and cultural anthropology has in fact produced many studies on indigenous knowledge long before the term gained currency. That distressed anthropologists have made a point of attempting to reclaim the discourse of indigenous knowledge for applied anthropology (Sillitoe 1998 and others) is perhaps based on the privileged place social anthropology holds as a discipline among the human sciences in having developed the notion of culture. However, it is equally an admission that anthropology, particularly in its ethnographic mode, has failed to legitimate endogenous knowledge over or against the dominant scientific discourse. Also, and perhaps more poignantly, it is an admission that anthropology has failed to take the whole issue of plural and alternative knowledges seriously, when it had intimate access to local communities the world over, and has left the job to development studies, sociology, education and other fields. The question as to what went wrong would lead to a discussion we cannot pursue here.

A quick survey of the question of indigenous knowledge in South Africa over the last several decades, something better done by others, would likely show that the debate here, as elsewhere, has been linked to the 'classical' themes, primarily traditional medicine and development topics, especially agriculture and conservation (Normann et al 1996), with one exception: that of the application to social services and management as carried out by the Institute of Indigenous Theory and Practice, Cape Town, in collaboration with the HSRC (Cohen et al 1993 and De Kock et al 1997). However, there is in South Africa a clear realisation of the potential impact of indigenous knowledge on a vast variety of other fields, such as government (languages, traditional authorities, constitutional reform, land reform, 'indigenous peoples') and education (languages, environment and multicultural education). The recent discussions of African Renaissance and *ubuntu* business management are certainly unique and are hopeful signs of more fundamental developments. But it is undoubtedly the field of traditional medicines that has led to the most pressing and complex debate, that of intellectual property rights – with enormous consequences setting national health and international trade at odds. Indeed, although we might have wished otherwise, we are cognisant that this particular topic (dealt with by others here) has been the primary instigation behind the present discussion. One

must, however, take the manifestly commercial and political motivations behind these discourses both seriously and critically.

A preliminary analysis of the indigenous knowledge systems discourse

The fact that it has been the areas of development studies and international trade (witness the international debate on the Brazilian forests and indigenous peoples) that have projected the theme of indigenous knowledge onto the academic and activist consciousness is critical. In the case of South Africa in particular, we furthermore note that the universities, and particularly the black institutions, have in the past not necessarily played a leading role in initiating the indigenous knowledge systems discourse. Nonetheless, one notes a variety of concerns, both superficial and legitimate, emerging in the context of the debate. Before attempting to offer an assessment of the situation in South Africa, let us restate some of the theoretical points underlying our analysis.

The confining frameworks of the dominant discourse

Alongside the inherent weakness of a discourse built motivationally on what may be described more as an ideological vacuum, one would conclude that the discourse of indigenous knowledge systems in South Africa in recent years is yet another symptom of the prolongation of the apartheid system in an epistemological sense, inasmuch as that system, on the level of science and knowledge, has been profoundly internalised through the instruments of formal education, social policy and conversion. Here we face a series of problems – namely that, in speaking of indigenous knowledge systems and despite the very thrust of that discourse, one finds oneself still moving in the context of three determinative and confining epistemological perspectives of frameworks, those of the development, scientific and apartheid discourses.

The first is the ‘development’ perspective. Here the indigenous knowledge discourse has very much been co-opted for purposes of national – read technological, commercial and industrial – development, even or especially at top levels of government. The discourse of ‘development’ enforces perspectives of domination of one’s body, group and life-world instead of regenerating them. The Western outlook has imposed a notion of time dictating linear evolution on an irreversible path to progress, an illusory utopia, but one that serves as a powerful ideology for technological development. Endogenous knowledge is more concerned with the sources of life and their preservation. Rather than being possessed by some developmental vision, endogenous knowledge seeks to nurture existing life forms in all their variety and complexity.

The second is the scientific framework. The terminology of indigenous technologies in particular betrays the technological focus subservient to the developmental

discourse on two levels. First we find the dominant existing technologies and the evolutionary perspectives which direct them dictating which forms of knowledge are interesting, useful or relevant, thus the unmistakably heavy emphasis on the contributions of indigenous knowledge to pharmaceutical and agricultural technologies, for example. This begs the question of the inherent function of knowledge, if such can be conceptualised. As Clifford Geertz (1983: 87) pointed out, Lévi-Strauss was right in stating that people's knowledge fundamentally represents a response to intellectual needs, over the view emitted by Evans-Pritchard (largely following Malinowski) in which people are not concerned with developing any knowledge beyond the pragmatic concerns of everyday life. It is easy to see here that the first postulate is far more comprehensive than the second, for the second is always oriented to specific pragmatic goals.

At author level, one finds local forms of knowledge being submitted to the examination of science and industry, which then determine which knowledges are true, valid or effective. Here the criteria for knowledge are undoubtedly imposed by a dominant science, as is clearly the case for phytosanitary products identified by *sangoma*. Pharmaceuticals are hardly concerned with the social and psychological aspects of African healing arts. They focus, rather, solely on the active substance derived from whatever vegetal matter is deployed. This is manifestly a reductive process which those interested in promoting endogenous knowledge cannot afford to tolerate. Beyond these factors, pertaining more to the level of theory of knowledge, one must take social, political and cultural factors into consideration.

Constraints and perspectives in the South African context

Focusing more on South Africa and on the activities of the historically black universities in particular, we note that the new discourse of indigenous knowledge systems is a social and cultural expression of the quest for identity and participation in an as yet inequitable society. It is thus an extension of the political liberation struggle, which has lost vision and momentum due to the transformation itself, to a large extent because liberation is no longer easily defined. For one, the identity of the socially, economically and culturally alienating factors is no longer clear (taking, for example, the discussions concerning the mandate and mission of universities such as Western Cape, Fort Hare or Venda). Worse, as in the post-colonial situation elsewhere, one discovers that the enemy has been internalised. To a less dramatic extent, this quest for liberation has been reflected in the quest for educational reform.

These factors lead us to a somewhat pessimistic analysis on two levels. The motivations of the present discourse reveal a lack of an ideological basis, in one sense a power vacuum, and the discourse itself demonstrates a structure very much determined by the dominant global discourse. In its present state, then, the discourse of indigenous knowledge systems is radically weakened and undermined in its aims.

It reflects both a struggle or quest for a new (political and cultural) ideology and the legacy of apartheid.

It would appear that the driving impulse behind the present discourse on indigenous knowledge is in fact a lack, a vacuum, in terms of an inability of the liberation discourse to occupy the post-transformation political ideology field as well as impart an ideological orientation to the ongoing drive for educational reform.

The assertion of the indigenous knowledge systems discourse today very much reflects the quest of the ANC leadership and government as a whole since the 'transformation' to recover and mobilise the social and political awareness and energy previously invested in the liberation struggle. This raises the question as to the content of consciousness outside of fairly distinct parameters of any political or racialised struggle for power. The latter is based primarily on a class phenomenon, yet says very little about the character of any of the groups involved, since the significant distinction pertains to their participation in yet another social entity, a nation or broader society. Class informs us about relations between groups, yet tells us little about the concrete characteristics of any one group. In this sense, South African politics is a struggle to fill in the identity of a majority which now has theoretical access to power, yet somehow either rejects or is prevented from exercising that right for reasons other than those of class conflict. This is the underlying motivation and energy behind the African Renaissance movement, which is at pains to define exactly what it means to be African (cf. the famous 'I am an African' speech pronounced by Thabo Mbeki in December 1995).

On another level, one observes that the general perceptions on indigenous knowledge systems follow, belatedly, general trends in education policy, namely the moves from a radical to a systemic discourse and then to an outcomes-based discourse, both radical and behaviourist, as outlined by Kraak (1998). The determining factors here are limited national resources which, as outlined above, have forced educational policy to take an extremely pragmatic stance by having to favour basic education and vocational training. This approach is perfectly understandable for a developing country and especially one in which resources have been so inequitably divided. Moreover, a pragmatic approach does not in and of itself rule out the significance of endogenous knowledge in any way. However, combined with the perceived pressures of having to compete in the world marketplace, South Africa will not be willing to strike out on innovative educational strategies that will both require new research and imagination and presumably put graduates of any level at a competitive disadvantage.

As a result, the discussion of indigenous knowledge systems very much remains a minority debate among intellectuals. There is still a lack of widespread interest in the discourse on the part of politicians, academics and the public, the very actors who could give it any structural impulse. Proponents find themselves having to present and represent their arguments to sceptical and seemingly indifferent audi-

ences and the stakes have not yet been fully understood by the leaders or the public at large.

Moreover, in the South African context, one cannot escape having to deal with the legacy of apartheid. In light of the above, we may observe that the terminology of indigenous knowledge systems may unfortunately represent a prolongation of an apartheid categorisation of knowledge, an extension of a distinct 'Bantu knowledge system' as it were. Indeed, in our efforts to promote the use of endogenous knowledge in South African education, we have often met with a scepticism based on a fear of the reintroduction of a new form of the 'Bantu Education' system known under apartheid. This scepticism is often bolstered by the fear of being left out of (or left behind) the process of globalisation (intellectual, academic, 'scientific', whatever these may mean). It appears to us that the discourse of indigenous knowledge not only attempts to incorporate the criteria of the dominant knowledge, but also enforces a division and hierarchy of knowledge and social functions and the delimitation of the areas in which they may legitimately function. The distinctions may no longer be white and black, Bantu or European, but rather rural and modern, or traditional and scientific, for example.

The essence of the apartheid categorisation is that dominant knowledge is indifferent to endogenous knowledge. It admits to a plurality of knowledges but argues that they are so separate that the one is unaffected by the other, a relation which in real life translates into an exercise of power. Enlightenment science, on the other hand, does not admit to plurality, for it imposes its own uniformity in the form of its inherent materialism and the scientific method. For its part, the development perspective subjects all knowledges to its own evolutionary vision of progress and judges them only on the basis of whether they are seen to be effective in achieving its own ends. While each of these discourses is often seen as inimical to indigenous knowledge, it would appear that the present discourse of indigenous knowledge systems in fact assumes them and forces itself to adapt to their demands.

Here we might condition our remarks in saying that there may indeed be a valid use of the term indigenous knowledge or technology when we refer to a specific practice such as Tswana grain storage. However, we insist that, in order to understand it correctly, this sort of concept must be placed within a larger epistemological framework that we seek to provide by employing the term endogenous. This is the sort of framework we seek to provide in the following section.

A plea for a renewal of the 'indigenous knowledge' discourse

As a first step to rehabilitating the discourse of 'indigenous knowledge', we should like to propose a shift in vocabulary from indigenous knowledge to endogenous knowledge.

Over the years the term 'indigenous' has taken on distinctively pejorative connotations, for historical reasons, which we cannot ignore. This would not necessarily impinge on the etymology of the word, but it does reveal a very strong evolutionary bias and incorrectly assumes an ethnic component. Etymologically speaking then, it would imply a shift from a topographical or more precisely biotopical, as in speaking of indigenous species of plants or animals inapplicable to human societies, to a more botanical etymology implying a form of development, oriented from within and driven by internal resources. This means a semantic displacement from the descriptive, analytic sense of topographical identification and belonging to (native to) a more 'processual', synthetic, sense of auto-development, provided it is understood that no process is fully autonomous. What is endogenous is essentially social and generative. (We suggest this shift in terminology following the use of the term by French-speaking colleagues – Hountondji, Ela, Ki-Zerbo. We are not aware of it having been used in English before, except in the field of econometrics, where it can be understood as simply a variant spelling of 'indigenous'.)

From this perspective we might venture a definition of endogenous knowledge as being a community-, site- and role-specific epistemology governing the structures and development of the cognitive life, values and practices shared by a particular community (often demarcated by its language) and its members, in relation to a specific life-world.

This definition first of all asserts that endogenous knowledge is always bound to a particular context determined by both social and material dimensions. It comprises a shared epistemology or ethos (cognitive or perceptual life, better described by some anthropologists as collective representations), shared norms and values, and any of a vast variety of rites, habits and technologies, all of which make up its practices. What constitutes a community cannot be defined precisely, but may be identified through its sharing of visible practices or its communication of any of the constitutive elements through language. It must be assumed, however, that the language itself (which may be a dialect, Creole, craft-language or task-discourse) may be inaccessible to a non-member or non-practitioner. The last mentioned points to the all-important *performance* criterion for knowledge: knowledge may often, but not always, be conceptualised, yet it always bears a relation to activity or behaviour. And we might well add the term 'living' community in order to underline that endogenous knowledge is nothing if it is not contemporary and dynamic. We may certainly have reasons for studying endogenous knowledge historically, but we must be careful to avoid the historical trap mentioned below. Finally it must be underlined that all members of a community must share a similar experience entailing their relations with a specific environment or life-world. It should be noted that participation in one environment or community is not necessarily exclusive, and a person may participate in several communities at different levels.

This definition raises a number of issues that bear influence where one might consider adopting the terminology of endogenous knowledge.

Perhaps the most imposing definitions of indigenous knowledge are negative due to the sheer weight of the dominant Western scientific tradition. For this reason, one might well proceed with an investigation and reassessment of the domains of Western thought and science in particular, in view of exploring the critical, pluralistic and alternative ideologies which have been set aside by the evolutionary and techno-rational paradigm. Although the dissenting traditions (one might say 'minority' traditions – the use of the term 'alternative' is prejudicial) within Western philosophy and science may not provide either structure or content to endogenous epistemologies, this exercise should at least undermine the perceived authority and dominance of Western thought where it has held sway in the fields of formal education, state-building, the monetary-based market economy and Western religion. Investigations of recent debates on symbolic cosmologies, oracy, feminism and deep ecologies (organic cosmologies) may be useful.

One of the most frustrating aspects of dealing with the terminology of indigenous knowledge is the historical trap. What is ignored in the discourse of indigenous knowledge systems is that endogenous knowledge represents a critique of dominant knowledge and that it belongs to a living community. Although endogenous knowledge may express itself in local and ethnic modes, it is necessarily relevant to contemporary society as a whole, if for no other reason than its inherent plurality – the varied epistemological perspectives and resources it offers. All too often, in speaking of indigenous knowledge, the question is raised: Which period of history are we talking about? Outside of betraying an inherent bias toward past, outmoded ways of life, the assumption is of course that endogenous realities are static and that time, in modernity, has overtaken or worse, erased, not only all expressions of endogenous knowledges but also their sources. This point often falls hard on ears accustomed to hearing that colonialism and apartheid have destroyed anything African, but we argue, at the epistemological level, endogenous realities indeed persist and continue to assert themselves in very real cognitive, moral and empirical ways. Clearly, globalisation has led to cultural hybridisation at a phenomenal rate and scale. The mistake, however, is to confuse the global with the universal. Our presupposition is that experience, and therefore knowledge, remains plural. This is why we urge an epistemological understanding of endogenous knowledge.

In this sense, one notes that the endogenous knowledge paradigm possesses several important characteristics.

It is first of all holistic and organic, in that it is concerned primarily with the way things relate and fit together. This would appear to sanction the notion of *systems* of endogenous knowledge.

Secondly, endogenous knowledge is non-dominating and non-manipulative, but nurturing. Possibly the clearest level of opposition here is between the modernistic

(Enlightenment) conception of earth as a planet to be conquered and mastered, and the endogenous (and post-modern) vision of earth as a source of life, if not life itself, and therefore to be nurtured.

Thirdly, endogenous knowledge is non-mechanical, but social and people-centred. At this level, one notes that knowledge is always (ideally) at the service of the community, rather than an attempt to engineer the society.

One further needs to insist on the primacy of the epistemological dimension in the discourse of endogenous knowledge. This allows one to focus on the relational aspect of knowledge, where the knowing is not separated from the relation of the knower to the known; subject and object are not necessarily distinct but share worlds; knowing does not entail an objective and fixed knowledge in the scientific sense. Attention to the epistemological dimension emphasises the registers and relation between identity and power rather than an objective content.

In conclusion then, it appears that a fundamental epistemological shift is to be made – in fact a shift to an epistemological analysis of the indigenous knowledge systems discourse – if one is to escape the theoretical, and very psycho-social (Maganyi 1981), confines of modernistic science and the subtle prolongation of an apartheid scheme of knowledges. Having proposed such a shift, we will now attempt to fill in the notion of endogenous knowledge from the viewpoint of social and cultural anthropology.

Endogenous knowledge in anthropological perspective

Parameters of endogenous knowledge

Endogenous knowledge refers, in speech or normal conversation, to a community's distinctive resources and capabilities (its modes of understanding, values and institutionalised practices) for both shaping and filtering, concealing and revealing both sensory and cognitive experience, as well as for understanding and encoding, storing and communicating a meaningful and tacitly self-validating or paradigmatic construction of knowledge. A *knowledge-based* and *knowledge-producing community* may, at least tacitly, be aware of its actual lived experience in historically or socio-culturally specific circumstances. It may also at times re-appropriate, re-orient, or re-embrace its basic culture-specific postulates or presuppositions, or its projects of knowledge production. Marriage negotiations, funerals or various notions (such as 'honour', 'ancestor', 'authority', 'misfortune', 'parenthood' and 'motherhood', or even 'future', 'industrial revolution', 'migration', 'urbanisation' and 'progress') may all underpin and act as a primary orientation for the collective imagination and activity.

Endogenous knowledge is *mediated* through a people's particular understandings of shared, context- or group-specific experience, and through their strong links to their particular sources of knowledge, such as ancestral words, ritual speech or styl-

ised dialogues. In contrast, displaced people may develop and celebrate, from within their speech-community, a poetics of resistance and multiple identity in what has been called a process of 'creolisation' or 'pidginisation,' or '*diversalité*,' as our French-speaking colleagues say. What is produced in response to this sort of alienation is an 'imagined pluralism', or patrimonialisation through folklorisation.

What we need to avoid is the recovery and the reification of the concepts *local* (evocative of the colonial associations of rural, pre-industrial, traditional, tribal or ritualistic) and (*self-*)*identity* (whether social, ethnic, national, authentic, intracultural, religious or economic). These references have deliberately been created in order to be subsequently denounced by the 'Centre's' claims to legitimacy through any number of modernistic entities and procedures. (Under the latter, we understand the colony, literacy and missionary Christianity, the 'civilising mission', by the capital city, nation, national language, state, mass tourism and mass media, present-day geopolitics, or even through mass mobilisation of labour, the global economy and its integration of financial systems, which erect a global stage of competition and contest limited goods such as land, housing, money, wealth, status, management or decision-making, and the values of participation, authenticity, meaning, quality, service and access.) Paradoxically, colonial and apartheid ordinances have invented – precisely in order to better reject – local activities, particularities and 'customs' as *negativity*, as anti-social, as idolatrous or irrational, as a void. Colonial power established itself by localising, tribalising and thus miniaturising societies and cultures. 'Tribes' were defined as simple (homogenous) and unchanging, and as possessing but local units of language, culture, self-identity and religion (Ranger 1993). 'Localism' has functioned as a correlate to the colonial invention of the native, the underdeveloped, the rural, the uneducated, and in some cases, as the (romanticised and exoticised) locus of the resistant, the rebellious – the reserve of unique spiritual powers.

Local societies and cultures and their knowledge systems, however, have always been complex, pluralistic, multi-layered and dynamic worlds of (economic, political, social, religious) change. They have always entailed contradiction and contestation, dislocation and (interregional) regrouping, innovation and remarkable powers of adaptability, counter-ideologies and symbolic resources of criticism, and have demonstrated vast reserves of resistance and response to economic upheavals or to the upheaval and trauma of war. These are the sorts of resources local societies have exhibited in confronting widespread ecological and epidemiological crises. They continue to inform people's dealings with modern urban society and the unsettling effects of global monetarisation and industrial capitalism, global literacy and global religions. At the same time, we should also avoid dissolving the incommensurable particularism of local languages, insofar as they bear local cultures and local forms or modes of agency, *vis-à-vis* the unifying pretensions of science, Christianity, the state, the idioms of the international mass media and informational simulacra.

In order to avoid re-stating polarities such as 'ethnoscience versus technoscience', 'endogenous' (local, traditional) knowledge versus 'universal, modern science' – all of which suppose and echo the power geography or geometry expressed in 'the West versus the rest' and the 'local versus global' – we need to lay bare the hegemonic and counter-hegemonic pragmatics of legitimisation, whether they be cosmopolitan, local, gendered, androcentric, Eurocentric, creolised, commodifying or folkloric. The local/global, indigenous/universal polarity is symptomatic of geopolitical strategies in which particular knowledge systems and cultures are so powerful or globally pervasive that they no longer recognise their status as local(isable) knowledge. Similarly, the notions of acculturation, inculturation, transculturation, cultural pluralism/syncretism or creolisation have all relied on a spatialising or territorialising view of culture and knowledge. If these concepts have fallen into disuse in current anthropology, it is because they were never freed of their moralising connotations. We may nonetheless wish to give attention to the ways people appropriate other cultures, 'de-originating' them and stripping away the externality of elements that are adopted, transformed and brought over to the inside.

Mutual decolonisation

The endogenisation of plural knowledge systems and practices entails a mental decolonisation – that is, a fundamental shift, on two levels. First, a shift is made from a homogenising situation of extraverted and 'dis-located' learning and research (as typically practised in many universities in the post-colonial South). The dominant educational mode has been oriented mainly towards the extraction of data and knowledge, via the 'brain drain', thus reinforcing, if not creating, a total dependency on exogenous university models, as well as on imported laboratories and libraries. Second, it requires an effort of revalorisation, re-appropriation and partial re-invention of local paradigms.

Further, the dynamic of endogenisation parallels forms of the newly-found cultural assertiveness evident in many and very heterogeneous local cultures – such as the rediscovery of local cultural traditions, or the cultivation of local cuisine, music, folklore and so on, or even the revaluation of biodiversity. As such, endogenisation constitutes an assertiveness that ties in with nationalist reactions against a neo-capitalist and informational globalisation (one in which capital operates in an ever more 'footloose' fashion and is increasingly linked to computerised informational technologies and virtual flows of money). It further ties in with the ethno-cultural reaction to imperialist aspects of the scientific hegemony from the North. Movements of endogenisation, moreover, are drawing on prestigious cultural traditions from other parts of the world – such as the Chinese, Ayurvedic, Balinese, Japanese, Arabic or Amerindian – which are forcefully affirming their specific epistemologies, classificatory grids, cosmologies, and ethical and ecological concerns.

As an outgrowth of the anthropological focus on cosmologies, modes of thought, ritual, symbol, unconscious structures and implicit meanings, the notion of *site-specific knowledge* ties in with the growing awareness that the post-post-colonial world scene of information flows and knowledge production is becoming increasingly multipolar. Here one finds differentiation occurring along gender and ethnocultural lines, along economic divides, and in reference to broad religious credos. This multipolar focus is, at present, beginning to replace the former universalist stance of science, as well as the essentialist concepts of race, ethnicity and culture typifying the modernist stance. These concepts have seemingly been trapped by structures of power and enfranchisement in the prejudiced fixity of demarcating discrete, unchanging (social, political or moral) boundaries.

The producers of knowledge

A necessary step in reevaluating knowledge is identifying the producers of knowledge. To begin with, deconstructionism has offered a critique of the Cartesian *cogito*, revised the notion of the academic and called for a reevaluation of the actor's or community's point of view. This constitutes a call to specificity, to dialogue with the local, and points to the need for a re-analysis of knowledge production, both on the local level as well as on the geopolitically defined scenes of centre-periphery, politico-economic relations. More fundamentally, feminists and African-American voices have demonstrated the urgent need to rethink the genealogy of knowledge, to rethink alterity while avoiding the negativity of difference or its simple reversal.

Note that the meaning of *endogenous* is not predicated on space, locality, spread or diffusion, neither on ethnocultural possession or roots, on political, economic or ideational boundaries, nor on any presupposition of some fixity or homogenised cultural realm. The emphasis is placed on plurality and on 'knowingness', on someone's culture-specific/authentic and communal performative capacities. Through learning and sharing of experience and method, culture-specific knowledges produce their own experts. Rather than spatialising experience, the notion of endogenous entails a more historicising perspective, or more precisely a focus on activity and authorship (the position, rootedness or inclusion of the subject in an ongoing engagement with contexts such as the city, a cash economy, global trade or techno-science). The focus should not be reduced to nostalgia for life-ways and knowledges thought to be traditional and therefore authentic. Room must be made for a multidimensional, rhizomatic model with discontinuous, interpenetrating subspaces and entanglements.

Placing endogenous knowledge and the dominant scientific tradition in perspective

Oracy and literacy

In line with Walter Ong, Jack Goody has argued that widespread literacy has brought about a cultural mutation in the encoding, storing and transmitting of knowledge. This mutation has profound consequences for the recognition and mobilisation of endogenous knowledge.

In cultures of *oracy*, communities share their knowledge in very practical, community-based, interactive and multisensual transactions. Oracy is very dependent on the participants' culture-specific *habitus*, bodily dispositions, culture of speech/rhetoric, and (gender-, status-, role- and age-specific) styles of communication. Oracy anchors memory in the (rhythmic, performative and ritualising) body, and in particular in the heart as the source of sentiments and morality, and the seat of both secrecy and opacity with regard to the memory and interpretation of life-events. Oracy favours 'figuration,' a recognition of polysemic reality informed – often unknowingly – by metaphor. *Literacy*, in contrast (at least alphabetic or lineal writing) entails a *technè* that anchors knowledge in vision (more traditionally called observation) and in the homogenising text. Writing also produces a 'distancing representation' of the ideas in line with a more solitary and critical interaction with the text and its claim to authority. One thinks of the distancing representation so prominent in the Calvinist interaction with the biblical text and the divine signs of predestination. It resulted in the rupture between Catholic traditions (voiced along the lines of church hierarchy), on the one hand, and the (dialogical, critical) scrutiny of divine will and matters of faith in a Calvinist interaction with the biblical texts and divine message, on the other. In summary, literacy has favoured an essentialistic dynamic of 'literalisation' in which knowledge is equated with mirroring, 'ostension' or the 're-presentation' of reality.

Today, *techno-science* and the massive power of the conjoined media and international capitalism inform a great deal of intellectual endeavour. It promotes a form of methodologisation (with its emphasis on procedure), operationalisation, prospect, and homogenising order as techniques of government and science management.

Plural knowledge systems versus imperial systems of knowledge

Here we wish to consider cultures as processes of contestation over the power to define authenticity and progress or organise power, cash-producing and profit-making activities. One might first observe that 'science' has often demarcated itself from local knowledge traditions and action networks.

In this context we should avoid the cliché of science presenting itself as an intrinsically problem-solving activity, as a product of disinterested laity and pure rationality, as something impersonal, objective and free of the limitations imposed by

culture and history. In fact, unlike technology, science is a speculative activity: it has its own particular cultural and psychological roots. It is finally the denial of these very roots in the name of an impersonal reified science that is responsible for many of the ethical problems in the contemporary culture of science.

'By objectifying and impersonalising knowledge, by de-historicising the producers of knowledge, one could argue away the imperfect reality of living persons and human history from the world of knowledge' (Nandy 1995: 12).

One might often detect that the social sciences occupy a 'Third World position' *vis-à-vis* the 'hard sciences', and in particular *vis-à-vis* the techno-sciences. The primordial point of reference for the 'hard sciences' is, in reality, the breakthrough of Western modernity and the industrialised world interpreted in the light of Enlightenment values. These values, in turn, comprise in particular the notions of objective knowledge and scientific rationality perceived as autonomous – in other words, free from the cultural and the psychic compulsions at work in the various spheres of life. These, in fact, are the deeply held beliefs and assumptions underlying the modernist practice of science. It follows then that science has necessarily become associated with a particular method, theoretical knowledge and experiment. The culture of science or *science cultures* (including physics, molecular biology, primatology, immunology and ecology, as well as the medical, mathematical, engineering and navigational sciences) all too often draw on mechanistic, 'physicalistic' concepts of the universe – the Newtonian notion of a world machine – and this has fostered human violence as well as violence to the non-human environment. It comes as no surprise then, that through the political events of the last fifty years, large segments of science, and its discoveries, have become heavily militarised.

Technology and the notion of material progress continue to elicit social hopes and individual aspirations. Lineal evolutionist thinking remains a latent presupposition of modern science, a rationalist, objectivist and universalist/metacultural stance of modern science.

'The development of science and technology in the West considerably overlaps with beliefs in material and social progress, itself of an ideological nature, for domination of nature has double-edged consequences . . . Contemporary scientists promulgate the delusion that our knowledge is infallible and final. Science and technology are not necessarily synonymous with social progress' (Nader 1996: xii).

It is an all too ideological assumption that science and technology have brought generalised mobility, prosperity, health, security and other supposed benefits to human welfare. One all too uncritically takes for granted its technorational activity, its bounded and autonomous nature, its homogeneity and its emancipatory effects. Indeed, with the industrial revolution, science and engineering technologies became measures of human worth and comparison. Moreover, as key components of the 'civilising mission', the purported benefits of science have been used to justify European political hegemony in the colonies. The tragedies of Nagasaki and Hiroshima, or of any recent war, however, have shaken the unquestioned belief in Western

science, rationality and technology. In another area, there is a growing risk that the business world imposes its market logic on intellectual freedom, in general, and on the university, as the privileged locus of learning and research, in particular. The supposed rigour and unambiguity of the 'hard' sciences are not free from illusion when confronted with real-world problems of an extreme complexity.

It is of utmost importance to understand that science is not free of culture; it is, rather, not only full of culture, but also does not function independently of its practitioners and their vested interests, whatever their claims to a lay status. Japanese primate studies, for example, reflect a great interest in ranking, and in inter- and intergroup relations, whereas Western primate studies reflect a neo-Darwinist emphasis on sociobiology, on evolutionary reproductive advantages of specific adaptive behaviour. Western scientific knowledge-building connotes an institutional or bureaucratic setting ruled by the notion of systematised inquiry and ordered rationality, such as financial and intellectual accounting. It is ruled by a group of people united by a common competence; it has erected boundaries and a very pervasive oppositional thinking: science *versus* religion, rational *versus* magical, universal *versus* particular, theoretical *versus* practical, or developed *versus* underdeveloped. Science in fact mirrors the compartmentalised societies in which it is embedded. Science has the tendency to create an inferior or incompetent 'Other' so as to better reinforce its own hegemonic role. One all too often finds modern science contrasted with the sciences of other civilisations, such as those of China, India, Islam and the older civilisations of the Americas.

The global expansion of science is based on relations of power rather than on any claim to a greater level of rationality. There is a growing sense of failure and betrayal when publicly funded science remains tied to the welfare of a few. One might very well ask if science might ever come to recognise and reflect on the common fears, anxieties and anticipations that, only because they are shared by Western scientists, become implicit codes that determine the bulk of scientific activity.

Charting a new direction

Charting a new direction in our understanding of knowledge entails privileging local, practical, differential, site-specific/situated knowledges and competencies in contrast with the Western scientific tradition.

The tragedies of colonisation, apartheid and war have shaken the unquestioned belief in Western science and technology. Local agricultural systems, for example, have for centuries been involved in intercropping, using shifting cultivation based on an understanding of the nutrient cycle, of the interaction between vegetation and soils, animals, and climate. Here the aim is not to oppose 'science' to the 'local sciences', but rather to provide a more legitimate framework for understanding the relation between the two. This might be achieved by abandoning the false separation

between science and local or civilisational knowledge systems; opening up to the plurality of valid ways of looking and questioning; changing attitudes about vital and experimental site-specific knowledges; reframing the organisation of science, and discarding the core-periphery model of analysis as long as it is framed within the notion of progress. In short, this means avoiding assessing the credibility of science as autonomous, 'self-generated, unique or superior by excluding values from the space in which science is practised. It has often been demonstrated that the compulsory methodology employed by science and urging standardisation, uniformity or conformity may not, in the long run, provide the best possibilities for the development of new scientific models, methods and discoveries.

Roles, communities and sites of endogenous knowledges

Here we come to a number of considerations in locating endogenous knowledges, namely the persons, communities or sites to whom or to which they are particular; the sorts of arts and techniques to which they give expression; and finally, the domains and institutions of production to which they pertain.

First we might note that differential knowledge practices are particular to authoritative knowledge-bearers in culture-specific roles and status, such as healers, bards, soothsayers, diviners, messengers or even judges, journalists and so on. Knowledge-bearers share rhizomatic space-time networks of site- or context-specific knowledges ranging from cooking and commensality, to dealing with agriculture, or with the movements between the home and the agricultural fields, from courtship to child-bearing and education, from craft work to marketing, or from building a house to inhabiting it and gradually making it into a home.

Further, endogenous knowledges are located in speech-communities or communities of conversation. This is a non-spatial notion that emphasises the agency of the members of a community, in a context so badly in need of competencies, authority. These may be monolingual communities or plural language-bearing communities in which members know which language is spoken where and with whom. Communities may make use of plural and even diverse languages (local, vernacular languages and even those inherited from colonisation) to build knowledge and to underpin their relations with the world and with one another. Gender-specific signification also plays a role here. The category 'woman' has been used primarily as a sign-vehicle of male (phallogocentric) signification, and rarely as the source of the construction of signification. In the realm of public (patriarchal) institutions the woman is spoken of, yet prohibited to speak out.

Endogenous knowledge performatively brings about cognitive shifts that open up new culture-specific, cognitive horizons, such as irony, parody, (satirical) *diffraction* and *heteroglossia* that in the manner of expression, or figuring, or in the offence, surpass the restrictions of conventional androcentric/Eurocentric discourse. These

sorts of shifts call attention to the gap or irreducible discrepancy between what appears and what actually prevails. They also underline the *subject's* resistance and subjectivity as the locus of difference, of self-identity, of 'subversion'; not locked within the societal hierarchies, control mechanisms and dualisms such as culture/nature, gender/sex, soul/body, objectivity/subjectivity and public/private. Irony provides a way to throw out one's hermeneutic anchor in the absence of a safe harbour. Considering the Eurocentric science politics, local knowledge systems have always been treated as on the outside, thus excluded as inferior and partly non-valid, instead of being recognised as a genuinely valid site and a performative agency opening up new (gyno-centric) avenues for knowing and for situated knowledges that also articulate the multidimensionality and heterogeneity of what counts as human for disenfranchised others in given worlds.

As techniques and domains of (re)production, we are dealing with arts of generating and regenerating life, worlds, forms of being; arts of revealing and concealing knowledge; as well as of techniques of transmission, storage of knowledge, of bonding, consensus-creating, of including and excluding.

One of the primary levels is that of bodily or sensory arts and techniques. These may range from rhythm to melody and resonation, such as that typified by the mother/child paradigmatic relation. This category also comprises means by which groups, communities or congregations constitute themselves in meetings, or (re)make and undo their bonding, as in mourning, for example. It includes many other sensory techniques ranging from touch to taste and speech – witness the wide variety and extent of the many taxonomies of plants, foods and animals deployed by endogenous knowledges.

One also thinks of the many forms of systematisation that can be achieved through practical, material (con)figurations or through verbal means. The first instance comprises the material base of knowledge systems, largely based on ideograms, and may include patterns of weaving, moulding, pottery, building, cooking, drinking and the like. Systematisation through verbal means includes genealogies, kinship systems, calendars and narratives, ranging from prayers to myth, and from children's songs to royal hymns. It may further comprise incantory chants, lists, taxonomies and aetiologies, both folk and divinatory.

Finally, one notes a broad spectrum of domains and institutions of (re)production comprising a wide variety of human activities, such as marriage, child-bearing and -rearing, housekeeping and domestic tasks; family and school education or youth initiation; pre-capitalist market systems; agriculture, pastoralism, fishing; construction of houses and other edifices; or even conflict resolution, jurisdiction and peace-making.

Mediating between endogenous knowledge systems

In conclusion, it is necessary to make a somewhat theoretical yet very fundamental remark on mediating between endogenous knowledge systems – an issue which invokes the question of the very possibility of understanding, communicating and ultimately, relating. The problem of mediating between endogenous knowledge systems is not so much, or not only or primarily, a problem of multilingualism, translation or interpretation, but rather a problem of *transliteration* of knowledge systems, of culture-specific narratives, aetiologies and values. This entails a form of cultural brokering by laying bare the latent organising or all-encompassing, yet open-ended, partly indeterminate theoretical categories, metaphors, practices of control, formations of agency, mutual respect, and process of becoming, constituting self-identity, subjectivity, knowing and so on. The basic concern we wish to express here is one of becoming compassionate with (speech-) communities, their values and sense of positively repossessing subjectivity and (self-)identity, however mobile and contingently founded. Such affinities, including claims of multiple selves, are produced through shifting yet enduring encounters, negotiations and connections, yet they are neither ever fully captured by these interactions, nor overwhelmed by the ‘many-ness’ of things.

In summary, we have attempted to demonstrate that, in the international and South African literature and debates, the discourse of indigenous knowledge tends to hide a dependence on the very knowledge tradition, that of the dominant Western scientific culture, which excludes the possibility of other sciences. Although an argument for a rhetorical shift to the language of endogenous knowledges may not be convincing on etymological grounds alone, a change in terminology may be necessary to escape the historical linkage of concepts such as indigenous, local, folk or traditional knowledge, to a modernistic scientific paradigm, itself ideologically dependent on the notion of evolutionary progress. We therefore propose approaching endogenous knowledges from an epistemological perspective rather than forcing them to bear the burdens of evolutionary developmental paradigms. It is in this light that we have attempted to identify and describe the parameters, sites, agents and acts of endogenous knowledges in anthropological perspective – above all, in terms of the particular living (speech-) communities who constantly (re)produce, fashion and deploy them. Perhaps in this way an anthropological perspective can contribute to the effort to create and secure a legitimate space for endogenous knowledges among the wide spectrum of human sciences.

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Part

2

*Indigenous Knowledge
and the Disciplines*

Science Education and Africa's Rebirth

B.O. Tema

Introduction

One of the key factors that accounts for the utter suppression of effective learning of science in Africa has been the controversial status of the knowledge that African learners bring to the learning situation. Philosophers of education recognise the importance of prior knowledge or existing knowledge as a factor in entrenching new knowledge and as a baseline, for curriculum development and for introducing new concepts. However, the discourse relating to African thinking (knowledge systems) in relation to science seems to have progressed from a position of total rejection which prefers to see the African learner as a *tabula rasa* with regard to contextual knowledge that can be used as a basis for learning science, through to a position of conditional or reluctant acceptance. This point will be clarified later in the course of discussion. Before further and in-depth discussion on the relationship between African indigenous knowledge and science, it seems necessary to account for the 'sudden' emergence of interest in indigenous knowledge systems (IKS). In other words, it is important for me to locate IKS in the context of the historical moment. What is the nature of the moment that has provided stimulus for an interest in IKS to such an extent that it can be used as a basis for future approaches to science education in Africa?

A description of the nature of the moment is like beauty; it lies in the eyes of the beholder. To a Westerner, critical of the achievements of science so far, the nature of the moment may be described as one that recognises that science has failed to provide solutions to various problems, especially those that relate to developing countries. Such a person would, therefore, conclude that it is time perhaps to re-look at the knowledge systems that have enabled people from the developing world to survive in spite of their alleged ignorance of science.

This person would describe the moment as one that provides an opportunity to re-examine different contextual knowledge systems that so far do not form part of scientific knowledge. The United Nations and its agencies recognise the value of IKS not only as part of its commitment to universal human rights, but also as crucial for sustainable development.

For the African, however, especially a South African, the moment is a much more wondrous one. It is a moment of deep exhalation at the point of entering the plains after a long, long walk in the mountains. This is a moment of safety that allows the time and space for unpacking the bags that have been carried around on the journey through the mountains. Over the years, the African's mind has been preoccupied with shedding the burdens of colonialism and apartheid. At last a moment of critical self-reflection has arrived – a moment wherein the African can examine afresh the indigenous knowledge on its own terms and also in terms of experience and knowledge that have been acquired during interactions with different cultures. The moment affords opportunity, not only to examine African knowledge in relation to scientific knowledge, but to juxtapose it with other knowledge systems such as Chinese medicine, to perhaps uncover its unique, useful features that cannot be immediately blended into scientific knowledge. The African celebrates this moment.

Science education in schools

Having welcomed this *moment*, let us now examine how science education has been practised in Africa so far. Science education in Africa has, by and large, not only copied curricula from Western countries, but it closely borrowed approaches to practice whenever they could be afforded. As in most 'Western' countries before the 1960s, science education was dominated by the transmission mode of teaching, in which teachers saw their role as that of imparting an accepted body of knowledge to students. The launching of the Sputnik by the Russians in 1957 shocked Western countries into reassessing of their science teaching practices and the establishment of new curriculum development principles. Curriculum reform projects that followed, for example the Nuffield Science Teaching Project, abandoned the content-driven curriculum in favour of 'process science'. Process science was considered more valuable because it would give students an experience of science as it is practised by scientists and introduce them to the 'scientific method' – a method that was thought to yield reliable knowledge. A clear distinction was made between 'science content' and 'science process' (Munby 1988; Millar 1989). Content-driven science was thought to encourage passive rote learning while 'process science' encouraged active learning.

The 1960s also heralded a period of curriculum reform in the newly independent African countries and the process approach as introduced in the West was adopted in most African countries. However, Ongunnyi (1986) points out that, in Africa,

process science never really took off because of the expansion of school enrolments in the post-independence period and the attendant financial constraints. This resulted in the shortage of qualified science teachers and the lack of adequate laboratory facilities.

In the West, however, even while process science was being introduced into schools, philosophers of science were questioning the nature of the scientific method on which process science is based, and even rejecting the idea of its existence. Popper (1959) rejected the inductivist basis of the scientific method. He pointed to the theory-driven nature of observation in science. Feyerabend (1975) rejected the existence of a specific method that is generally followed by all scientists. He pointed out evidence from the history of science showing how various scientists have contradicted the so-called scientific method.

Over the years, a growing dissatisfaction about the efficacy of the process approach as practised in schools also developed. It was found that most practical work done by pupils consisted mainly of routine experiments in which pupils followed steps clearly laid out by the teacher to reach certain conclusions. The purpose of this kind of practical work was to verify assertions made in class or to reconstruct some of the processes by which discoveries were made. Cawthron and Rowell describe the image of science conveyed by school texts as follows: 'Throughout the pages of these texts reality is accepted as given, or reified, existing quite apart from human agents. And it is assumed that such agents can approach the comprehension or appreciation of reality by persistent application of the processes of perception and/or reflection, particularly the former in the first instance' (1978: 32).

Thus, while attempting to bring out the active nature of scientific enquiry, the process approach as practised in schools was found to distort the nature of knowledge formation by emphasising the 'out-there-ness' of knowledge, rather than viewing it as a human construct. It obscured the process of selection in the observation and interpretation of data, thus suppressing the possibility of alternative interpretations.

The formalisation of the scientific method into steps has also led to their reification, with the result that their origin and associated underlying questions are downplayed. They are often taught algorithmically and the reasoning involved in the process is lost. Paul and Binker contend that the suppression of hypothetical thinking involved in the scientific method makes scientific processes appear unique to such an extent that they can only be acquired in science classes. They argue that 'Scientific thinking is not a matter of running through a set of steps once. Rather it is a kind of thinking in which we continually move back and forth between questions we ask about the world and observations we make and experiments we devise to test our various hypotheses, guesses, hunches and models' (1990: 514).

They illustrate the thinking involved in science, which we also use in daily life, by stating: 'We continually think in a hypothetical fashion . . . [by thinking for example:] If this idea of mine is true then what will happen under these or those conditions? Let me see, suppose we try this? What does the result tell me? Why did all this happen?' (1990: 514).

Thus, instead of approaching scientific thinking as a novel way of thinking, students should be encouraged to recognise elements of this type of thinking in their everyday thinking.

The problem-solving approach has been advocated as a replacement of the simplistic process-oriented approach described above. Noting that problem-solving involves the use of existing knowledge, a new form of research that attempted to apply the philosophy relating to the importance of prior knowledge (constructivism) to science education, evolved in Britain. This was outlined by, for example, Ausubel (1963). This research showed that children from all kinds of backgrounds bring to school concepts and ideas about some scientific topics that are contrary to accepted ones, and that these concepts are usually resistant to change in response to traditional methods of teaching (Driver and Easley 1978; Gilbert and Watts 1983; Hewson 1980). Posner et al (1982) have suggested that a change in these conceptions can only take place if the pupil is dissatisfied with his or her original belief and finds the new knowledge intelligible, plausible and fruitful. With reference to students from non-Western backgrounds, Baimba suggests that it might be necessary to go further and allow students to consider their traditional world-view against the scientific paradigm. He states that ' . . . traditional beliefs which make sense of the world to traditional students, often conflict with what is taught in science lessons. Hence, for the majority of these students, the meaningless information given to them in science lessons is often shelved, to be used only for the purpose of passing school examinations. Once outside school, it is the traditional knowledge which they use to make sense of their world' (1992: 28).

As stated earlier, the introduction of African students' prior knowledge into the science classroom has always been contentious. Many writers on curriculum development in various parts of Africa have shown that it is possible to incorporate traditional concepts and practices in science curricula. For example, Cole states: ' . . . there has always been a rich collection of cultural objects and beliefs with scientific bases in all African societies. The scientific bases may be very elementary but could serve as valuable links between what is familiar and new knowledge and understanding that is to be acquired' (1975: 318).

This also asserts the following: 'In no culture is science written on a *tabula rasa*. Everywhere science does already exist in one form or another, albeit not as structured and articulated as in modern science' (1984: 36).

This view is, however, not shared by some influential educators in South Africa. The De Lange Report that was commissioned in 1981 to investigate, among others,

the learning of science and mathematics in South Africa, dismisses the idea that science concepts can be related to concepts from traditional African culture. It maintains that no science-related concepts exist in the African culture. As pointed out above, such concepts and practices do exist. The need, therefore, seems to be for a change in attitude on the part of some educators in South Africa in order to allow African students to bring their cultural experience into the learning situation. As Bruner (1972) suggests, 'what is taught should be self-rewarding by some existential criterion'.

Juxtaposing the students' world-view with the scientific paradigm could have the effect of showing the strength and weaknesses of each, so that students may accept and incorporate elements of the scientific world-view into their daily lives. To develop an awareness of competing theories, writers such as Martin (1972) have suggested that discarded scientific theories may be studied together with current ones. This would indicate their merits and demerits, and show why the current theory is more acceptable.

While the above argument for a critical pedagogy of science seems reasonable, writers such as Garrison and Bentley hold an opposing view. They suggest that learning science is like learning a first language or acquiring a new world-view – what they call 'original learning'. They assert: 'It appears that insofar as we are concerned with original learning, we are primarily concerned with correct response, verbal repertoire and a set of behaviours, and not concepts or conceptual change . . . We believe that the original acquisition of science resembles the acquisition of a second world-picture. Learning to live in such a world can never be an entirely rational process' (1990: 26).

In other words, Garrison and Bentley (1990) suggest that students are incapable of learning unfamiliar scientific knowledge in a critical manner and they recommend that such learning should proceed by rote. However, Siegel rejects the idea that science requires rote-learning. He suggests that, like all other subjects, science is concerned with reasons, and students should learn how these reasons are warranted. He states that: 'A critical science education, then, takes as its primary focus the study of reasons in science. Instead of regarding the science curriculum as a "rhetoric of conclusions", it is regarded as a means of helping students to come to understand the nature and the role of reasons in the scientific enterprise' (1988: 113).

The author also maintains that, while learning scientific knowledge involves the acquisition of unfamiliar knowledge and may sometimes involve a change of one's world-view, this process can indeed proceed in a rational manner. Unless we are concerned with indoctrination, meaningful learning and a change of world-view are only possible if rational procedures are used. A student needs to know why he or she has to abandon his or her beliefs and adopt new ones. In the case of unfamiliar knowledge, the student still has to be able to make sense of it by, for example, relating it to his or her existing science knowledge, rather than just absorbing it.

Developing critical thinking is therefore an important way of ensuring meaningful learning of the paradigm of the day and, ultimately, helping students to be able to contribute to revolutionary science.

Curriculum development in science education

As pointed out above, the theorising and practice of science education in Africa followed the Western mode. Approaches to curriculum development also took the lead from Western countries, but in most cases could not be effectively implemented as a result of financial constraints. In South Africa, curriculum development was the ambit of teams of experts (Tema 1993). It was conducted piecemeal according to developments in the West, with the result that the original aims of the curriculum sometimes did not match the prescribed practise (Tema 1995). The rationale for the selection of the elements of the curriculum and their relationship to the prescribed teaching approaches were in most cases obscure. The exercise of curriculum development was also purported to be value-free, perhaps to justify the tendency to borrow and the inherent inductivist approach to science education at the time. This tendency might also have been used to preclude the deliberations that should accompany the curriculum development process in order to silence those dissenting and subjugated voices that could prove a nuisance to the process. It is also possible that, whereas in South Africa local experts were used to exclude other voices in the curriculum development process, in other African countries that did not suffer the pariah status, international experts were used for this purpose.

The author of this paper proceeds on the assumption that the process of curriculum development should be a democratic one. This means that all parents and other stakeholders in education should have equal rights to determine what children should learn. Experts have their own specific roles to play, but that should not be a basis for excluding the values, conceptions and concerns of stakeholders such as parents. The process of curriculum development should be a deliberative rather than a prescriptive one. It should be a process that reflects what the society or community regards as important for its children to learn on the basis of its values. It should be seen as part of determining the future, much as is voting during elections. The process of deliberating about the curriculum could open up a communication space between experts in subjects and ordinary citizens, thereby increasing the possibility of incorporating elements of African knowledge into the curriculum and reducing the alienation of learners from their contexts. As part of the transformation of education, South Africa has adopted an outcomes-based model, which uses the determination of educational outcomes as its starting-point. Working teams consisting of a variety of stakeholders in education determined these outcomes. The challenge now is to transform these interesting curriculum ideas into practise.

Research issues in science education

One of the major concerns about research in Africa, especially in South Africa, is the paucity or under-representation of black people in research and knowledge production. This problem was first highlighted in South Africa by Evans, who located it in the history of South Africa. He stated that 'the fact that whites dominate the academic process should be regarded not merely as an effect but also as one of the objective mechanisms which sustain racial domination' (1990: 22).

He justified his assertion as follows:

1. *Whites have a monopoly over research skills.* He states, in this regard, that: 'the important deduction to be made . . . is that white domination over academia reveals that blacks have never been trained in the techniques and processes of serious research' (1990: 23).
2. *Black universities, or 'bush colleges' as they were then called, were never meant to be centres of research and development.* In this regard he states: 'The black campuses . . . have never embraced research as an essential component of their functions. Nor were they ever intended to do so. A distinctive feature of the black universities is that, with the singular exception of Fort Hare, each is a creature of segregationist legislation enacted in 1959 . . . the net effect of these differences is that research and research skills remain firmly in white hands so that academia is likely to retain its racial character' (1990: 23, 27).
3. *Current [in 1990] research funding displays racial preference of white over black researchers.* He maintains that the funding organisations that existed in South Africa then, '[did] not possess the necessary commitment to alter the racial character of the research corpus significantly'.

To correct the state of affairs, Evan suggested the following:

1. Universities should 'change internally to redress the racial character of academia' (1990: 29).
2. ' . . . special divisions should be established within universities to oversee and develop incentives for the training of blacks . . . As far as possible departments should ensure that research components form essential parts of courses presented . . . Special positions such as research assistantships or project assistantships could be established to engage black students directly in ongoing research conducted by academic faculties' (1990).
3. More funding should be directed at black research.

Evans' paper generated a lot of debate among South African academics. The issue of a lack of research methodology among black students was widely accepted as a major contributor to the problem of under-representation of blacks in research. Universities and academic associations like the Southern African Association for Research in Mathematics and Science (SAARMSE) placed a lot of emphasis on the development

of research capacity. Evan's paper, however, also evoked radical responses from black academics, such as Jansen. He dismissed Evans' solutions with contempt. First, he rejected what he called Evans' 'incorporationist argument', that more blacks should be included in established research programmes. He maintained that this argument 'places blacks in the pathetic position of beggars for participation in the white academic world'. He asserted that 'There is . . . a more dignified and incisive vocation for the black scholar, one which does not simply seek participation in an established structure, but seeks to redefine the racial terms and territory on which research takes place' (1991: 107).

Jansen argued that the problem facing blacks in research is not fundamentally based on the lack of skills, but rather on epistemological issues – those issues that frame research. He stated that: ' . . . even when black intellectuals do research, they are saddled with very conventional conceptual and methodological tools of analysis, a problem often called intellectual dependency' (1991: 108).

He suggested that it is only when research encompasses and encourages the consideration of black experiences, such as racism, that greater participation in research will take place. He proposes that: 'we need to reclaim race as a radical analytical focus and political project' (1991: 108).

The progress regarding greater participation of blacks in research in South Africa needs to be properly evaluated. To date, research funding organisations such as the National Research Foundation still lament the paucity of blacks in research. What is the problem when so much time and money have been spent on imparting research methodological skills? Perhaps we need to ask ourselves if method is a legitimate starting-point for research. I believe that research method is important insofar as it provides a framework for conducting research. In other words, method is important because it allows others access into how knowledge was produced. However, it seems that knowledge of research methodology is a weak stimulus for conducting research. Harding (1991) offers some suggestions regarding the weakness of knowledge of research methodology as a research stimulus. She contends that the so-called scientific method is presented as a way of establishing the objectivity of scientific knowledge. She asserts that the scientific method supposedly ensures that scientific knowledge is untainted by personal interests, desires and values, but goes on to point out that knowledge can never be divorced from the researcher's interests and values. This idea corroborates the anti-positivist stance that was enunciated earlier. It seems, therefore, that instead of using methodology as a starting-point for introducing students to research, universities should develop students' skills to identify the questions and values that underpin research, and to appreciate why certain things are worth studying and others not. It is hoped, that with this approach, students would unearth their own issues and questions, and thereby become internally motivated to conduct their own research.

Another issue relating to all forms of research in Africa is the limited opportunity for publishing research papers. Some universities also place more value on an academic who publishes overseas, and this undermines the usefulness of research in one's country. Of note are the following issues with regard to international publication:

- Writing for international publication often deflects attention from local issues because of the need to impress the overseas reader.
- Articles published in overseas journals are often inaccessible to local scholars or policy-makers, for whom they could be of immediate use.
- The preference for academics who publish overseas may sometimes mask a lack of commitment to the local context.

Science education in the climate of the African Renaissance

In the introduction, I explained the importance of appreciating this moment in Africa's history. This moment provides the freedom to take stock, and the opportunity to ask fundamental questions that are typical of the beginning of a new road. The moment also ushers in a soul-invigorating realisation that 'we are our own liberators' (Mbeki 1999). As self-liberators, this means that we can chart a new course and we have indeed started in many areas of our lives. This newly discovered self-confidence makes the task of dealing with the rubble and ruin all around us less daunting. The president of South Africa, Thabo Mbeki, calls this the moment of the African Renaissance. He states in this regard that, whereas '... in the context of the evolution of the European peoples, when we speak of the renaissance, we speak of advances in science and technology, voyages of discovery across the oceans, a revolution and an attendant spread, development and flowering of knowledge and a blossoming of the arts' (1999: 241)". Furthermore: 'An essential element of the African Renaissance is that we must all take it as our task to encourage her, who carries this leaden weight, to rebel, to assert the principality of humanity – the fact that she, in the first instance, is not a beast of burden, but a human and an African being' (1999: 242).

For African science educators, the challenge of 'encouraging her who carries the weighty burden to assert herself' means that they have to have the courage to bring the contextual knowledge of the African learner into the classroom and make it a subject of study, and a scaffold to assist learning. Reclaiming 'her' humanity will take place that much faster when her meanings are appreciated and understood. Learners should be allowed to use metaphors from their experiential background to help anchor new scientific concepts – for example, to examine how much mathematics is contained in the construction of hut, how much physics is contained the construction of a drum, and indeed all forms of African musical instruments. Students should be encouraged to look behind taboos, such as not allowing strangers to enter a

newly-born's room. How does this practice relate to scientific concepts regarding the development of natural immunity? In other words, instead of spending too much time lamenting the fact that schools do not have modern amenities such as laboratories for science education, teachers would, while the provision of such amenities, is still in the planning stages, use the environment as a living laboratory. A positive spin-off of this practice may be that it will teach students some of the practises that are in danger of extinction with advancing urbanisation. Most urban children do not have an idea of how all the items mentioned above are constructed. Thus, conservation of traditional African culture could be achieved during science and mathematics lessons. Accepting the African child's lived experience into the learning situation has the positive psychological effect of integrating him or her as a whole person in the learning process. The African student has had to compartmentalise his/her lived experience away from school knowledge (Baimba 1992). An integration of both these aspects seems essential for learning and change – cognitive and conceptual change. As Rogers declares: 'We cannot change, we cannot move away from what we are, until we thoroughly accept what we are' (1980: 17).

The following points can be stated in summary:

- The science classroom of the African Renaissance should certainly not be a quiet one where the teacher, like the priest in a church, is the only one who is allowed to speak. It will be a forum for noisy discourse because of the challenge that the discussion of scientific concepts presents to traditionally held ones. The traditional classroom which Dewey (1949: 70) describes as having 'fixed rows of desks and [a] military regimen of pupils who were permitted to move only at certain fixed signals . . .' is still the norm in Africa. However, in the climate of the African Renaissance, classrooms would become more flexible by introducing chairs and tables that allow rearrangement for classroom discussion. Pupils would be constantly in the position of having to defend their views and listen critically to those of others. This would enhance the development of self-correcting strategies, dissatisfaction with long-held views, and the awareness of the possibility of changing them; a practice that has the positive spin-off of strengthening democratic behaviour because a democracy depends on the citizens' ability to debate national issues.

Belenky et al. (1986) refer to teachers who use this kind of approach that allows students to explore and develop their tacit knowledge, as midwife-teachers. They state: 'Midwife-teachers are the opposite of banker-teachers. While the bankers deposit knowledge in the learner's head, the midwives draw it out. They assist the students in giving birth to their own ideas, in making their own tacit knowledge explicit and elaborating it.' Science educators of the African Renaissance should become midwives to the flourishing of science in Africa.

- Every citizen would exercise his or her right to question the curriculum content and to make suggestions. Those responsible for curriculum design would have to disclose their rationale for their selection of the components of the curriculum. In other words, a transparent process of curriculum development would be the only one suitable for citizens who believe that they have a responsibility to help design the future of their children.
- Universities and other tertiary institutions would abandon their positivist approach to research. They would appreciate that research questions should always guide the selection of research methodology, not the other way round. Research students imbued with the spirit of contributing knowledge that would help to rebuild their countries, would reject the idea of conducting research solely on the basis of the supervisor's agenda. They would have the boldness to present research proposals that ask authentic questions. They would also feel challenged to respond through research to statements by researchers who have attempted to compare African and modern Western thinking, such as the following by Horton: ' . . . although there is a determined pursuit of goals of explanation, prediction and control, there is little if any explicit critical monitoring of secondary theory in terms of general criteria of empirical adequacy or consistency' (1982: 243).

Indeed, the fact that researchers such as Horton could ignore the fact that the African knowledge he was subjecting to scrutiny had not been intended for such study, was perhaps due to the fact there was nothing else available. This points to the need for the production of such systematic studies. The African scholar also has to take up the challenge of bringing traditional African knowledge into the classroom and to conduct his or her own critical analysis. This would not only provide studied responses to the assertion mentioned above, but would also provide the essential sources of reference for future scholars and even policy-makers. African researchers should also take it upon themselves to explicate African beliefs and conceptions, such as those that conflict with modern medicine. For example, many traditional midwives in the North West province of South Africa are dissatisfied with the practise at maternity hospitals of stopping post-partum bleeding soon after a woman has given birth. They believe post-partum bleeding must be allowed for a while, as was the practice in traditional society. This conflict between the Western approach and the traditional one will not be solved by ignoring the practice, because new mothers are usually given herbs to induce bleeding as soon as they reach home, thus increasing the danger of death through excessive haemorrhage. African medical experts who attended the three-day consultative meeting of the World Health Organisation in Harare in 1999, urged African member states to develop strategies for the integration of traditional medical practice into their national health care systems. Such integration will require some reconciling of basic concepts. There is an absolute need for

modern medicine to understand the conceptual framework of African traditional healers.

- Finally, researchers would also take on social questions, such as examining whether racism is still an impediment to the effective learning of science, especially in South Africa. The under-representation of girls and their under-performance in science are also subjects that call for investigation by science education researchers.

To conclude with the words of Maxine Greene (1989): 'I would like to think of teachers moving the young into their own interpretations of their lives and their lived worlds, opening wider and wider perspectives as they do so. I would like to see teachers ardent in their efforts to make the range of symbol systems available to the young for the ordering of experience, even as they maintain regard for their vernaculars. I would like to see teachers tapping the spectrum of intelligences, encouraging multiple readings of texts and readings of the world.'

In 'the shadow of silent majorities', then, as teachers learning along with those we try to provoke to learn, we may be able to inspire hitherto unheard voices. We may be able to empower people to rediscover their own memories and articulate them in the presence of others, whose space they can share . . .

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Towards a Culture-based Foundation for Indigenous Knowledge Systems in the Field of Custom and Law

A.M.S. Majeke

The present system of legal education is practically unsuitable to deal with the nature of and to identify the profile of disputes that originate from indigenous African communities in South Africa or anywhere else on the continent where there was an enduring colonial regime. Practically, the systems of structuring society that existed until independence in most former colonies were designed by the colonial overlords to suit the interests of the colonisers and their settler communities. History has shown that the importation of foreign legal dogma always deprives indigenous people of the right to the effective manipulation of their own cultures to suit their own purposes. Asante (1998) calls this 'settlerism' and reminds us that 'The conquest of territory is one thing but the on-the-spot enforcement of cultural and educational values, as well as economic exploitation, makes settlerism the vilest of all penetrations into the belly of a nation' (1998: 3).

The colonising authorities never focused on the demands of life and the needs of the indigenous communities they invaded. The present government acknowledged this problem in blunt terms in its education White Paper (1997). It makes the following statements in Clause 1: 'In South Africa today, the challenge is to ensure that it (education in general) can succeed in stimulating, directing, and using the creative and intellectual energies of the entire population . . . The present system perpetuates patterns of inequitable access and participation; it does not produce sufficient graduates in crucial fields.'

This has had a profound impact on the normative structures that form the permanent philosophical, social, and psycho-social foundation of a legal system. A number of recognised South African authors from the African community acknowl-

edged the primacy of culture as an informing foundation for developmental ideology, precisely in reaction to this deliberate travesty of fairness by colonial overlords. Mzamane (in Pityana et al. 1992), for example, says the following: 'Culture can be seen as the ensemble of meaningful practices and "uniformity's of behaviour" through which self-defined groups within and across social classes express themselves in a unique way or locate themselves within an identifiable "field of significations" . . . Every community has its own unique culture geared towards survival, which can be mobilised for social transformation.'

Mzamane then refers to Ngugi wa Thiong'o, who lists various artifacts as aspects of culture, including education. He therefore concludes that: 'The culture thus evolved expresses their conception of what they consider right and wrong (moral values), good and evil (ethical values), ugly and beautiful (aesthetic values). From these values spring the community's consciousness, its world-outlook and life-style, its collective and individual self-image, its identity . . . and their relationship to the universe in a certain way' (Mzamane 1992: 366).

The question of what knowledge to transmit has resulted in conflicts that have sometimes led to war.

'Man has progressed from being a primitive hunter and food gatherer . . . in vehicles he has developed by means of his cultural heritage. And though the achievements of great men along the way were necessary for this progressive development, their contributions would have been nothing if the new knowledge they obtained had not been infused into the social groups of which they were a part. And once it was integrated into these groups, it was transferred in each generation by parents instructing their children and teachers instructing their students. Then it became part of the culture of that group, the total body of knowledge and customs that is passed on from one generation to the next' (Niehoff 1985).

Aristotle has stated that the young must be taught those useful arts that are indispensably necessary.

It is the meaning of the phrase 'indispensably necessary' that has created much of the social conflict around education in general and schooling in particular. It is known that whoever controls the educational system largely controls the transfer of values, normative structures, skills and knowledge from generation to generation. Consequently, when independence came, the systems of government and social obligations in place had, in most cases, nothing to do with and in some cases were totally inimical to indigenous interests. This paper is too short to document all. However, it is easy to refer to the system of education itself. The contents of curricula and syllabi emphasise the social and cultural rhythms of the settler communities. That has meant that the conceptual structures, the paradigms themselves in the structures, and the operationalisation systems of all of these have been borrowed props from European days of the past.

The enduring problem is that these institutions were created in such a way that they never fitted in indigenous social systems and areas. Consequently, they proved to be unable to penetrate the social veil and interact with the peculiar profile of indigenous African systems doing the same things. Stark (1958) explained the absurdity of this situation in the following way: 'In other words, according to the sociology of knowledge, it is illegitimate and absurd to divorce man qua perceiver and knower of the external world from the man qua member of a concrete society' (Stark 1958: 14). Further: 'The point we are trying to make, namely that cultural phenomena are interconnected with social ones and fully understandable only if they are seen within this nexus, is nowadays very widely accepted' (Stark 1958: 9).

Very few people seemed to be aware that these indigenous areas have always had lawyering, doctoring, nursing, teaching and whatever other professions represented in the modern world today, as part of their social institutions. Indeed, Africans survived all these years of the existence of humanity with their own systems of performing these services. The histories of different African communities indicate very clearly that they were warriors, determined operators, analytical, and producers of various technological implements, like the foundry that needed fairly well developed iron-smelting skills. Van Sertima (1989) documents the fact that Africans were, and still are today, scientific in the technical as well as in the analytical sense.

Colonial authorities deliberately taught and trained indigenous African students in schools and tertiary institutions in skills that did not fit them back into their communities, and that forced them to work in employment situations where white people's undertakings were situated. This included, for lawyers, the courts where they work after graduation. For medical doctors and most health professionals, it meant working in urban areas where the money is. For nurses and teachers, it meant working, almost literally, only in places called hospitals and clinics for nurses and schools for teachers. The infrastructure provisions and resources for institutions that were predominantly attended by indigenous African students were deliberately made to be sub-standard by colonial authorities. Consequently, their skills were also sub-standard, over and above the fact that those skills were never really made pertinent to the configuration and profiles of the problems in the areas or disciplines where they were being trained. None of the curricula and syllabi were based on the day-to-day experiences of the indigenous communities where they belonged.

This situation seems to be continuing post-liberation. None of the existing institutions that offer training in all these fields have ever attempted to investigate how these *fields of study and work* had and still manifest themselves in indigenous societies. The result has been professional and vocational inefficiency, misuse and sometimes abuse of scarce resources, that has resulted in social tensions and conflicts. Moreover the advent of foreign-trained professionals, as the present institutions produce, has created class and status accretions that have resulted in people removing themselves from the indigenous areas where they were born and grew up.

This has given rise to excessive social instability and absence of social security. The consequences have been devastating on law and government, both being the central pillars of social coherence and solidarity. This, in turn, has directly affected social and community solidarity, and has resulted in low-intensity civil wars as in KwaZulu-Natal, and have erupted, in places like Burundi, Rwanda, Somalia and Sudan, to mention a few, into full-scale wars with horrendous loss of life.

In order to change the situation, specific research has to be done into the restructuring and representation of the contents of the syllabi and curricula. This can only be undertaken effectively by people from indigenous African communities in each area of study. Asante explains this process in conceptual terms as follows: 'The Afrocentric method suggests cultural and social immersion . . . as the best approach to understand African phenomena. This process is extremely difficult because it means the researcher must have some familiarity with the history, language, philosophy, and myths of the people under study' (1990: 27).

Asante talks about a metatheory, that ' . . . suggests the character and content of theories in the sense that it prescribes what a theory should explain . . . and what analytical methods are required for revealing and establishing concepts . . . ' (1987: 34).

He then proceeds to say that 'The crystallisation of this critical perspective I have named Afrocentricity means, literally, placing African ideals at the centre of any analysis that involves African culture and behaviour' (1987: 6).

It becomes necessary, therefore, to look at Afrocentricity as ' . . . groundedness, which allows the student of human culture investigating African phenomena to view the world from the standpoint of the African' (Asante 1990: vi).

According to Asante, therefore, 'Centrism, the groundedness of observation and behaviour in one's own historical experiences, shapes the concepts, paradigms, theories, and methods of Africalogy' (1990: 12).

This means crash courses in research methods, electronic equipment skills, and the search for people with specialised talents among the staff and the students alike. This explains the need to provide them with cheap access to topical and relevant texts and reference works, including the capital equipment to access the information through available technology such as computers. Placing them in traditionally white tertiary institutions, including the new technikons where the curricula and syllabi are still based on the commercial and economic entities that were created by white settler communities, is not going to help. They will still have to look for employment where the skills were evaluated and priced. This has not yet been done in indigenous African communities.

Moreover, the ideology behind education and the philosophies that drive the individual skills areas have always been based on imported models of doing things. Professions like law and medicine are so Eurocentric that they have been exposed as ineffective in several critical areas in indigenous African lives. The psychology

behind them has either been deliberately geared towards serving the interests of erst-while settler communities or towards making money and status. The aspect of social delivery services for community-building has always lost out to other concerns. The more urgent crisis that needs to be addressed immediately is that we are losing indigenous knowledge and skills at a time when contemporary governments cannot finance the major part of the bill for the delivery of services into the areas of development that are affected.

The specific focus and idea for me is to facilitate the development of inter-disciplinary graduate studies, with law and society being the major focus. The technical areas that need support and funding are the indigenous technologies, as they affect the development of *legal norms* and the utility of special skills in enhancing social solidarity. These range from cattle-rearing to medicine, from herbal chemistry to physical engineering. This paper is not intended only for lawyers; consequently, the language and the examples will be those that any person trained or not trained in whatever field of human activity can understand. I deliberately will avoid legalistic terminology.

Social solidarity creates an atmosphere of law and order, enabling appropriate social status recognition to be accorded to those critical skills. This enables the creation of structures of social control that relate directly to the life-sustaining systems that generate social education and, therefore, social leadership, which leads to recognition of mutual dependence in society. This, in turn, leads to the belief that those who follow have some confidence in those who lead. The easiest example can be found with the Xhosa of the Eastern Cape, and the Pedi, Shangaan and Venda of the Northern Province. It has become clear there that, if we do not enhance the indigenous technical skills of the circumcision practitioners as medical skills, and more young men die during these operations, the necessary customary law and social status that control the growing-up of boys will collapse. Young men without social leadership always resort to self-help and deviancy. Inevitably crime is going to rise.

Another example of the technical skills needed is in pastoral farming, because we are not yet going to get rid of *lobola* or *bohali*, or whatever it may be called in the other indigenous languages. This means two separate and unrelated skills, technically.

The first one is to understand the ritual significance of blood as a dynamic that unifies families in society. Closely related to this is childcare and support systems for children.

Secondly, it is the knowledge of how types of stock like cattle, goats and horses are reared, and how they are used or prepared to serve ceremonial ritual functions. Without these skills, indigenous communities will collapse into messy competitive ventures for making both status and money. One has to deal with criminal law as rules pertaining to deviant conduct that societies understand. This means a jump

from the culture of anti-governmentism to a culture of social accountability. This includes the use of land resources as capital for development, all the way from animal husbandry and crop farming to iron smelting and mining, while maintaining them as the psycho-spiritual element of identity and belonging. This is also technical and just as deep.

The present court system is going to collapse with serious loss of life in internal disorders, and we need to produce alternatives within ten years. We have not even started to plan. Imagine the usefulness of a herbalist or a faith-healer with a law degree, a physicist with specialised training in intellectual property, and a social worker functioning as a lawyer in family disputes because of a deep understanding of the technical utility of obligations and duty in indigenous African cosmology. None of these skills are produced at our universities.

The historical and social foundations of the contemporary superstructure called South African Law are based on three main legs that prop up governance, government and the enforcement of obligations in South Africa. These legs are Roman Law, Germanic Law in the form of Dutch Law that came from specific provinces in the area now called the Netherlands and Belgium, and the English common and procedural law (Hahlo 1979: 1). The first leg consists of the remnants of Roman legal precepts that were accepted and interwoven into areas like England, Scotland and the rest of the European continent. The philosophical foundations of Roman Law tolerated one of the worst forms of slavery in human memory, yet it is regaled by its proponents as one of the most flexible legal systems history has ever known. Without questioning their sincerity, it has to be borne in mind that Roman Law was based on and facilitated empire-building. In spite of some of its good points, it was essentially a class-based and hierarchical system of rule-making. Because of this, it is by far the most removed from indigenous African concepts of human social relations and the obligations systems. For example, Roman Law by definition entrenches private property, individual ownership and the right to kill in defence of property. As a result, present-day capitalism has its foundation in the Roman concept of full power (*ius plenum*) of use of property subjected to the right of ownership. This includes the right of life and death (*ius vitae necisque*) of the head of a family (a *paterfamilias*) over the inmates of his house or farm.

Dutch Law, the second leg of this superstructure, has always been part of the rest of Germanic Law in Europe. Germanic Law has always been and still is the indigenous law of European societies. Nothing is more striking for me, as an African, than the idea of a patriarch in these systems. The patriarch or father of the family has always been virtually the only full legal person in a family. In other words, males were always full citizens of their communities and women were always inferior and subjected to the total control of the males as husbands and fathers. Although there is no record that in indigenous Germanic law they had the power of life and death as in Roman Law, the institution of the marital power vested in the male, unless

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otherwise contracted, has survived modern times and has even crossed oceans into the colonies as a legal rule. It is, for me as an African, this dubious foundation of trust in male benevolence that has caused me to understand why Europe was dragged into terrible wars by its male leaders. This includes the First and Second World Wars, where the principal sufferers were the women and the children who had no voice in deciding whether or not to participate in the wars.

The third leg is English Law, comprising mainly civil and criminal procedural law, including the law of evidence, interpretation of statutes and administration of wills and estates, insolvency and company law. English Law's common law rules have penetrated large areas of Roman Dutch Law through court decisions, and dominates the public rules of political discourse.

Fundamentally, it is an acknowledged fact that the layers of social thought and structure arise out of specific foundations of social structure and technological interaction with the environment to produce food, security or shelter and status. Rawls acknowledges that basic human needs come from involuntary and naturally pre-determined factors of survival: 'The social system shapes the wants and aspirations that its citizens come to have . . . Thus an economic system is not only an institutional device for satisfying existing wants and needs, but a way of creating and fashioning wants in the future' (1972: 259).

Aristotle's whole discussion on education revolves around the acquisition of knowledge through interaction in the day-to-day social activities of the community: 'But when the five years from two to seven have passed the children must not become spectators at the lessons which they will themselves have to learn' (Ulich 1954: 64).

Plutarch extended this to cover farming, character development, the feeding of infants, the treatment of slaves and a whole list of other things he thought were socially necessary (Ulich 1982). The best example of this is the extended family consciousness of the bulk of indigenous people in Africa and, therefore, in South Africa. This creates for human beings the specific coding of the foundations of norms for dealing with both the environment and each other in society. In European societies, the notion of business and commercial enterprise has created status structures and individual relationships that emphasise the use of each other to make a living by making a profit. Hence, the long-standing joke that the British are a nation of shopkeepers. The idea of making a living by making a profit enabled people to use each other as instruments and led to a notion of survival of the fittest that does not fit into most indigenous communities, including those in Africa.

The drift of the above paragraph indicates that present-day scholarship in African societies has to understand the foundations of systemic dysfunctionality and disjunctures that are a direct result of paradigm and practice tensions in societies with multiple legal systems. This means that a set of principles has to be developed in academia and government that allows for a new look into the way we make a

living in this country. The best example of how things cannot work if left to themselves can be seen in the increase in social instability in the rural areas that had some degree of consensus on how to do things. Moreover, as more and more jobs are lost in the employment market, we have to find useful skills for the youth to learn in society. Without this, the indigenous African areas are going to implode.

Let us take a leaf from the experiences of the recent past, where indigenous societies, virtually without external assistance, brought the previous government to a standstill by ignoring its dictates unless these were enforced by military means. That, as every person now knows, did not work. It never really forced the indigenous communities to surrender, even in the face of everything else that was thrown at them to achieve obedience.

It is instructive, for example, to mull over the violence (Galtung 1996) that characterised relationships between the government and indigenous communities. First, there was direct violence to cause communities to obey. This refers to the use of military invasions, random shootings and massacres, as well as the demolition of homes and the destruction of movable property, including the shooting of stock found to have offended government fiat.

The second form was deliberate violence against social structures and institutions, through decrees and legislation that de-recognised cultural norms that were known to create social coherence and solidarity. For example, the customary marriage was deemed to be null and void. The army, the police, the courts and the commercial infrastructure ensured the break up of family units in order to alienate the individuals from each other and then use them as manual labour to develop institutions in settler communities.

The third form of violence is epistemic and conceptual. Systems of thought and practice were bludgeoned into indigenous communities without regard for the way they impacted on the individual lives of the affected communities. The personal psychology of spiritual regeneration is based on cognitive consonance with one's environment. The perspectives of reality and being that reinforce spiritual wholesomeness are based on the social operationalisation of those factors of life that lead to security and a feeling of contentment in self-identity. The colonial and settler community invasions of hearth and kin developed institutional psychosocial problems that refuse easy solution. Sibisi (in Pityana et al. 1992) makes the following points: 'The scars resulting from the struggle against apartheid are twofold. Firstly, there are the traumatic effects of violence, detention and torture at the hands of the security forces, and the random violence of their vigilante allies . . . Secondly, there are the brutalising effects upon those who have participated in various ways in the struggle, especially children who committed acts of violence' (Sibisi, in Pityana et al. 1992: 135).

Sibisi did not deal with the psychological effects of this oppression on the cultural rhythms of the indigenous African communities. However, Moodley did try: 'Psychological liberation was sought through a return to African values of communalism,

shared decision-making and more personal styles of communication, in contrast to the impersonal individualism of white consumer society' (in Pityana et al. 1992: p. 147).

That is because the sources of thought and creativity inside the individual have been damaged almost beyond coherent internal functionality. This form of violence is even more hideous than the previous two, because those can be attacked and attended to by the creation of certain forms of visible structures whose symbolism means at least some form of visible liberation. Dealing with conceptual violence and the normative sabotage of reality is far more complicated because it means first reinforcing the soul in order to reach the mind.

It is far more difficult to deal with this form of violence because it created its own discourses in order to rationalise the direct physical violence and the consequent structural violence that resulted in the violence against the mind (Galtung 1996). That is why most invaders used the term 'pacification' to have a euphemistic notion of physical violence, plunder and rape. That is why all this was explained as the need to 'civilise' the natives through Christianity. Once that rationale had been explained to their audiences and to their own souls, it became easier to have to deal with structural and institutional violence. It was called 'upholding the law' and 'creating law and order'. Consequently, enacting statutes in parliaments that were not produced by indigenous peoples themselves and promulgating decrees or presidential orders by heads of state who were not members of indigenous societies became easier to explain. It became easy to subsequently take the political step of purporting to 'outlaw' indigenous law.

We, however, know from empirical observation that institutions in indigenous societies did not die out and did not change the philosophical and political direction that existed before colonial invasion and occupation. The forms of resistance to control that the indigenous people undertook neutralised a large area of institutional infiltration and penetration by foreign dogma and structure. The best physical examples are circumcision and customary marriages. These institutions exist and have been recognised as such by the present constitution. Africans only complied with imposition when superior armour was around to enforce it. As soon as the enforcement agencies like the army and the police left, the usual life-styles were resumed.

Our challenge is now to document and expose for replication and strengthening how these indigenous normative systems function and with what skills each member in a community is trained in order to survive as coherent units. It is critical to remember that the resistance itself was never wholly voluntary and brave in the face of adversity. It was a simple consequence of not knowing what else to do once indigenous communities admitted to themselves that they no longer had the military wherewithal to resist. Passive resistance became the most effective form of destroying infiltration. This meant that, unless the security forces or their informers were present in some form, people would not comply with rules and orders from the colonial authority. It became more and more difficult, as well as expensive, to obtain

obedience. Since nature allows no vacuum, people resumed their customary institutions out of sheer lack of anything else to do. The critical thing is that, unlike the native Americans, the native people of the Philippine Islands, the native people of Hawaii, and the natives of Siberia, indigenous African communities never really surrendered. They lapsed into sullen overt apathy and active covert hostility to the colonial regimes.

This means, therefore, that the skills that the native peoples of Africa developed in dealing with the efficacy and efficiency of their normative structures have been retained in their legal systems. These legal systems have taken an antagonistic position towards the existing superstructure that calls itself a legal system. My problem is that there are signs that some of the present members of government would want to see the security forces used to quash any resistance to present-day rule. It is the intention of this paper to emphasise that such intervention would be doomed to failure and would only have the effect of causing massive loss of life. I want to suggest a better alternative: the rediscovery and re-integration of the indigenous skills that are found in the indigenous normative systems. This approach will be more fruitful because indigenous people and their structures outnumber the physical imposing presence of the imported systems.

That is why it becomes necessary to address the unresolved issues of the tension between indigenous and contemporary notions of public versus private law, as well as conceptual structures of commercial and constitutional law. It is critical to do the necessary research to look at the real meaning of these concepts as they relate to real-life situations in indigenous communities and the way they are perceived in the imported superstructure as it exists today in South Africa and even the rest of Africa.

For this purpose, it becomes necessary to look at what has been suggested as the usefulness of Roman law as a tool for finding a method of integrating indigenous law into what is called the 'mainstream' legal system. Dr Van Reenen of the University of the Free State is carefully pushing the idea that Roman law can be used as a basis for legal reform through harmonisation, integration, or unification: 'In the light of the Roman and Roman Dutch law legal heritage of the present "official" South African legal system, this article explores or evaluates a similar role for the Roman (-Dutch) law in the harmonisation and integration of the "official" system and the various indigenous legal systems in a nascent, new South African legal order' (Van Reenen 1995: 276).

Of course, it always depends on who believes themselves to be in the mainstream. It becomes somewhat intricate and complicated if some members of the indigenous communities believe that they belong to this mainstream. Those who believe that Roman law would help if it was used as a tool to integrate the different legal systems in South Africa, have made the following points:

Roman law has a major standing in the field of private law in South Africa.

- It consists of basic legal skills as the necessary conceptual tools and techniques that are critical in the training of lawyers as part of the existing legal systems.
- It enables students to master complex legal rules and principles.
- It gives them proper historical perspectives of law.
- It has fundamental principles of critical importance.

It becomes necessary to respond to this before we can make any progress in researching indigenous skills and knowledge in the field of law.

To begin, the new LLB degree course was created to incorporate a year or two of clinical skills that would enable a graduate to open an office as an attorney and be admitted as an advocate without having to undertake articles of clerkship. That has not materialised yet and, instead, we have LLB and graduates with other law degrees walking the streets, unable to secure articles of clerkship with any attorney. This includes graduates of practical law training schools.

Secondly, the curriculum and syllabus of the new LLB course were supposed to include a very strong component of indigenous versions of contractual and constitutional status institutions, in terms of both contractual undertakings and the position of the individuals involved in the contracts in society. That has not been done either. Instead, we are continuing with legal education and training that reflect the status and capacity of a person as is found in Roman law, Dutch law and English law. No other definition of a person in the eyes of any other legal system is part of the study of law.

Consequently, the problem is that the estate of a deceased person in African or indigenous law has a different status to that in the other systems, and creates totally different contractual and status liabilities and duties which are imposed on affected people. None of this is taught in our curriculum. As a result, wives and girls lose control of their parents' estate to something called an heir recognised by Roman, Dutch and English law regimes. There is no such a thing in indigenous law.

Roman law may or may not have such wonderful principles (my own specialisation in comparative legal studies during my research for my Master's degree made this very clear), and the fact is that it does not solve several problems – for example:

- African women are de-stated and made into minors in law, and depropertied of their own property created by their own contributions to the family as wives, daughters or girls.
- Roman, Dutch and English law regimes created the problem of the *paterfamilias* or head of the family that have nothing to do with any Romans in South Africa, with any Dutch in indigenous African areas, and more critically, with any indigenous Africans in their own homeland.
- There is a problem in the recognition of private property in the constitution, whereas the same constitution does not know anything about family estates in indigenous societies and in their law.

- Roman law refers to *magistrati* (magistrates like praetors and consuls) and *iudices* (judges) who served different political roles in Roman society. We know, for example, that they resolved disputes in society. The same functionaries in South Africa came in with the imported legal system as political agents that served to enforce colonial government rule among the indigenous African populations. The last thing they ever served, or serve today, was the function to resolve dispute.
- These functionaries and court institutions, and their administration structures are the forums where the legal profession makes its money. Very few of the actual disputes that arise in indigenous communities ever reach the courts, because the lawyers (B.Iuris (Bachelor of Law), B.Proc. (Bachelor of Procedural Law), and LLB (Bachelor of Law) graduates, including judges, play a game that is called 'let us be seen to be helping'. They play it very well because they were all socialised into it through legal education and training in tertiary institutions. My experience as a magistrate (a municipal and state judge by United States ranks), as a principal magistrate, as an attorney with Tsotsi and Company in Maseru, Lesotho, as advocate of the High Court of Lesotho, and as a practicing advocate of the High Court of South Africa, have given me the insight to make these statements. I know all these segments of the legal profession firsthand.
- None of the materials that become process or the paperwork in civil and criminal cases that reach these courts, ever bothers to consider the profile, configuration, shape, standing, or whatever else of the dispute as it arose or where it came from. In other words, the most critical part of the disagreement that led to the reported conflict and or loss of rights by one or other of the disputing parties never goes to court, because the sociology of the dispute has never been investigated.

The term 'sociology of a dispute' refers to the fact that quarrels in society arise out of real or perceived injuries. The starkest form of this distinction is that an indigenous African family would regard it as an unimaginable insult for their daughter to marry without an exchange of stock to symbolise the creating of new blood relationships. However, under the same circumstances, a noticeable number of African women with Eurocentric educational qualifications regard this as an insult to them as individuals because they are being 'sold' like stock or merchandise from a shop. One has to know about the undercurrents when presiding on these disputes. Yet present-day legal training and practical court procedures do not even address the distinction in practice.

I repeat, the Romans are not in South Africa, the Dutch and the English do not live in indigenous African areas, and indigenous Africans know nothing and do not want to know anything about Roman law or any other system of law. They have enough immediate problems with survival to care. We need to remember that the Dutch, the English, and the Romans, if any, in South Africa never knew, and do not

know indigenous African law, nor do they really care to know it at present. They have other emergency problems to deal with – for example, crime and loss of property.

We all know that no legal system will ever succeed in establishing itself as a social system and work efficiently if it is not founded on the fundamental cultural rhythms of the majority of the population in its borders. Yet we continue to teach young indigenous Africans how to be good Roman, Dutch, and English law specialists. They are becoming foreigners in their own land.

I was therefore not surprised when the Dean of the School of Law at the University of Venda reported in 1999 that a large number of the students in his law school and at the University of the North did not want to be taught or have anything to do with indigenous law if they could help it. They believed it was dead and gone. I would like them to take a word of advice from an old lawyer in the imported tradition and an old political activist in this land. If they do not attend to the problems of their own indigenous communities, they will be victims of civil war down the line. No people will accept inferiorisation in their own land forever.

Roman law can only be taught on a comparative basis when all the systems of law that affect the populations here are taught as a matter of necessity at law schools.

There has to be formally and deliberately articulated research into the philosophy and the sociology of law and government as perceived by the indigenous communities themselves. This paper makes this call, with the basic understanding that everybody knows and understands that the imported system we are using at present is based on certain *a priori* recognised notions of life and reality. It is ridiculous to assume that they form a universal foundation of every manifestation of life on the planet. It is just as unrealistic to assume that the other forms of life are not going to want to claim their own space in this cosmic reality we call earth. All I am suggesting is that, instead doing this through actual conflict or when it has manifested itself, we can do it now.

Constitutional provision is a question of culture. All segments of the population in a country or state have to be fully represented in any constitutional provision. This refers directly to their cultural rhythms as well. The indigenous populations of most developing countries today seem to be left out every time this exercise is undertaken. This is critical in a country where indigenous communities comprise the overall numerical majority. Their consciousness and their distinct cultural interpretation of the constitution so provided will ultimately prevail as time goes on. In most cases this will happen with serious social instability, often with violence being the order of the day. This has happened with tragic consequences in most developing countries where these matters were ignored.

Imported versions of constitutionalism tend to create more problems than solve existing ones. This is always the case where the question of socio-cultural identity and being are ignored. Bengu, a noted South African scholar, said: 'Cultural identity is an important element not only in the search for an appropriate development

strategy. It has also much to do with the struggle against foreign political control and economic domination' (1975: vi).

The critical point is that issues of self-expression, self-identification and deliberate social definition of futuristic goals are often ignored by the providers of new constitutions. In some cases they are often treated as nuisances that have to be ignored. Often the new constitution represents a social and cultural reality that is unknown to the local population. Consequently, there is lack of identification and solidarity with the new instrument, followed by a tendency to resist it. Social conflicts arise out of these problems. Further, the manner of interpretation of the rights and duties in the instrument is completely confused by the indigenous communities, with resistance to the old order. The contemporary authorities then treat this interpretation as a challenge to law and order. Power then begins to be used to enforce obedience. That is the reality that faces the new South African constitution. Kaburise, a leading figure in legal education in this country, said: 'It may be useful to delineate certain postulates that ought to underlie the role of legal education in a future changed South African society. There would need to be a fundamental restructuring of administrative units if only because a vast population would become integrated into the mainstream of life in the country' (Kaburise 1987).

The situation becomes even more intractable if the contemporary authorities are imported versions of structural organisation and cultural reality. The activities of the power institutions in that new order often create tensions between the ruler and the ruled. This paper seeks to convince attorneys and other providers of the constitution to step back a little and find out how much of that new order reflects the cultural rhythms of the ruled. The request contained in that *caveat*, specifically requires the general law of this country to find a way of interacting with the indigenous law in a more representative manner. This means no version of democracy can be the only one that prevails. English and Roman Dutch law institutions and organs represent the general law of this country. The issue of the definition of a right, and indeed, for example, the right to vote, becomes very critical as these notions of competing realities converge on the necessary definition of obligations and duties inside the state entity. The colonial historical origin of the existing structures of constitutional reality cannot be disputed. The history of the dynamics of providing the required structures or organs of constitutional reality is absorbed in the new constitution. The unequal order of the old order is reflected in the new constitution.

The starting assumption in this presentation is that the new legal regime and legal order utilise existing structures that have certain implied values. These values often come with imported versions of constitutionalism that require some form of co-ordination and synchronisation with the indigenous versions of constitutional awareness. This specifically seeks to refer to the social foundations of constitutional awareness, the dynamics that found law and order, and the requirements of a social structure in a community that expresses constitutionalism in a given community.

There is no area of state activity in this country that does not impact on the social rhythms of indigenous populations. Let us look at every one of them and have a deliberate conscious programme of identifying areas of conflict and contention, within the indigenous systems themselves or between them as entities and the imported legal order.

Finally, it is critical to look at how indigenous systems of obligations affect the structural configuration of the social systems that came with the European and Asiatic settler and indentured labour communities. Consequently, the emphasis here is specifically on the necessity of a collaborative effort in looking at these issues. It is assumed that no specific segment of these different cultural entities in this state can do it alone. There has to be some specific involvement of the known sources of the competing ideologies and cultural manifestations of constitutional reality.

The attempt in this communication is to seek to enjoin the legal collegiate, both academic and professional, to do the following:

1. Examine the unstated assumptions in the stated maxims of the new constitutions and the issues of constitutionality more closely.
2. Look more closely at the active segments of these communities to see what they specifically represent.
3. Subject the social foundations of the different legal systems and their basic philosophical and structural assumptions as normative structures to closer scrutiny. The meaning of law and order has to be revisited.
4. Analyse and identify the competing dominant interests represented in the new constitution, and ensure that they are put in their proper perspectives *vis-à-vis* the indigenous populations and their relationships with the new constitutional order.
5. Review and monitor legal education very closely to isolate and rework areas that do not represent all the cultures in the new state. More critically, change or adjust them to accommodate the erstwhile-suppressed socio-cultural interests that were ignored in the old order.
6. Subject questions of law and order to a new way or approach to looking at the issues of the socio-cultural expectations of the indigenous communities. The meaning of law and order in relation to dispute-resolution mechanisms of the state has to be reassessed.

The suggested practical steps towards this purpose would be the following:

1. Firstly, a group of committed and affected professionals should be brought together to generate the first operational structure of looking at the problems in a holistic and solution-oriented manner.
2. The next step is to look at the content of each syllabus and curriculum, with the informing and overarching ideology being the integrated way in which the areas manifest themselves in indigenous areas.

3. Thirdly, the academic staff affected in traditionally black universities should be able to do research for their own personal purposes immediately after the appropriate training programmes have been completed.
4. Fourthly, the next set of law graduates from traditionally black universities should have the research skills needed for these intended research projects. They should have the technical know-how to access electronic files for legal research from the computers they not only know how to operate, but which they also managed to purchase while they were students.

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Science, Magic and Religion as Trajectories of the Psychology of Projection

L. Mqotsi

Having established science as cognition of the objective recurrences of nature, man has tried stubbornly and persistently to exclude himself of science, reserving for himself special privileges in the shape of alleged intercourse with supersensory forces (religion), or timeless moral precepts (idealism).

Karl Marx (Trotsky 1940: 2–3)

Introduction

The discussion that follows is premised on the concept of the universality of human nature in its basic essentiality. There may be variations and differences in human behaviour – continental, regional and local – but behind all this is the essential unity of humankind, the global motivations and imperative that egg us on relentlessly. The duty of institutions of learning and research, as I see it, is to look behind overt manifestations, to pin-point and analyse the sources as objectively as possible within the ambit of the shared experience and skills of enlightened humanity. An examination, in this spirit, of the challenges and notions under review should lead to a clearer understanding of the fundamental mainsprings of human behaviour.

The central challenge of this and future generations is to seek to bring about a *new* world society with *new* people, free and untrammelled by the baggage of yesteryear. In such a climate, it should be possible to develop a world order of decent humanity.

The impact of this challenge is even greater for societies in transition and, like our own, loaded with a hybrid cultural heritage. We are caught up in a tangled web, the dynamic articulation of sometimes conflicting social and psychological

imperatives, of which the gravitational pull throws us into disarray and sets us adrift, bereft of stabilising moorings. It is a society in a state of flux, of change, of decay, of dying and of development.

But we have to find a way out of this maelstrom. And I believe that to be able to deal effectively with the rampant issues of race, ethnicity, ritual killings, accusations of witchcraft and practices of sorcery; and a host of other destructive group attitudes generally, we need to understand their origins. This is a critical precondition. The present discussion is an attempt, in a small way, to clear the decks for an informed debate on three compelling challenges that confront us today.

Science, magic and religion: A review of perspectives

Many attempts have been made to define the respective roles of what are commonly called science, magic and religion in society. It is, therefore, necessary to review briefly some of the scholars in the field before I put forward any one thesis on the subject and discuss its significance for modern Africa.

Frazer, the classical anthropologist, argues in *The Golden Bough* (1929) that the fundamental conception of magic is identical to that of modern science. Underlying the whole system is a faith, implicit but real and firm in the order and uniformity of nature. He states further that magic is primitive science based on the assumption that man can dominate nature directly.

Malinowski (1948) says that magic and science are quite distinct. He states that science is guided by reason, corrected by observation, but that magic is impervious to both. Science is born of experience, but magic is made by tradition. Science is founded on the conviction that experimental effort and reason are valid, but magic on the belief that hope cannot fail and desire cannot deceive. Then he goes on to argue that the theories of knowledge are guided by logic; that magic is based, not on logic, but on the association of things that are felt to be alike.

Firth (1938) states that magic is a rite and verbal formula, projecting desires on the external world on a theory of human control toward some practical end, but, as far as is known, it is based on false premises. He continues to say that productive magic asserts man's power over nature and allows him to go forward with his aim, in the conviction that, through his own efforts, he can command success. Speaking on the relationship between magic and religion, Frazer (1929) says that magic is an attempt to control nature, whereas religion is an attempt to propitiate. The spell attempts to control; prayer seeks to persuade, supplicate. Malinowski (1948) argues that magic is a specific act for a specific end, whereas religion is an end in itself.

Tylor (1929) believes that the basis of religion is in dreams. People have dreams and hallucinations about those who have departed – hence the belief in the existence of these.

Hunter-Wilson (1945–46) believes that religion includes man's ultimate values and institutions of reality – that is, all ideals and values people may have – whereas magic insists on the material in particular.

The analysis

Now let us examine these splendid theories and see if they do, in fact, stand up to critical scrutiny. While it is true of both magic and science, as Frazer claims, that they are based on the assumption of an ordered nature of things, and the belief that this order is amenable to human control, it is not, in my view, correct to speak of magic as 'primitive science', except on the postulate of a unilinear evolutionary doctrine, which is itself questionable. Both scientific and magical techniques represent attempts by humans to gain mastery over the environment, but science is limited to what is known, observable and practical, whereas magic offers illusory control based on the failure to grasp the relationship between cause and effect.

Malinowski saw the essential difference between magical and scientific techniques as that the former is guided by wish-fulfilment whereas the latter is empirical. His conclusions from this are, however, somewhat confusing and perhaps misleading, because both science and magic are born of experience and glorified by tradition. The mythical conceptions, for instance, subsumed under the concept of race prejudice, may be bolstered by traditional dogma in the same way that scientific tradition has honoured the theories of Euclid, Newton and Einstein. Both scientific and magical techniques are guided by reason and observation, but, admittedly, from different premises. Both are logical systems in terms of the premises from which they start. Frazer puts it better. He says that magic is the misapplication of one or other of the two fundamental laws of thought, namely, 'the association of ideas by similarity and the associations of ideas by contiguity in space and time' (Frazer 1929). He then goes on to say: 'Legitimately applied, the principles of association yield science; illegitimately applied, they yield magic, the bastard sister of science' (Frazer 1929). In other words, one uses scientific techniques in one's adjustment to reality on the basis of knowledge of the inherent relationships in the situation with which one has to deal. But in the absence of this knowledge, when the situation becomes extraordinary and baffling, one reverts to the use of extraordinary techniques, which nevertheless assume a knowledge of the inherent relationships in the problem situation. Wastermann says: 'Where there is a question of extraordinary issues of vital importance to life itself, of the threatened well-being of one's own existence, of one's kin or of the community; in a word, where the ordinary course of life is no longer possible and great issues are at stake, then extraordinary means are required which, on account of the occasions from which they arise, take on the character of the superhuman in the imagination of the participant' (1939: 189).

This, to my mind, is what Frazer means by the illegitimate application of the principles of association. But the legitimacy or otherwise of premises or of the application of principles does not affect the consistency with which principles, once assumed, may be applied within the given logical structure. Logic does not depend upon the validity of our assumptions, but on the consistency with which we stick to these postulates or predilections, however false. The delusions of a paranoid patient, for example, although by their very nature basically false, may, nevertheless, be highly systematised.

Firth's view implies that magic involves priests and magicians, spells and incantations, ceremonials and rituals, songs and incense, and the attitude of the whole society to the forces that the priest, the magician and the other participants seek to invoke. The need to project desires is the motor that sets all these in motion.

On the question of the relation between magic and religion, it is true, as Frazer says, that magic is an attempt to control nature. However, while it is also true to say that in 'religion' one propitiates, falls prostrate before the supernatural, it is equally true that, through prayer and supplication, the person of religion hopes to control nature, to influence the course of events, albeit indirectly. During a drought, for instance, the magician may believe in the potency of a magical formula to bring about rain, whereas the priest may believe in the efficacy of prayer. In both cases the aim is the same: to bring about relief; and in both cases the technique used is magical. The difference is the humble and suppliant attitude of the priest and the commanding one of the magician. Indeed, Frazer himself saw this. He writes: 'The magician gives way to the priest, who, renouncing the attempt to control directly the processes of nature for the good of man, seeks to attain the same and indirectly by appealing to the gods to do for him what he no longer fancies he can do for himself' (Frazer 1929).

We have here a very important principle emerging – the principle of projection upon which all magical techniques are based. This is the only legitimate basis for making a distinction between magic and so-called religion. In religion, we have the projection of desires, wishes and ambitions, fears and anxieties – observable objects as well as feelings and emotions that people experience – on a world of make-believe, a 'screen' as Kardiner (1937) calls it. Our attitude here is one of dependence upon some force more powerful than we. In magic, however, our desires, our anger, our envy, our anxieties, are projected onto spells, medicines, rites and other individuals – real things. Thus, in religion we have the projection of reality onto a screen, while in magic we have the projection of reality onto reality. This will become clearer when I deal with witchcraft accusations later in this paper.

It is difficult to agree with Malinowski's view expressed above that magic is a specific act for a specific end, whereas religion is an end in itself. As we have seen already, both are goal-directed. They are directed towards the satisfaction of some human need or desire, or a nexus of human desires, which can be isolated and spec-

ified. It is true, however, that the field of what one might call 'applied' magic tends to be narrower and more hazardous than that of transcendental magic (religion), which is wider and safer. In this field, it is impossible to catch one on the wrong foot, so to speak. The forces that are called into play are unpredictable, since for some just cause they may not behave according to expectation and desire. In magic, however, one cannot always plead the intervention of some extraneous factor in the event of failure.

Durkheim (1912) saw the projective nature of religion. Speaking specifically in relation to the Australian tribal structure, he says that religion is society worshipping itself and that the high god is the product transcendental of the clan.

This observation is of universal application. In Western society, for example, the Christian God is clearly the father writ large, while the hierarchy of princes and dominions, seraphim and cherubim, and a host of other angels in the heavenly sphere is reminiscent of the feudal structure with its emperors, princes, dukes, nobles, knights, squires and serfs. The heavenly hosts are also male, as befits a conception of heaven that is the product of a male-dominated society. The only contribution of woman to the holy trinity is the production of a son; even so she has to be purified by the invention of an immaculate conception in order that her uncleanness shall not pollute the gods. And so we speak of the Blessed Virgin, Mary!

The same principle applies in African religions, or any other religion for that matter. While the high god (Qamata, Nkulunkulu, Molimo) was not clearly defined in societies that were still building themselves into larger national units and had not yet learnt the art of centralised authority, the relative positions of ancestors in the world beyond the grave clearly show how rank is transcendentalised. The ancestors of a family occupy relatively the same positions they occupy while living, grandfathers being more important than fathers, and so on. Family ancestors were concerned only with the welfare of the family, but those of the chief concerned themselves with the welfare of the group as a whole, in much the same way that the chief was regarded as the 'father' of the whole group. The nebulous conception of god seems to have been bound up with the development of larger national groupings that were ruled by paramount chiefs whose authority had not yet become as clearly defined as the authority of an Egyptian Pharaoh or the Russian Tsar. Women, children and young people played hardly any part in the galaxy of the illustrious dead.

There is a relationship between the remoteness of the other-worldly beings and the remoteness with which men tend to cloak themselves here below. Emperors and popes are very remote individuals; so are their gods. The larger the society and the greater the multiplicity of roles open to individuals, with the consequent need for the centralisation of authority, the remoter the gods and the greater their powers. For the powers of the gods reflect the powers of kings. This is why the African high gods are not so clearly defined, because, although so-called paramount chiefs were rulers of rulers, their authority was rather tenuous. It is significant of the Zulu that

Nkulunkulu had taken definite shape – it is not clear when in their history – but one may not be far off the mark if one associates such a development with the unifying influence of Shaka.

It would also seem that there is a relationship between the degree of elaboration – the extravagance of rewards and the remoteness of the gods – and the paucity of material enjoyments that are available to individuals in a given society. We have the most elaborate religions with the remotest and most fearsome gods in class societies (Europe, Egypt, Assyria, Aztec, Peru, etc.) which, by their very nature, condemn the majority of humanity to a life of starvation and poverty.

Thus, religion is a projection of known forms of social relationships and desired powers. It is not correct, however, to say as Durkheim does, that belief in supernatural beings is irrelevant to religion. Rather, would it be true to say that one has not discovered any supernatural world, but merely has a mind-picture of the real world, a projection of this world as it impinges upon our senses. It may be transformed, elaborated on or even distorted, but it remains essentially the same image. Fung Yu-Lan has expressed the matter in a telling fashion: 'Since man has knowledge, many religions regard God as having knowledge, though there is this difference, that He is omniscient. Since men have power, many religions regard God as having power, though with this difference, that He is omnipotent. Since men have a will, many religions regard God as having a will, though with this difference, that His will is perfectly good' (Yu-Lan 1947).

Durkheim's view of religion should not be regarded as denying the fact that religion or magical beliefs and practices generally may be related to the structure of personality, not merely to social structure; that they are an instrument in the maintenance of personal integration, not simply of social integration. Magical beliefs establish order in the tangle of things from the points of view of both the individual and society. They enable one to control the uncontrollable, explain the inexplicable and thus give one a sense of security and mastery over the environment. They give meaning and purpose to life itself.

One must agree with Tylor that religion does involve belief in the existence of supernatural beings. It is also true that dreams and hallucinations about the dead are relevant to religion, but it is doubtful whether they constitute its basis. Rather, they should be regarded as a complex technique of adaptation to the environment in all its ramifications. Belief in the existence of the departed also flows from one's fundamental desire for immortality. It may also represent a picture of experience and serve as reassurance that the society into which one is born has existed from time immemorial and that one will die and leave it still in existence. Therefore, one merely continues with stock-in-trade of wishes and desires in a dream world.

Hunter-Wilson's is a more comprehensive definition of religion, but to argue that 'magic insists on the material in particular' (1945/46) is to limit the field of magic to interpersonal relationships.

This short review shows that social anthropologists and sociologists have attempted to distinguish between magic, religion and science. These distinctions and definitions, however, have been unsatisfactory. One of the reasons for this is the fact that science has tended to be regarded only as a method or a set of methods of investigation and classification. That it also refers to a body of knowledge has not been sufficiently appreciated. This attitude naturally tends to associate science with modern societies with their highly developed technical skills, and magic with the so-called primitive societies, where information and knowledge are not neatly catalogued into phyla, genera and species.

Science has been regarded as belonging to the realm of the rational and as being based upon the application of practical knowledge and logical principles, whereas magic and religion have been associated with the supernatural. The difference between magic and religion has been explained – not so much in terms of the spiritual forces involved, as in terms of the manner of approach to these forces. The magician is said to direct and control them, whereas the man of religion appeals to them to act on his behalf through supplication, prayer and sacrifice. Thus, the difference postulated is largely one of attitude and resultant overt behaviour towards these supernatural forces.

However, even this distinction cannot always be maintained, for the line of demarcation between the two is very tenuous indeed. Frazer himself, who popularised this distinction, has made reference to the inability of the lower classes in Europe and elsewhere to keep a clear distinction between magic and religion. We also know that the Eskimo and the Manus do not approach their gods with awe and veneration. They scold them and remind them of their duties to their children, and may even depose them if they fail to serve their desires and goals. The Lovedu, Krige (1941: 113, 114) tells us, do not fall prostrate before their spirits. They speak to them as 'man to man'. Here, it is not just a matter of magic 'tinged and alloyed with religion' (Frazer 1929). These societies just do not fit into the anthropologist's stereotype.

Common weapons in the process of adjustment

Thus far we have distinguished between science, religion and magic in terms of observable human behaviour. It is, however, possible to conceive of all these as accommodation or adaptive techniques, which one employs to adapt to the natural, social and psychological environment. This is the classification I prefer. We then differentiate between magical adaptive techniques on the one hand and practical or non-magical adaptive techniques on the other. The use of magical techniques stems from the type of behaviour that is the result of the dictates of wishes and desires. One fulfils wishes by projecting them in an attempt to control and master the forces of the environment. Thus, magical techniques are active weapons in the process of

adjustment, which Firth has described as 'the continual process of struggling for order by the individual in his relation on the one hand with his own logical system or categories of thought and his own set of impulses, desires and emotions' (1938).

Scientific techniques, however, involve the use of common sense and objective methods of adapting to self, society and nature. Scientific techniques of adaptation, therefore, are based on the empirical knowledge of casual relations, whereas the magical involves the use of projective mechanisms and substitute satisfactions. What we now distinguish as magic and religion would then fall in the category of magical techniques, defined in terms of the use made of mythical methods in these systems, as opposed to the empirical that is characteristic of science. Thus, the traditional distinction between magic and religion falls away and we distinguish between magical systems and scientific systems, or projective systems and reality systems.

Faced with the practical and urgent problems of controlling, harnessing and explaining the environment, one cannot just sit and do nothing about threatening disasters. One therefore attempts to apply some method of adjustment to the situation that, if it does not solve the problems, allays anxieties. One may settle down to a study of the problem situation (as in modern times) and apply, in its control, certain practical methods appropriate to the situation and in keeping with the amount of knowledge about the factors involved in the situation. Thus, to meet a need for food, one may hunt animals with bows and arrows or shoot them with a gun; one may use a wooden plough to till the land or a tractor-drawn steel plough; and to protect against the vagaries of the weather, one may live in a cave or build an imposing concrete-and-steel structure. It is clear from this that the degree of control over the environment will depend to a large extent on the amount of knowledge one has about that environment. When one uses the knowledge acquired and adapts this in a practical fashion to the environment, we speak of employing *scientific adaptive techniques*.

But knowledge of the world is limited, and the problems faced are, as a rule, urgent and allow little time for study. The more limited the knowledge, the greater the insecurity and dangers to which one must feel exposed from unknown and threatening forces. A second method of reacting to a situation that calls for action becomes necessary. In the absence of knowledge whereby scientific techniques can be adopted, one does not assume that a situation that is threatening is beyond control. On the contrary, one acts on the assumption that it can be controlled. This lack of knowledge about the situation, however, precludes the application of ordinary, everyday techniques. The situation thus becomes, in a sense, 'extraordinary', and requires 'extraordinary' measures to bring it under control. And so magical adaptive techniques are born which, according to Joseph Kerrin are '... a non-practical means of achieving ends that cannot be achieved through ordinary practical means' (Kerrin 1946).

Magical techniques – that is, magic and religion – arise where chance factors enter into a situation. Thus, in hunting, for example, the animals may not make their appearance or the arrow may miss, and in agriculture rain may not fall or some natural malady might afflict the crops. And because these factors are beyond one's control, a system of control is devised from the desire to control. Magical techniques are essentially psychological in genesis, and are dominated by the wishes of the individual or group. Wish-fulfillment and fantasy take the place of knowledge. The method of wish-fulfillment relates to projection, and this is the method adopted in magical techniques. One projects desired satisfactions and unfulfilled wishes in an attempt to control the threatening forces that surround to be their master.

Distinguishing forms of projective reactions

It is possible to distinguish between various kinds of projective reactions. Indeed, abnormal psychology abounds with examples of these. For purposes of this paper, I shall deal with two variants only – namely witchcraft and sorcery in Xhosa society. Although the Xhosa do not make any verbal distinction between witchcraft and sorcery, they do differentiate between one who specialises in witchcraft, associated with such familiars as *thikoloshe* (a kind of spirit), baboons, *impundula* (a mythical bird used as a powerful carrier of witchcraft), and the ability to fly at night by means of a mysterious cage (*ikhetshi*) on the one hand, and one who uses malevolent medicines and rituals which are socially disapproved, whether used for social or individual purposes, on the other. The former I call witchcraft and the latter sorcery.

Witchcraft seems to represent an extreme form of projection. The reasoning involved is something like this: 'I hate so-and-so. I wish to harm him. I therefore harm him. I capture his soul and do the worst possible things with it.' Witchcraft is, therefore, *not actually* practised.

Sorcery, however, is *actually* practised, and consists in a material substance with the malevolent magical power it is supposed to have. As far as the Xhosa are concerned, however, the distinction between witchcraft and sorcery is blurred. Schapera (1952) has indeed pointed out that this is the case with all the Southern African Bantu-speaking groups.

On closer examination, it will, however, be seen that witchcraft among the Xhosa is supposed to be used for destructive purposes only. There is no suggestion that it is ever used for socially approved ends or in any productive way whatsoever. The position among the Juku-speaking peoples of Nigeria as reported by Meek (1931: 301) is different. Here, witches are regarded as necessary, for they help increase crop yields and assist in the capture of game when they are tired of human flesh.

We cannot, of course, go into any great detail here, but let us look at some of the different Xhosa beliefs about witchcraft and sorcery. They believe, for instance, that *impundulu* sucks people's blood and 'kicks' them. Women are believed to be able to

keep a snake around their waists and in other private parts. Men are able to keep a snake called *umamlambo* (in order to acquire riches), or baboons to ride on while on witchcraft campaigns. Witches are able to kill people magically and then exhume them after they have been buried, in order to enslave them body and soul. Sorcerers are believed to be able to harm you, even by working on the severed parts of your body, such as hair and nail-parings, or on your spittle, sputum, excreta or footprints. Your personal effects too, such as clothes, may be objects of sorcery. This is what Frazer (1929) calls contagious magic. It is believed that, whatever is done to your cut hair and nails, which were once part of your body, will have a corresponding effect on you.

Various situations give rise to suspicion in Xhosa culture. Thus, it is assumed that if women cross words at a church meeting and one of them starts spitting, it is because she is chewing a magical substance. If others fear her or show reluctance to oppose her, it is because she is using medicine which makes it possible for her always to have her own way. If she says that all the people who have been against her have died, she is taken to have been responsible for the death of these and others. This is regarded as a terrible admission. If you dream about someone you do not trust coming into your house and when you go to harangue that person the following day, he or she keeps quiet, this is taken as proof that he or she has, in fact, been there to molest you. Before you drink medicine in the morning, you always pour off the surface in case some woman's snake got into it in the night and left its deadly saliva to poison you. If your crops are not as good as those of your neighbour's, it is because he or she is using medicines to make the crops rich at the expense of yours. If you lose a contest, it is because your opponent has been using malevolent medicine to outclass you.

Clearly, therefore, the explanation of the *nature* of witchcraft and sorcery beliefs has to be sought in those human situations, those interpersonal relationships that are fraught with emotional stress and strain and disruptive conflict, for the main-springs of human behaviour are to be found in conflict, and magic is one of the ways in which an attempt is made to resolve the conflict. This is done by means of a process of projection and, in all cases, it is the individual's will, desire, fear, and so on, that is being projected on to others. The worker, for example, accuses others of evil intentions, jealousy and hate; mother-in-law and daughter-in-law accuse each other, and so do co-wives; the wealthy *Nyakyusa*, Monica Wilson (1951: 307, 308) tells us, accuse those whom they starve of witchcraft, which they ascribe to lust for food! When one desires to succeed, one accuses others of using medicine for success and therefore feels justified in using them oneself, ostensibly as a protection against the evil intentions of others. One who feels the rigours of competition discovers that some people use protective medicine to keep themselves strong and thus offset the effects of malevolent magic which may be used against them by those who, in their imagination, envy them. Placed in this situation, a person reasons that it is surely to

be expected that he or she should also use these protective measures in self-defence, for as Horney says, 'sometimes projection enables one to eat one's cake and have it, to maintain the idealised image (of the self) and also to do as one pleases' (1947: 26).

Krige points out that witchcraft and sorcery may be used as a scapegoat in order to avoid facing an unpardonable weakness. Desertion of one's family, violation of incest taboos, excessive drinking, and so on – all these things may be ascribed to the effects of witchcraft and sorcery. Playing hide-and-seek with one's conscience in this way makes it possible for one to go on as though one were, in fact, entirely not to blame. Krige says of the Lovedu: 'Attributing certain types of antisocial actions or the breaking of some customs to witchcraft makes it possible for society to breast successfully many blows; an issue is avoided and the transgressor made to feel himself incapable of such actions but for the witchcraft' (Krige 1941).

These beliefs have social and psychological functions. Firstly, they enforce morality in that they regulate human relationships for the good of society as it is constituted. People must not be too stingy; they must show kindness to others, although not too much; they must not go about boasting about their own success.

Another function of witchcraft and sorcery is to buttress the power of those in authority. In Xhosa society, those commoners whose economic power made them potential political rivals to the chief were liable to be accused of witchcraft and killed. They thus found it in their interests to distribute their wealth among less fortunate relatives – the *isisa* custom – leaving the position of the chief unassailable. Among the *Nyakyusa*, where the incentive to witchcraft is associated with lust for food, the poor are always in danger of being accused of witchcraft because they, in fact, are more likely to desire food. This has the effect of forcing them to conform with the cultural stereotype of an ideal personality and of keeping the rich comparatively safe in their position of privilege and prestige, while the poor are afraid to voice their dissatisfaction with their lot openly.

Another social effect of belief in witchcraft and sorcery is to make the relationships between people comparatively cordial, because people fear offending those who are suspected of practising witchcraft and sorcery. They try to befriend them so that they should be free from the danger of being bewitched, since it is believed that there is always a reason – such as envy or some other cause – for witchcraft.

Witchcraft and sorcery canalise aggressive behaviour. Accusations of witchcraft and sorcery tend to colour those relationships that give rise to emotional stress and strain, such as the relationship between co-wives in a polygamous society, or mother-in-law and daughter-in-law.

These beliefs provide those who cherish them with explanations for baffling events that take place in our everyday lives, such as differential misfortune and bizarre forms of behaviour, like hysteria. In short, as I have already pointed out, the beliefs constitute a manner of adapting to the environment. It is an ineffectual technique, for it arises from a failure to understand the true relationship between cause

and effect, and assumes an understanding of that relationship based on magic. These beliefs, however, are a reality in their own right and have a logic of their own, which provides those who espouse them with a philosophy of life and a theory of psychology (Evans-Pritchard 1951: 98–102).

As we have seen, the accusations of witchcraft and sorcery work through a projective mechanism. The emotional stresses set up by the conflictive interpersonal relationships in the social and economic fields are relieved by sublimating them so that they appear as a conflict between man and the forces of evil. Krige (1941) observes that 'witchcraft provides an explanation of the worst evils, such as sickness and death, that befall man; it is the principle of evil, the Bantu Sata'.

The psychological function of witchcraft and sorcery beliefs as anxiety-relieving mechanisms should not be underestimated. To all magic there is counter-magic. In the first place, the range of accusations does not, as a rule, go beyond the area of conflict – co-wives, close neighbours, relatives and other categories of persons with whom the accusers are closely connected in their everyday lives. It is, therefore, comparatively easy to deal with one's persecutors, for they are all known.

In the second place, there are diviners and other ritual specialists who are believed to be able to say who the witches are and to deal with these nefarious beings effectively. To ensure effective anti-witchcraft (Nadel 1935) the services of these specialists are indispensable, for 'only through Beelzabub can you cast out devils' (Evans-Pritchard 1932: 323).

Witchcraft beliefs are not peculiar to Africa. For sixteen centuries, Europe was dominated by demonology, exorcism and expiation. Men of learning did not disdain the practice of displaying their erudition in expounding theories in justification of prevailing beliefs about witchcraft and sorcery, and the brutalities related to such beliefs. Those who disclaimed this barbarism were ostracised, and their works confiscated and destroyed. Dr Harley, Hume reports, believed that the methods used by African diviners are 'on the whole less barbarous than those of early Western "witch finders"' (Hume 1950: 108).

In his book *Psychiatry Today*, Stafford-Clark refers to *The Witches' Hammer* that was written by two monks on the instruction of Pope Innocent VIII. Before the Reformation, it was the principal authority for the persecution of the insane or neurotic, and belief in the 'existence of witchcraft and witches, leading to the conclusion that to doubt such things is to be a deliberate heretic and blasphemer' (1952: 29, 30). Stafford-Clark tells us that the first execution of a witch took place in Europe at about AD 430. After that, thousands of people were burnt alive at the stake. Thus, in the reign of Francis I of France alone, well over 100 000 people are said to have been killed. Some 500 were burnt at the stake in Geneva within three months in 1515. Witch-finder General Matthew Hopkins secured the execution of over 100 witches in the years 1645–1647 in England.

But with the growth of knowledge, as science conquers more fields and the horizons widen, those magical conceptions must recede and become narrower, until with the triumph of science – an unlikely event in the foreseeable future – magic becomes superfluous. Belief in witchcraft and sorcery among Africans continues to exist in its present form because the conditions that gave rise to it (and still influence it) have not changed in any fundamental way, and are not likely to change for a variety of reasons. One reason is selective conservatism and another is the fact that tradition dies hard and the dogmas of a culture tend to linger, long after the social reality and objective conditions have changed. A third reason is that, in some areas of Africa, such as South Africa, it is the express policy of those in power to resuscitate tribalism and primeval institutions – even in the midst of twenty-first-century scientific and technological development.

However, this does not mean that Africans are not going to feel the impact of social change. The chances are that the industrial, scientific and technological developments that will draw them into the orbit of Western institutions, will prove to be some of the most veritable and powerful sources of anxiety neurosis and conflict, and this may well increase the incidence of irrational beliefs and group hatred. It is true that the more Africans become integrated into modern thought and outlook, the less they will tend to embrace the bizarre aspects of their cultural heritage, such as beliefs in the efficacy of witchcraft and sorcery, and in the powers of diviners and other ritual specialists. Instead, they will find dubious solace in the more fashionable and sophisticated substitute reactions of modern societies – race prejudice, the fortune-teller, the family doctor, the psychologist – very often glorified repersonifications of the superstitions of the past.

Conclusion

This exposition is, in part, an attempt to draw attention, if I may, to the need for the linguistic development of a semantic social science. It is my hope that future social research will be informed by the overriding necessity to stick to and obey the rigours of the scientific method of investigating, examining, assessing and classifying both subjective and objective phenomena. This, I hope, will be the guiding principle at all times and in all situations.

The emerging elite (especially African) would do well to resist the temptation to develop an Afrocentric view of the universe. There is no such thing, in scientific terms, as an African race. Africa is not populated by a special breed of humans endowed with special attributes. The opposite notion – tacit or explicit – of a kind of emotional reaction to Eurocentrism, the pervasive force of Western thought and culture, would amount to replacing one system of magic with another and would do nothing to advance or promote the evolution of solutions to the many problems of our time. We must beware of the danger of sliding into developing a voodoo science

while extolling noble sentiments about our uniqueness. That travesty of scientism can have no legitimate place in the panorama of achievements of the twenty-first century.

As part of the global human race, it is our right and our duty to claim and secure our residence within the mainstream of its historic ascent to higher levels of thought, science and technological attainments. It is in this way that we will be able to share in the successive victories of humankind over the blind forces in our cosmology. On that pilgrimage we shall not be alone. We shall be marching side-by-side with the great and the good. We shall be in the proud and noble company of the likes of Edward Said, whose scintillating scholarship transcends all boundaries of race, colour and religion.

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Psychoanalysis, the Enigma of Human Behaviour and the Contribution of Indigenous Knowledges

Françoise Vergès

Qui que tu sois devenu, tu ne sais pas ce que tu es.

(Whoever you have become, you do not know who you are.)

Cited by Ba (1973)

In matters of therapy, humanity is in the highest degree irrational, so that there is no prospect of influencing it by reasonable arguments.

Sigmund Freud

Introduction

In this essay, I take indigenous systems of knowledge to refer to systems of thought that look at human behaviour and relations among human beings from an anthropology of passion rather than an anthropology of reason. One of the challenges of the project of 'decolonisation' has been the deconstruction of the meta-narratives of romantic idealisation of human behaviour and of the economy of interests. Romantic idealisation pervades the discourse of reconstruction, forgiveness and reconciliation. It informs the ideology of 'Never Again', a formula that brings comfort but evades the hard realities of human propensity for cruelty and violence. However, the economy of interests posits an individual who must be capable of always weighing rationally the pros and cons of its impulses, desires and attitudes.

This economy of human behaviour is an expression of the *économie restreinte* that Georges Bataille decried in *La part maudite*. In contrast to an *économie généralisée* – one which seeks to integrate an economy of loss, of expenses, of 'irrational' behaviour – the *économie restreinte* reduces the subject to a self dominated by an idealised superego. The discourse of romantic

idealisation and the economy of interests suggests that external causes are determinant.

It is not surprising, then, that this discourse produces narratives of persecution and victimisation, which foreclose the work of analysis and reminiscences. In the non-European world, and particularly in Africa, the process of decolonisation – that is, of retrieving and developing indigenous systems of thought – implies a deconstruction of romantic idealisation and of the economy of interests, and a search for hybrid systems of knowledge that weave European and non-European forms of thought together. It might also mean questioning the non-European fascination for, and resentment towards, Europe. The decentring of European thought, advocated by so many post-colonial intellectuals, also signifies a decentering of African, Asian or American systems of thought.

The meta-narrative of human behaviour revisited

According to the meta-narrative about human behaviour, human beings would know what to do if they were enlightened about their interests, they would make rational choices, they would ensure that harmony among human beings is preserved so that each individual may pursue her or his interests. This narrative (of European origin) suggests that a complete knowledge about one's own desires and interests will guarantee mastery over one's behaviour. To be sure, feminists, minorities and non-European peoples have challenged this meta-narrative of reason. However, it continues to dominate intellectual life. Even recent discourses about the construction of the self as an ongoing process are caught in this paradigm, although in a romantic disguise that makes them more appealing.

Hence, the discourse about transgression is supposed to offer an alternative to normative discourse that is, through its plays at performative attitudes and masks, necessarily subversive. Subversion is not necessarily a challenge to political power, and neither transgression nor subversion has automatically a salutary effect of demystification. Whether we need more 'love', more 'tolerance', or more 'subversion', more 'transgression', we remain caught within the promise of a redemptive future – one in which love or transgression will produce a pluralistic system. Political projects of political emancipation, of reparation, reconstruction and reconciliation often rest on a paradigm that privileges moral principles over an ethics of action, and harmony over equilibrium. The norms of reason and transgression continue to construct an individual without alterity. The discourse about passion has been deemed too pessimistic, too cynical. People need 'dreams', we are told.

Yet, the anthropology of daily life (conflicts, negotiations, exclusions, inclusions) provides the grounds for an understanding of human behaviour, which, in turn, offers an ethics of action that integrates the 'bad' side of humanity. In his essay 'Daily Life in Africa', the philosopher Paulin Hountondji remarked: 'As far as Africa

is concerned, the reminder of everyday may produce the salutary effect of demystification, of a return to what is real beyond the pretentious stream of discourses that obscure it' (Hountondji 1992). It is this 'salutary effect of demystification' that, I argue, we should look for.

The ideal of harmony among human beings has produced an anthropology of human interest that excluded the anthropology of passion. Indigenous knowledges – knowledges that have sought to understand the enigma of human behaviour beyond the meta-narrative of reason and transgression – propose an anthropology of passion. One is divided, the anthropology of passion says. The individual is not *indivisum in se* (indivisible), but divided and connected to others. This approach posits a fundamental alterity of the subject. The African saying, 'Whomever you have become, you do not know who you are', expresses, in its enigmatic form, this fundamental alterity. One's goal cannot be the formal unity of the self but an equilibrium between competing impulses.

There are thus connections, a meeting ground, between the African conceptions of the person and non-African systems of knowledge, such as European psychoanalysis and Asian systems of thought, which also reject the idea that there is an order somewhere, still to be found, and which, once it has been found, would make things better. They challenge an important tenet of European thought: the belief that, if we were to find the right model, there would be order in the world. They teach us that there are things that we will never know, things that are already there, *déjà là*, and that as we are born, we are already caught in a web of determination, a network of filiations.

We may seek an equilibrium, but not harmony. What is the importance of this approach though? In which ways does it constitute a site of resistance to the meta-narrative of reason and transgression?

Let us look at the possibility of a common ground between European psychoanalysis and indigenous knowledges. If, as Marie-Cécile and Edmond Ortigues have argued in their study *Oedipe Africain* (1966), personal questions are resolved by the individual (no person other than the one concerned can answer these questions), how can psychoanalysis help us understand human relationships? What is the use of systems of knowledge that do not provide a programme of emancipation? Allow me to briefly present my own experience.

Biographical insights

I grew up in Réunion Island, a French Overseas Department in the Indian Ocean. The island, situated on the 'margins' of Africa, experienced slavery, colonialism and political assimilation. Its population is the result of this history: African and Malagasy slaves, Indian and Chinese indentured workers, Muslim immigrants, and European settlers. Since the 1930s my family has been deeply engaged in anti-colonialist

politics. I grew up a witness of and a participant in the anti-colonial struggle. I observed that people were mobilised by their passions as much as by their interests, and that, because of their passions, they could go against their interests. I understood that personal relationships, feelings of envy, jealousy and love were as important as ideological commitment and political courage.

However, I thought that the acts of jealousy, cruelty and envy that often bred violence, were more the result of a 'wrong' model than being an inherent part of politics, and thus, of human behaviour. I became an activist in the feminist and anti-imperialist movements of the late 1970s. My generation, post-decolonisation, post-colonial, post-1968, was convinced that it had found what was missing in the decolonisation movement: not enough attention had been paid to gender, to women, to sexuality and to culture. Now 'we' had found the true model. 'We' knew better than the former generation what constituted good. We held onto the ideal of the indestructibility of the self. We advocated heroism. Heroism shaped our generation. We entered the world walking through a gallery of virile heroes and we wished to live up to them. Yet, the idealisation of the heroic activist led many among us to experience inner conflict, depression and anguish. It took us a long time to understand that militancy, like any other impassioned activity, is built on ambivalent feelings.

The psychoanalyst, Marie Langer, who escaped Nazism and went to work with revolutionaries and victims of torture in Latin America, has described the ambivalence thus: 'Along with the desire and the goal of repairing social injustice and achieving a more just society – reparation, depressive position – there exists a schism somewhat unavoidably dualistic, yet effective, whereby companions are idealised and enemies are loathed' (Langer 1989: 150). I finally had to notice that I was not only mobilised by good impulses, by the desire for collective good, but also by aggression, the desire for revenge and the complete destruction of the enemy. I slowly came to understand the deep ambivalence of political activism. In *Living with Torturers*, Sasanka Perera spoke of the demonisation of dissenters among revolutionaries in Sri Lanka. Perera remarked that some experiences of political struggle 'have to be understood in the context of a language of incompleteness, suddenness, darkness, and endless unfulfilled continuity' (Perera 1995).

From the testimonies at the Truth and Reconciliation Commission in South Africa, a more complex picture of the anti-apartheid struggle has emerged. The comrades were certainly the victims of the apartheid regime, but they were also caught in personal rivalry and webs of jealous relations; they experienced resentment and depression. Yet, such gestures of positive demystification are often not integrated in the elaboration of knowledge.

To go back to my experience, despite my own observations about the violence of feelings among feminist sisters, about the incredible attraction for positions of personal power, about the self-destructive impulses that animate movements claiming to wish for the 'good', I could not renounce the meta-narratives of control

and progress that dominated post-colonialist struggles and that constituted the formative myths of my generation. I adopted the belief in pure historical rupture: only a clear-cut break with the colonial past would free us from what our fathers had not been able to do – the construction of a decolonised self. If the goal was not attained, either it was because we had not yet found the ‘good’ model, or because the ‘people’ had not yet understood what was good for them. We either had to find a new model or a ‘new’ people.

Towards a new ethics of action

The recurrence of some questions, regardless of culture, of the political and economic situation, of gender, of ethnicity, testifies of another domain of human behaviour. There are the questions of origins, filiation, guilt, sexuality and death. It does not mean ‘the personal is the political’. Rather, it means that the integration of an anthropology of passion would allow us to build an ethics of action that would go beyond the Manichean paradigm of good and evil. In the post-1970s revolutionary movements in Africa and elsewhere, there was a strong resistance to psychoanalysis: it was bourgeois, it was European, it divided the people, it removed them from the struggle. But it was contemptuous to think that these questions belonged to the bourgeoisie – to those who did not suffer hunger, fear and poverty.

To affirm that, once these basic needs were met, people would no longer suffer, was a denial of what the oral traditions, folktales and popular cultures have long told us – that human beings are caught in a web of symbolic debts that constitutes an inheritance – a family inheritance that is a cultural inheritance – and are acquired through the singular relationship that each child enters into with his or her parents, its group. Oral traditions everywhere provide numerous stories about individuals who, because they disavow their symbolic debts, are punished or rejected.

‘Madness is about being alone, about refusing the advice of others,’ an African proverb says.

African indigenous knowledges provide the grounds for an alternative approach to comprehend human behaviour, and, therefore, to build an ethics that integrates this approach. It is not a discouraging approach. To the contrary, it is deeply human. These knowledges constitute an accumulated knowledge about the human condition. The discourse about happiness and progress is a discourse about the desire of a limitless existence in which my dreams, my desires can be accomplished. Indigenous knowledges show that this dream denies a principle of human existence: I must live within limits, I must learn to keep my desire for omnipotence in check. Yet, again, what is the use of such systems of knowledge in a world in which economic inequalities and unequal access to technologies or basic needs shape the lives of so many? What is the use of such systems of knowledge in a world in which certain knowledges receive legitimacy, become authoritative, and others remain marginalised or simply

the terrain for exoticism? For instance, what is the point of psychoanalysis if, as Freud himself argued, the issue of analysis is not the transformation of the individual? What is the point of systems of thought that affirm that it is worthless to dream of a new man or new woman? What is the point if there is no promise of mastery, of control; no prescription for happiness except that one must accept the human condition, its limitations and its frustrations?

At the heart of the human condition is a fundamental alienation of the subject, and it is a universal condition. Everywhere, people are experiencing feelings of persecution and fear; they are neurotic and aware of spirits. The discourse about passions speaks thus to the ego: 'Nothing has entered into you from without; a part of activity of your own mind has been withdrawn from your knowledge and from the command of your will' (Freud cited in Gilman 1993: 163). There exists a space, a territory that may remain unaffected by external social causes, but the concrete consequences of a better life, more liberty, justice and equality will not guarantee psychological satisfaction. One may continue to experience violent envy, deep discontent or feelings of unfulfilment even though one's living conditions have improved. People are not naturally good, not naturally happy, and no rational explanations would convince them that they should be happy and good. As the French philosopher François Flahault suggests, the seed of hatred and malice is present in each of us; it is the expression of our desire to escape the limitations imposed by the existence of others (1998: 17).

This may look like total abstraction, so let us reflect on ourselves. Have we never experienced unfulfilment or unhappiness even when everything was smiling at us? Have we not had depressive thoughts about which the sources were obscure to ourselves? Systems of knowledge that are not based on the idea of a rational individual reveal that there may be losses that are irretrievable, that there may be no total reparation of a wrong. We have to live with the loss; of a loss, there is no conceivable return to a pre-loss state.

Reparation, then, is not only a problem of justice. It is also about revenge, about a desire for completeness that exists in every human being. Reparation is therefore both about justice that is reasonable, measurable, and revenge that is often absurd and never complete. The saying 'an eye for an eye, a tooth for a tooth' is about justice that is revenge. In the shadow of the rational demand for reparation lures the impassioned demand for revenge. The state and the community devise rules of reparation, and yet we witness many instances of the discontent of the victim. It is never enough and one can understand the desire for revenge, one can understand the consuming fire of anger.

In *Je ne lui ai pas dit au revoir. Des enfants de déportés parlent* (1979) Claudine Vegh unveils the enduring presence of an irretrievable loss that hinders reparation. Thirty years after a forced and violent separation from their parents, the children of European Jews who disappeared in the camps declared that they would have preferred to

die with their parents in the gas chambers. Acknowledging the ruins, the buried worlds, the lost communities of one's life may be an impossible task.

Reparation can be thought of as a process of incorporation, but there may be situations when it is impossible to overcome loss. Human beings can be very fragile; not everything can be overcome. The processes of annihilation, dehumanisation and the technique of de-fabrication, whereby isolation, dispersal, torture, violence and proximity of death become the structures of life, may lead to such a profound destruction of the psyche that no therapy can cure. Indigenous systems of therapy know that and their practitioners have devised forms of therapy that merge prayers and songs, words of love and hatred, in order to support the individual whose suffering cannot be expressed in the words used in daily communication.

In our post-colonial world, still haunted by the ghosts of colonialism and of anti-colonial struggle, still inhabited by deep sorrows and troubles, a world of flows, such conception of the subject may appear interesting but not very useful. In a world in which, according to a recent study of the United Nations Development Programme (September 1998), a fifth of the world population has no access to decent health services, what is the importance of the talking cure? In a continent like Africa, in which the lack of basic resources is glaring, institutions are crumbling (when they do exist), health problems go way beyond mental help, and professional training does not prepare one for the dearth of resources, what can such an approach bring?

Lingering challenges: Colonial psychology and political emancipation

We are confronted with a series of problems – one of which is the (psychoanalytical) concept of the individual. How can such a theory help individuals caught in situations like genocide, ethnic cleansing, famine, civil war and torture if no hope is allowed? A second problem is that the psychoanalytical theory emerged in Europe. How can its notions relate to other cultures, to peoples that Europe enslaved and colonised? Upon which assumptions rests its universalism? Is it not a mask for its imperialism? Has not racism pervaded psychoanalysis like it pervaded other disciplines? I wish to present the tenets of colonial psychology and its critique briefly before returning to the questions raised by psychoanalysis and indigenous therapeutic theories. Colonial psychology remains an under-studied field in its relationship with psychiatry in the metropole; a comprehensive and comparative study of psychiatric institutions in the empire is still to be done. More importantly, a Foucauldian analysis of the ways in which colonial psychology and psychiatry in the metropole question, answer, or echo each other, has not yet been done. True enough, and this is not an exhaustive list, we can turn to the works of Jock McCulloch, Bernard Mouralis, Christian Lesne, Wulf Sachs, Robert Berthelie, Chabani Manganyi, Lionel Nicholas, Saths Cooper, Octave Mannoni, Fritz Gracchus, Abdelhadi Elfakir, Frantz Fanon, Albert Memmi, Marie-Cécile and Edmond Ortigues, and Mahfoud Boucebci

if we want to learn about colonial and post-colonial psychology. Yet, it is still a marginalised field of research in post-colonial studies.

European colonialism provided the setting for the encounter between European psychology and Africa. Colonial psychology was the heir of the *psychologie des peuples*, which emerged, in the second half of the nineteenth century, as a discourse of which the goal was to define a relation between race, culture and the psyche. Its first subjects were the European working class, the poor peasantry and the vagabond, which were said to be prone to excesses and displayed a pathology of degeneration that ought to be studied in order to deploy preventive strategies. Race moved from being a 'purely biological category to a purely psychological one' (Morel 1857: 7). Theories about the potential madness of the anarchist, the communist, the vagabond, were extended to the colonised.

Gustave le Bon, in *Les lois psychologiques de l'évolution des peuples* (1894), proposed the notion of 'psychological race', which was in direct lineage with Gobineau's racist theory and influenced a generation of psychologists. As Antoine Bouillon remarked, the *psychologie des peuples* rested on the notion of the radical heterogeneity of the beliefs of the racial groups (Bouillon 1981).

The psychology of colonisation advocated a progressive assimilation through seduction, rather than subjugation by force. The European-trained psychiatrist was thus an agent of colonisation. As Jock McCulloch has shown, psychiatric services were established where European populations were largest, in Algeria, Southern Rhodesia, Kenya and South Africa. The object of study was the male settler and the native male. Ethnopsychiatry was the result of the application of psychological discourse, and discourse about race and gender in the colony. Ethnopsychiatry focused on two groups of Africans: male peasants and intellectuals.

In Europe, the psychiatric gaze was fixated on the female body; in the empire it was fixated on the male body. Peasants provided the bulk of inmates: they were the victims of social dislocation, living on the fringes of colonial cities, people whose customs, traditions, and masculinity were challenged, destroyed by colonialism. Male intellectuals exhibited what colonial psychiatrists diagnosed as the symptoms of mimicry and envy, while nationalism was seen as a symptom of arrogance and pride. Colonial psychologists asserted that they were inventing a science, the psychology of colonisation, of which the findings and conclusion would be useful to establish a control accepted and even desired by the colonised.

The leading figures of colonial psychology were South African John Colin Carothers in the British empire, and Antoine Porot in the French empire. Both became influential writers and teachers, and they helped to shape the mental service in the empires. Both earned international recognition. Both adopted the theory of degeneration, which was so prevalent in their time, and applied it to the colonised. Both acknowledged that non-Europeans had some strengths, but both believed in the psychic inferiority of Africans. Carothers summarised the African temperament

thus (it must be mentioned that this was written in a study sponsored and published by the World Health Organisation in 1953):

'The African accordingly has been described as conventional; highly dependent upon physical and emotional stimulation; lacking in spontaneity, foresight, tenacity, judgement and humility; inapt for sound abstraction and for logic; given to fantasy and fabrication, and in general unstable, impulsive, unreliable, irresponsible and living in the present without reflection or ambition or regard for the rights of people outside his own circle' (Carothers 1953: 87).

Health organisation

Antoine Porot, who opened the first mental health service of colonial Algeria, wrote that Muslims were credulous, suggestible and degenerate; they showed a weakness of moral and affective life, and an innate difficulty for introspection. The North African lack of symbolisation was compounded by fatalism, credulity, suggestibility, and lack of curiosity (Porot 1918: 377–384). (Fanon wrote a scathing critique about Porot's thesis in *The Wretched of the Earth*. In his denunciation of the colonial psychiatric diagnosis of the criminality of the North Africa – 'a reaction written into the nature of things, of the thing which is biologically organised' – Fanon situated the sources of alienation in the social organisation of colonialism.) Islam maintained the Muslims in a state of credulity and superstition; it was a factor of illiteracy, ignorance and xenophobia. Both anthropology and the psychoanalytical revolution of the time had no impact upon colonial sciences. Raymond Berthelie, in his study of the history of psychiatry in Algeria, as well as Philippe Lucas and Jean-Claude Vatin, in their study of colonial anthropology, noted how the colonial social sciences shut themselves away from what was happening in the metropole. Carothers and Porot were not exceptional men, but 'men of their time', who shared the 'civilising ideal' which dominated European politics and culture, promoting an 'ideology of difference' which justified the politics of colonial domination. Colonial psychiatry, with its sociocentric and ethnocentric vision, was a political project rather than an attempt to apprehend insanity.

Colonial psychology produced an idiom of which the scientific terminology was easily adopted by the medical profession. For its part, the discourse of ethnopsychiatry reflected the fears of the white settlers. These were fears of the rising nationalism and the revolts of Africans, as well as fears of their bodies; repulsion and fascination for the black body, for the realm of the night, the *ce domaine de la nuit*, which belonged to the natives and which haunted their sleep. The scientific discourse justified the idea that the settlers' politics were forced upon them by the behaviour of Africans.

Decolonising psychiatry

After World War II a new approach was developed, characterised by the belief that the colonial relation was one that 'chained the coloniser and the colonised into an implacable dependence' (Porot 1918: 380). There was a shift in focus and the coloniser's motives were analysed. Colonisers had not gone to the colonies with benevolent intent, but because they were seeking an easy position of racial, economic and political privilege. Their psychological complexes made them perfect colonisers; they arrived in a country that had been conquered by the military and found, awaiting them, a social function, cheap labour, as well as sexual and economic privileges.

The new theories cast a suspicion on the long-held opinion that there was one road to 'psychological development' which mirrored the 'European psyche', and that there was a psychological solution to the political and economical situation produced by colonialism. Yet, the new theories insisted on a psychological analysis of the colonial relation, for this relation had been translated into metaphors, tropes and iconographic material, of which the content and consequences exceeded a strictly political analysis of conflicting forces. Psychology would become a weapon of decolonisation.

The fundamental contribution of Fanon's *Black Skin, Whites Masks* (1967) and Memmi's *The Colonizer and The Colonized* (1965) was to raise the question of psychological dis-identification. Yet, in this psychology, the 'I' was not inscribed in a network of symbolic debts. The process of the reinscription of the decolonised subject occurred in the temporal break with the past. The process of dis-identification signified freeing oneself of what had been imposed by the coloniser, but at the same time reconstructed a mythic self, free of limitations. Human beings, however, proved to be stubborn and continued to experience anguish, anxiety and guilt, despite the progress made in the realm of politics.

The human condition and politics

Psychoanalysis is firstly about a space in which the oral dimension of the relationship is fundamental. It is firstly about *une parole*, about words, language. It is about the intimate decision of an individual to enter a personal journey in which one is both the investigator and the object of inquiry, the observer and the observed, the scientist and the informant. The therapist is there to share the patient's road towards recovery. The task of discovery, of deconstruction, is the task of the patient. Two individuals or a group, but in each case one goal, whether the situation occurs in a European hospital or in an African village, is to establish a space of benevolence, of trust. Therapy must first and always offer this space, '*un lieu possible, du possible*' as has been said. The psychotherapist Pascale Pillet, who works in a public hospital in France, has insisted on the importance of establishing a space in which patients

knows that they can put down their 'luggage'. She wants them to know that she is 'there', that they can trust her, that she will be there with them and she will accompany them to where they want to go in their exploration of the sources of pain and anguish.

In the therapeutic space, they are no longer alone. It is not the loneliness of the solitary individual, without friends, family or lovers, but it is the loneliness of the individual who always must defend, always present a good face. The systematic turn toward theory is often there to mask the fact that the therapeutic moment is inaugurated by a simplistic act: being there. Because it is difficult to theorise, psychoanalysts tend to dismiss its importance, and yet, as healers, therapists know how essential it is to establish this space. What counts in this scene is not the hermeneutical question of how to extract the truth of the unconscious content (in itself, it has neither truth nor content, but the dialogical dimension of '*par qui et pour qui le sujet pose sa question*' (through what and for whom the subject is posing its question). The reality is intersubjective or, as Pillet argues, the role of the therapist is to offer to the patient '*une surface de contact*' between the psychic life of the patient and that of the therapist. Interpretation is not the decoding of readable texts stored in the hidden archives of a buried world; it is the intersubjective production of openings in which the desire of the 'Other' plays an active role. Symptoms are solutions that individuals invent in order to answer certain problems, and therapy helps them to understand why these solutions are not always providing relief.

Memory and reparation

Survivors of a catastrophe or witnesses of terrible crimes, whose friends, community and whole world have vanished, do not know how or why to come back to the world of living – the feel forever estranged in a certain social reality. The issue of reparation, which has become so pre-eminent in our times, raises a set of questions related to how silence and forgetfulness are means of expressing disaster. Charlotte Delbo, a survivor of Auschwitz, wrote in one of her remarkable books about being asked what it meant to be in a camp:

'As to questions, they stopped quickly because I never answered any. I hear their voices coming from a great distance. When they entered my room, my eyes clouded over. Their thickness intercepted the light. Through this veil, I saw them give me an encouraging smile, but I failed to understand their smile, their attitude, their kindness – later I assumed it was kindness. It was almost impossible, later, to explain with words what was happening in that period of time when there were no words' (Delbo 1995: 237).

What does it mean when there are no words? History considers that there are always words to describe a situation, that memory is chronologically organised. Psychoanalysis, however, argues that past and present obey the rules of inter-

weaving, repetition and ambivalence. In the case of disaster, psychoanalysis may prescribe a medicine of silence and forgetfulness. What about the issue of damages and reparation? If my existence is defined by what is owed to me, I avoid the question of my own debt, debt to the others around me, to those who preceded me and to those who will follow me. To recognise my debt means that I abandon the status of pure victim. When it is the wrong done by the 'Other' which demarcates my self, I reap the benefits of victimisation: If I do not succeed, it is not my fault. Human institutions may repair to a certain extent, but it would be arrogant to think that they have solutions for everything. Their role and their function are not to respond to the deep need for completeness that inhabits every human being. Reparation will always be limited, unsatisfactory.

Toward the integration of knowledge systems

Human health can be divided in two realms. One can be described with statistics, numbers and facts related to, for example, decent access to clean water, lower mortality rates, decent pre-natal care and the like. One can also point to the external causes and prescribe remedies. It is a domain for which important resources may be needed. The borders of the other realm of human health, however, are more difficult to assess. Mental suffering is not always due to external causes. It is also a domain that does not necessarily demand important resources.

I want to cite an experience in Tulear, Madagascar, to illustrate my point. Tulear is a very poor city in which local healers, with the help of European-trained psychiatrists, have devised a programme of mental health. Respectful of existing resources, attentive to ancestral rituals of healing and to therapeutic rituals connected with religious movements, the project seeks to devise new techniques and new methods of therapy in order to invent a doctrine of therapy specifically indo-oceanic. It seems that such programmes need to be encouraged and developed. They represent the future of therapy in countries in which programmes of mental health are neglected.

What can the relations be among people who have been victims and perpetrators of murder, mutilations and genocide? Rwanda, Sierra Leone, Cambodia, Congo and Liberia testify to the limitless human capacity for murder and cruelty. Moralism, romantic idealisation and the economy of interests do not offer the grounds to understand the human appetite for murder. The different governments and the 'international community' have tried to develop schemes, laws and techniques of discipline and policing to restrain the forces of death. They are extremely important. However, it is the systems of knowledge that can provide a source of analysis of human behaviour that integrates the inherent human appetite for murder and self-destruction that would transform the meta-narrative about human behaviour. We still have to understand the economy of predation that governed the slave trade and

slavery. Contemporary fratricides echo the fratricides of yesterday. They tell the same story.

Whomever you have become, you do not know who you are, states an African saying cited by Amadou Hampaté Ba. This, again, is the lesson.

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Part

3

Indigenous Knowledge Protection

The Role of Intellectual Property in Building Capacity for Innovation for Development

A developing world perspective

R.A. Mashelkar*

Intellectual property and innovation

The twenty-first century will be the century of knowledge, indeed the century of the mind. Innovation is the key to 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. The increasing knowledge gap between the developing and the developed world is therefore a major concern. This knowledge differential has to be bridged in a short time-frame by mutual co-operation between the developing and the developed world.

Issues of generation, valuation, protection and exploitation of intellectual property (IP) are going to become critically important around the world. The exponential growth of scientific knowledge, increasing demands for new forms of IP protection as well as access to IP-related information, increasing dominance of the new knowledge economy over the old 'brick and mortar' economy, complexities linked to IP in traditional knowledge and animate objects, will pose a challenge in setting the new twenty-first century IP agenda. IP will no longer be seen as a distinct or self-contained domain, but rather as an important and effective policy instrument, relevant to a wide range of socio-economic, technological and political concerns. The development of skills and competence to manage intellectual property rights (IPR), and leverage its influence, will need increasing focus, in particular among the developing countries.

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Developing world concerns

An understanding of the role of IPR in the process of innovation, and the role of innovation itself in the process of development is crucial. Let us begin with the process of innovation itself. Usually, when we consider innovation, we only refer to formal systems of innovation – namely those done at universities, in industrial research and development laboratories, etc. Often the technological innovation that takes place in an informal system of innovation, be it by artisans, farmers, tribes or other grassroots innovators, is not recognised. Indeed, many societies in the developing world have nurtured and refined systems of knowledge of their own, relating to such diverse domains as geology, ecology, botany, agriculture, physiology and health.

We are now seeing the emergence of terms such as ‘parallel’, ‘indigenous’ and ‘civilisational’ knowledge systems. Such knowledge systems are also expressions of other approaches to the acquisition and production of knowledge. Indigenous knowledge and innovation systems must be sustained through active support of the societies that are keepers of this knowledge, their ways of life, their languages; their social organisation and the environments in which they live. The issues linked to the IP protection of indigenous knowledge and innovation are diverse, complex and sometimes highly emotive.

One of the concerns of the developing world is that the process of globalisation is threatening the appropriation of elements of this collective knowledge of societies into proprietary knowledge for the commercial profit of a few. Urgent action is needed to protect these fragile knowledge systems through national policies and international understanding linked to IPR, while providing for its development and proper use to the benefit of its holders. We need a particular focus on community knowledge and community innovation. To encourage communities, it is necessary to scout support, spawn and increase the grassroots innovation. Linking innovation, enterprise and investment is particularly important. New models and new thinking on IP will have to be envisioned to accomplish this.

The local communities or individuals do not have the knowledge or the means to safeguard their property in a system that has its origin in very different cultural values and attitudes. The communities have a storehouse of knowledge about their flora and fauna – their habits, their seasonal behaviour and the like – and it is only logical and in consonance with natural justice that they are given a greater say as a matter of right in all issues regarding the study, extraction and commercialisation of the biodiversity. A policy that does not obstruct the advancement of knowledge, that provides for valid and sustainable use, and adequate IP protection with just benefit sharing, is what we need.

The issues related to the economics of community knowledge are truly complex. While it is true that many indigenous cultures appear to develop and transmit knowledge from generation to generation within a system, individuals in local or

indigenous communities can distinguish themselves as informal creators or innovators, separate from the community. Furthermore, some indigenous or traditional societies are reported to recognise various types of intellectual property rights over knowledge, which may be held by individuals, families, lineages or communities. Discussion of IPR and traditional knowledge should draw more on the diversity and creativity of indigenous approaches to IPR issues.

The existing IPR systems are oriented on the concept of private ownership and individual innovation. They are at odds with indigenous cultures, which emphasise collective creation and ownership of knowledge. There is a concern that IPR systems encourage the appropriation of traditional knowledge for commercial use, without the fair sharing of benefits with the holders of this knowledge. They violate the indigenous cultural precepts by encouraging the commodification of such knowledge. The United Nations Development Programme (UNDP) estimates that medicinal plants and microbials from the South contribute at least \$3 billion a year to the North's pharmaceutical industry. However, not even a small fraction of this is reploughed into the developing world.

New experiments are beginning to emerge on benefit-sharing models for indigenous innovation. An experience in India is worth sharing. It relates to a medicine that is based on the active ingredient in a plant, *Trichopus zeylanicus*, found in the tropical forests of south-western India and collected by the Kani tribal people. Scientists at the Tropical Botanic Garden and Research Institute (TBGRI) in Kerala learned of the tonic, which is claimed to bolster the immune system and provide additional energy, while on an expedition with the Kani in 1987. These scientists isolated and tested the ingredient, and incorporated it into a compound, which they christened 'Jeevani', the giver of life. The tonic is now manufactured by a major Ayurvedic drug company in Kerala. In 1995, an agreement was struck for the institute and the tribal community to share a licence fee and two per cent of net profits. This perhaps marks the first time that compensation in the form of cash benefits for IP held by a tribe, has gone directly to the source of the IP holders. We need to multiply such examples globally.

Industrial property systems were set up centuries ago for inanimate objects, and as informal systems of innovation. An emerging challenge is to look at the systems that will deal with animate objects (such as plants and animals) and with informal systems innovation (such as those by grassroots innovators, like farmers, artisans, tribes, fishermen and so on). The standard IP systems will certainly not suit such innovators and their innovations. We therefore need innovation in the IP system itself! Shorter duration patents for smaller innovations, including specific improvements in the traditional knowledge, need to be conceived. They may involve a simple registration-cum-petty patent system, where the inventive threshold could be lower, but even a small improvement in material, process, product or use could be protected at much lower costs and for a shorter duration.

While recognising the market-based nature of IPR, other non-market-based rights could be useful in developing models for a right to protect traditional knowledge, innovations and practices. To date, debate on IPR and biodiversity has focused on patents and plant breeders' rights. Provisions under undisclosed information or trade secrets could be invoked to protect traditional knowledge not available in the public domain. Geographical indications and trademarks, or *sui generis* analogies, could also be the alternative tools for indigenous and local communities seeking economic benefits from their traditional knowledge. The potential value of geographical indications and trademarks is in protecting plants and germplasm that are specific and unique to geographical regions. They could protect and reward traditions, while allowing innovation, and emphasise the relationships between human cultures and their local land and environment. They are not freely transferable from one owner to another and can be maintained as long as the collective tradition is maintained.

Intellectual property rights and traditional medicine

The issue of access to and use of indigenous knowledge linked to traditional knowledge is becoming highly emotive, not least because of the huge implications of the economics of such traditional knowledge. An example of this is the \$60 billion world market for herbal products that is expected to grow to \$5 trillion by the year 2020. The World Health Organisation (WHO) defines traditional medicine as 'the sum total of all the knowledge and practices, whether explicable or not, used in diagnosis, prevention and elimination of physical, mental or social imbalance, and relying exclusively on practical experience and observations handed down from generation to generation, whether verbally or in writing'. Health care providers world-wide, including major pharmaceutical giants, are beginning to incorporate many of these into their mainstream activities. As traditional medicines are largely based on medicinal plants, indigenous to countries where they have been in use for several centuries, the effort is on accessing them either directly or through the use of modern tools of breeding and cultivation, including tissue culture, cell culture and transgenic technology. IP issues linked to such endeavours remain unresolved.

The World Intellectual Property Organisation (WIPO) has been sensitive to these concerns. At a conference held in October 1998 under the aegis of WIPO, an agenda for the future of IPR in the field of traditional medicines was prepared. This agenda prioritised activities in this area – namely the development of standards for the availability, scope and use of IPR on traditional medicine in Asian countries, the systematic documentation of traditional medicine for protection purposes, regional and interregional information exchange, and the compilation of the requisite databases, etc. This agenda needs to be moved forward.

The granting of patents on non-original innovations (linked to traditional medicines) which are either based on what is already a part of the traditional knowledge of the developing world, or a minor variation thereof, has been causing a great deal of concern to the developing world. The Council for Scientific and Industrial Research (CSIR) in India asked for a re-examination of the US patent no. 5,401,5041, which was granted for the wound-healing properties of turmeric. In a landmark decision, the United States Patent and Trademark Office (USPTO) revoked this patent after ascertaining that there was no novelty; the innovation having been used in India for centuries. The case of the revocation of the patent granted to W.R. Grace Company and the US Department of Agriculture of neem (EPO patent no. 436257) by the European Patent Office, again on the same ground of its use having been known in India, is another example. India has filed a re-examination request for the patent on Basmati rice lines and grains (US patent no 5,663,484) granted by USPTO. There is, therefore, a problem with the granting of such patents linked to the indigenous knowledge of the developing world that needs to be addressed jointly by the developing world and the patent offices of the developed world.

We need to understand that there is a distinction between the patents that are granted based on modern research and those categorised as traditional knowledge-based patents. A study by an Indian expert group examined 762 randomly selected US patents, which were granted under A61K35/78 and other International Patent Classification (IPC) classes, having a direct relationship with medicinal plants in terms of their full text. Of these 762 patents, 374 (49%) were found to be based on traditional knowledge. The fact that, during March 2000, USPTO granted 408 patents on several medicinal plants, implies that there is an extreme urgency in addressing the issue of patents in traditional systems of medicine. The governments in the developing world, as well as members of the public, are equally concerned about the granting of patents on non-original inventions in the traditional knowledge systems of the developing world. At an international level, there is significant support for opposing the granting of patents on non-original inventions. For example, more than a dozen organisations from around the world gathered to oppose the EPO neem patent. The entire process took five years. The process of opposition is, however, extremely expensive and time-consuming. A recent suggestion by USPTO provides a rational approach to solving these problems.

Patent examiners in the international patent offices, when considering the patentability of any claimed subject matter, use available resources for searching the appropriate non-patent literature sources. Patent literature, however, is usually wholly contained in several distinctive databases, and can be more easily searched and retrieved than non-patent literature that may be buried somewhere in the many and diverse sources of non-patent literature. We therefore have to address the need for creating more easily accessible non-patent literature databases that deal with traditional knowledge. As rightly suggested by USPTO, this should be a project for

the SCIT Working Group of WIPO on Standards and Documentation in collaboration with the IPC Committee of Experts. With the help of the developing countries, traditional knowledge can be documented, captured electronically and placed in the appropriate classification within the IPC so that it can be more easily searched and retrieved. This would help to prevent the patenting of products that have been based on the traditional knowledge of the developing world.

The documentation of traditional knowledge

Taking this suggestion further, it is proposed that the developing world should create a Traditional Knowledge Digital Library (TKDL). The TKDL portal should have a web-based search interface providing full text search and retrieval of traditional knowledge. The TKDL portal should have full data on traditional medicine and practices, including the pertinent scientific literature. Such a portal should include cross-references, key words, comprehensive search interfaces, indexing and retrieval, and it should have a secured access on the web. In future, TKDL can increase its canvas beyond traditional medicine and include other innovations based on traditional knowledge.

The methodology and standards used in the creation of TKDL portals should be the same as those established by several IP offices, such as USPTO, the European Patent Offices or WIPO's Intellectual Property Digital Library (IPDL). The search features should include complex Boolean expression search, proximity searching, field searching, phrase searching, right and left truncation, adjustable display format, etc. This search should be available via personal computer with key words, synonyms and a guided search on traditional knowledge classification.

Eventually, the creation of TKDL in the developing world would serve a bigger purpose in providing and enhancing its capacity for innovation. It could integrate widely scattered and distributed references on the traditional knowledge systems of the developing world in a retrievable form. It could act as a bridge between the traditional and modern knowledge systems. Availability of this knowledge in a retrievable form, in many languages, will give major impetus to modern research in the developing world, as the developing world can then become involved in innovative research, adding further value to traditional knowledge. An example is the development of an allopathic medicine based on a traditional plant-based therapeutic medicine. Sustained efforts regarding the modernisation of the traditional knowledge systems of the developing world will create greater awareness at national and international level, and establish a scientific approach that will ensure greater acceptability of these systems by practitioners of modern systems and the public at large.

IPC has been widely accepted by the patent authorities globally for the classification and retrieval of information. A recent study by an Indian expert group has demonstrated that IPC in its present form is adequate to retrieve information

pertaining to traditional knowledge. Sustained IPC reforms for documenting traditional knowledge may, therefore, not be required. Patent examiners will be facilitated by the search facilities based on IPC and key words (in one of the UN languages) with details of modern as well as traditional names. Such classification must remain internal to TKDL and should become a search facility based on IPC and key words.

There should be an effort to create a Traditional Knowledge Resource Classification (TKRC) which can be used for storing information, so that it acts as a metafile and provides multilingual capabilities to TKDL. With the same structure as IPC, TKRC will offer a uniform acceptable solution, it will serve as an instrument for the orderly arrangement of documents related to traditional medicinal plants and other traditional knowledge resources. It will serve as a basis for the selective dissemination of information on traditional resources to all users of non-patented information. A pioneering effort to create TKRC has been initiated in India at the behest of the Department of Indian Systems of Medicine and Homeopathy.

Some other concrete recommendations that WIPO could follow are:

1. Under the Standing Committee on Information Technologies (SCIT) implementation plan of WIPO, a feasibility report on traditional knowledge databases was planned by the end of the year 2000. It is suggested that a specific project based on the Indian efforts for a traditional knowledge digital library (described above) be taken up.
2. For documenting traditional knowledge, it will be necessary for a unique TKRC to be adopted globally. A TKRC relating to more than 2 000 medicinal plants has indeed already been completed by the Indian experts. This classification will have to be enhanced at a global level. It is recommended that a TKRC Enhancement and Reform Subcommittee under the IPC Reform Committee may be constituted. This will benefit quick documentation of traditional knowledge as well as further enrichment of IPC related to traditional knowledge systems.
3. The domain name www.tkd.com may be taken up by WIPO as the global repository of traditional knowledge. Each country, in turn, may prefix the name of their country to the global traditional knowledge library documentation for example, www.india.tkd.com.
4. Once the national traditional knowledge digital libraries are created, they may be included in the official list of international search authorities (ISA) related to non-patent literature. Presently there are 135 non-patent technical journals and periodical literature on the non-patent lists of ISA.
5. Once the traditional knowledge digital libraries are created by various member states and integrated with www.tkd.com, it will be useful for the IP offices to review the patents granted in traditional knowledge systems for non-original inventions. Revocation of such patents by IP offices will go a long way to address-

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ing the emotive concerns of the developing world on the issue of IPR based on indigenous knowledge.

Information technology, IPR and innovation

Information technology (IT) will play a major role in setting the global IP agenda. The growing role of IT in IPR was recognised by WIPO when a decision to initiate information technology projects was taken in 1998. The visionary remarks made by Kamil Idris, Director General, WIPO, in 1998 are worth recalling. He said, 'The first issue concerns information technology. It is clear that member states are resolved to make greater use of the potential that information technology offers in promoting international co-operation in the field of intellectual property. Our consultations are demonstrating an emerging consensus on the establishment of a global information network, centred on WIPO and serving the interests of all the member states, especially developing countries, with the necessary technical support to ensure that all countries can derive immediate practical benefits from this project.'

The concept of WIPONET was born with this landmark policy statement and WIPONET is today becoming a reality.

WIPONET is being set up to:

- narrow the information access gap that exists between the developed countries and developing countries;
- improve the flow of information concerning IPR among WIPO member states, regional IP offices and the International Bureau;
- improve access to and the exchange of IPR in terms of cost and access time;
- improve the dissemination of information on IP;
- consider the information needs and filing requirements of applicants, and develop electronic services, keeping in mind the need to provide benefits to applicants and IP offices, and to other interested parties
- help guide the International Bureau to leverage information technologies; and
- improve the retrieval of information on IP through the further development of international classifications of patents, trademarks and industrial designs as efficient search tools.

The inadequate preparedness of many national IP offices in most of the developing countries is a serious concern. The problem areas pertain to manual- and paper-based operations, static manpower resources, the rapid increase in the number of applications filed in recent years leading to inordinate delays in granting IPR, non-uniformity in examinations, poor quality searches resulting in fresh objections even after the first examination report, inadequate search facilities and tools, and the lack of digital data and networks. Most seriously, in most cases, IT has not yet been inducted in the IP administration.

It is expected that WIPONET will be making direct and indirect contributions in the modernisation endeavour of national IP offices. It will be a direct provider of systems and services. It will be a facilitator for providing details on technologies and related standards. In addition, it will define minimum modernisation standards and provide an implementable mechanism through the New Forestry Action Programme (NFAP) and future WIPONET support projects. WIPONET has the potential to make a catalytic impact on the development of a national IT infrastructure. There is a word of caution, though. Although the national IP offices will get the basic IT infrastructure and modernised environment, the full objectives of WIPONET will not be realised unless the developing nations take urgent steps to use this infrastructure effectively.

The developing world faces several challenges regarding IPR and their role in innovation. A weak physical infrastructure in terms of inadequate IP offices, as explained above, is just one aspect, but an inadequate intellectual infrastructure, poor public awareness and the lack of government policies that are in tune with the times are some other hurdles. Many research and development institutions, and industrial firms in the developing world, have so far focused on imitative research or reverse engineering, and have depended heavily on borrowed technology and, therefore, not created a productive national IP portfolio. Apart from manpower planning for IPR protection and the setting up of patent training institutes and specialised courses, judicious management of patent information is the need of the hour. This will require creating well structured and well functioning information centres for information documenters and retrievers, information users and IT experts.

The Internet can play a huge role in the dissemination of the traditional knowledge of communities (while bringing added economic value to these communities). An example is the recent experiment in India of the design of an E-commerce portal for Indian crafters and artisans, which will link individuals directly to designers and markets. Through this portal, it will be possible for a garment buyer in any part of the world to approach any crafter directly, select a pattern, a weave and a fabric, and place an order. This will mean not only a multiple increase in the crafter's income, but also direct interaction with the market. This will unleash the creative skills to meet the demands of the market, and further enhance innovation capacity. New challenges in IP protection will emerge as the Internet becomes a major facilitator in the commercialisation of traditional knowledge.

IPR and technology transfer to the developing world

Trade Related Intellectual Property Rights (TRIPs) has important provisions for fair play in technology transfer from which the developing world should benefit. Article 7 of the TRIPs Agreement states, ' . . . the protection and enforcement of intellectual property rights should contribute to the promotion of technological innovation, and

to the transfer and dissemination of technology to the mutual advantage of producers and users of technological knowledge, and in a manner conducive to social and economic welfare, and to a balance of rights and obligations.' Furthermore, Article 8.2 states, '... appropriate measures, provided they are consistent with the provisions of the Agreement, may be needed to prevent the abuse of intellectual property rights by right holders or the resort to practices which unreasonably restrain trade or adversely affect the international transfer of technology'.

Facilitating the access of developing countries to technologies required by them, constitutes one of the key elements in accelerating the pace of their economic and social development. Such access is generally the result of licenses and technology transfer agreements. The fact of the matter is that the prospective technology seekers in developing countries face serious difficulties in their commercial dealings with technology holders in the developed countries. These difficulties arise for a variety of reasons. Some arise from the imperfections of the market for technology. Some are attributed to the relative lack of experience and skill of enterprises and institutions in developing countries in concluding adequate legal arrangements for the acquisition of technology. Some arise due to government practices, both legislative and administrative, in both developed and developing countries, which influence the implementation of national policies and procedures designed to encourage the flow of technology to and its acquisition by developing countries.

Some of these difficulties may be overcome by providing suitable safeguards in the domestic IPR laws of developing countries. In addition, the transfer and dissemination needs of the developing countries have to be seen from the point of view of the capacity of those in need of accessing the technologies, particularly where the cost of technology may be prohibitive due to economies of scale and other reasons. In such cases, in order to implement the related provisions of the TRIPs Agreement, commercially viable mechanisms will have to be found.

New partnership models for innovation for commercial benefits, between the developed world and particularly that part of the developing world with a rich intellectual infrastructure, are emerging. As a part of the global innovation strategies, several companies world-wide are outsourcing new ideas and patents, including those from the developing world. External technology acquisition is assuming importance within leading global corporations. The ability to assemble and manage an effective global knowledge network in a short time, rather than developing in-house capability, is becoming the key determinant of competitiveness. Developing countries like India and China are benefiting from this trend. Several leading multinational companies are creating knowledge networks with such laboratories, including setting up innovation centres in these countries. A strong national information infrastructure as well as strong IPR protection will critically drive these partnerships. The global trend of the shifting of the physical location of innovation to

countries like India and China will lead to the setting up of new paradigms in the global innovation strategy.

The enhanced role of IP offices

There is an urgent need to develop skills among the scientists of the developing world to understand, interpret and analyse the techno-legal and business information contained in patents and other IP documents available in IP offices. For this to happen, it is necessary that these vital documents become available to the scientists and researchers. As it is not adequate for scientists to have only access to their own national IP office, they, as legitimate members of the global IP community, also need access to the global IP databases. Furthermore, an alliance at national and international levels should be created between the IP offices and scientific and technological institutions. Availability of such information will again lead to an acceleration in the pace of global innovation.

The required focus on utilising IP information for the promotion of technological innovation and the dissemination of technological information, is yet to be provided. IP offices are the repositories of knowledge and information on technologies. These offices can contribute significantly to bridging the existing gaps by creating a virtual global knowledge network with a partnership between the developed and the developing countries. The relationship between the technology seeker(s) from the developing countries and the technology provider(s) from the developed countries is usually unequal. This imbalance can be corrected by utilising the respective strengths of the IP offices, and the scientific and technological institutions that understand technology. To achieve this, these organisations should pool their resources for creating technology databases, which also provide the details regarding minimum technology standards (MTS). The availability of MTS will go a long way in promoting innovation and utilising IPRs for the benefit of the developing world.

Finally

This paper examines a developing world perspective on the role of IP in building capacity for innovation for development. Several action points have been suggested, which focus in effect on the crucial role of IT and intellectual property in driving the economics of knowledge, including the indigenous and traditional. The key players will be the international development agencies, WIPO, national IP offices, the government and the innovators, both in the formal and informal systems. As Sir Francis Bacon said, 'It would be an unsound fancy to expect that things which have never yet been done can be done except by methods which have never been tried.'

It is hoped that some of the actions suggested in this paper, although not tried before, will move us towards achieving something which we have not achieved before, namely a reduction in the rapidly widening gap between the developing and the developed worlds.

Globalisation and Intellectual Property Rights

The case for Africa

Robert Mshana*

Introduction

Two very important features characterise property. Firstly, the owner of a property may, within generally accepted limits, use the property as he/she wishes, and secondly, nobody else can lawfully use the property without the owner's authorisation. Generally, there are three recognised types of property: movable property, such as cars and wristwatches; immovable property, such as land and things permanently fixed on it; and intellectual property, which refers to creations of the human intellect. Ownership rights over intellectual property (IP) are referred to as intellectual property rights (IPR), which are exclusive rights granted by a state authority for a given period of time for certain products of intellectual effort and ingenuity. It must be stated that IPRs do not in any way assure a financial return or that commercial rewards accrue from market sales. Thus, the scope of protection and enforcement of protection are critical in determining the value of IPR.

The rationale behind IPR is the desire to reward and compensate an individual for time and expense spent in developing an invention. In return, the owner or the recipient is obliged to reveal the technology in such a way that any person versed in the subject is able to work with the invention. Despite this often repeated rationale, many studies have shown that there is no uniform cross-sectoral link between IPR and inno-

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It is published posthumously in honour of Dr Mshana's contributions to indigenous knowledge systems and intellectual property rights in Africa. Dr Mshana died in the Kenya Airways flight that crashed off the coast of West Africa in January 2000.

vation. Competition for market share is the biggest influence on research and development (R&D) investments by transnational corporations (TNCs). The liberal economic argument that IPR should be adopted because they supply the prime and needed incentive to invent, is premised on the assumption that private companies are responsible for all technology generation. This is absurd and simply untrue. State intervention in terms of public funding of research plays an enormous role in developing technological capability.

Public research and R&D spillovers are perhaps the most important sources of innovation, and this situation will continue for a considerable time. It is known that innovation and technology development occur in the total absence, or profound uncertainty about availability of IPR. In fact, most firms prefer to use lead-time and secrecy (as opposed to the public disclosure of the invention, as patent rights require), as protection of what they consider their intellectual property. This translates to the fact that IPRs are not the only or even the preferred incentive system for innovation. There are indeed already many incentives for innovation usually referred to by government negotiators as 'measures to correct market failures'. These include fiscal tools, such as subsidies and tax credits, all aimed at manipulating the private sector's aversion to R&D risk. Thus, IP policies are neither the only nor necessarily the most important government policy affecting innovation.

It is noteworthy that today, the ratio of patents to real R&D expenditure in the US and elsewhere is declining. Collectively, these arguments show that the economic reasons used to justify IPRs should be reviewed. Intellectual property is generally covered under two branches: *copyright* (literary, artistic and scientific works) and related or *neighbouring rights* (performances of performing artists, phonograms and broadcasters), and *industrial property*. According to the Paris Convention (1883), industrial property 'shall be broad and shall be applied to industry and commerce proper, agriculture, extractive industry and to all manufactured or natural products'. Industrial property protection (IPP) protects inventions (new solutions to technical problems) and utility models, industrial designs, layout designs of integrated circuits, marks and names, geographical indications, undisclosed information and repression of unfair competition. Classical IPP has been enforced by using legislation. However, more recently, technological development has allowed the use of technology to ensure protection of innovation.

This ominous development, that includes, for example, 'terminator' gene technology, has generated much debate and controversy. Treaties that provide for substantive protection of industrial property include the Paris Convention (1883), the Madrid Agreement (1891), the Nairobi Treaty (1981) and the Trademark Law Treaty (1994). Acquisition of industrial protection can be expensive and, in order to ease this burden and to ensure protection, several treaties were formed. These include the Patent Cooperation Treaty (1970), the Budapest Treaty (1977), the

Madrid Agreement (1891), the Protocol relating to the Madrid Agreement (1989), the Lisbon Agreement (1958) and the The Hague Agreement (1925).

Background

IPR and especially patent laws were framed in an industrial context more than a century ago to meet the simpler needs of an industrial era. The rationale behind the introduction of IPR varied from country to country. It is noteworthy that the original US patent laws were specifically designed to pirate or borrow industrial innovations from England. Until recently, IPP laws differed from country to country, reflecting the sovereignty of IPP. At the creation of World Trade Organisation (WTO) in 1995, however, this country-specific pattern of IPP was challenged in favour of global 'harmonisation'.

Towards the end of the twentieth century, the world witnessed a rapid expansion in globalisation, which has ushered in, among other things, privation of property including knowledge and life (*see* for example, Dolly, the sheep), liberalisation of markets, and a resurgence of IPR. It is precisely because of globalisation that a call for tighter and stronger IPR has reached a political level never witnessed before. This is usually orchestrated by large and extremely powerful transnational corporations (TNCs) lobbying their governments to exert extreme, undemocratic and sometimes unethical pressure on poor countries to pass IPRs that ensure increased profits for the TNCs. Globalisation will shape the path of technology development and utilisation, it will create new risks of marginalisation and will certainly create new vulnerability. These issues need to be discussed openly and frankly in order to ensure equity and dignity among nations and peoples.

The WTO included an addendum on IPR known as the Trade Related Intellectual Property Rights (TRIPs). This agreement is the most far-reaching and comprehensive multilateral agreement on IPR. TRIPs will alter the political economy of knowledge and technology. It sets out to harmonise rules for property rights over the protection of seven categories of intellectual property world-wide (copyright and related rights, trademarks, geographical indications, industrial designs, patents and plant variety protection, layout designs of integrated circuits, protection of undisclosed information and control of anti-competitive practices). TRIPs include new restrictions on the use of compulsory licensing by governments that seek access to foreign technology. The standoff between South Africa and the USA over the production of anti-retroviral for use against HIV/AIDS is a clear case of the impact of this type of restriction. TRIPs oblige states to provide monopoly rights on a range of products and technologies that have hitherto been excluded from the IPP regimes of many countries. These include pharmaceutical agrochemicals, and biotechnological products and processes. Article 27 imposes IPR on micro-organisms, microbiological processes and new varieties of plants. Using this article, patent filing has increased tremendously,

with more than 100 000 patents being filed every year. However, some patents are ridiculous and incredible, while others are potentially very dangerous, especially when dealing with the patenting of life forms, whether genetically modified or not. The patents on turmeric, garlic, neem, etc. are based on sheer arrogance and biopiracy. However, the recent patent application on how to prepare curry, by a Japanese duo, Hirayama Makoto and Ohashi Sachiyo, who want a process or product patent for making curry and who describe 'their' process as 'adding extracted spices to ingredients like cut and processed onions, heating the mixture, adding curry powder and heating until mixture becomes viscous' really insults our collective intelligence.

TRIPs has ushered in new realities and debates. Indeed, it appears that the uncertainties over the impact of TRIPs were already recognised at the time of the creation of the WTO, for their in-built agenda that calls for the review of certain controversial articles (Article 27.3(b) to be reviewed in 1999) and the whole agreement is to be reviewed in 2000. Never before have we seen such an intense global debate over an issue about which so little is known. It is important to realise that most of this debate concerns patents, and especially those over life forms.

Patents are IPR. Their use varies and appears to be dependent on the 'terrain of patentability' which is determined by the actual use of the patent, the national jurisdiction and legal infrastructure, and the presence or absence of effective mechanisms for excluding others. To qualify for patentability, the technology must be new (novel), must involve an inventive step (non-obviousness) and must have industrial applicability (usefulness). TRIPs state that patents must be available for all innovations, whether products or processes, and in all fields of technology. It is further stated that patents should be available and be enjoyable without discrimination as to place of invention, field of technology and whether products are imported or locally produced. On close scrutiny, it appears that patents have the potential to destabilise many developing economies, and that this is due to inherent disadvantages of the system. These disadvantages include rent dissipation, impediment of secondary innovations, concentration of ownership of information and exacerbation of inequalities in wealth distribution.

Patents in biotechnology demand further attention, due to several important factors associated with this form of technology: the extremely rapid pace of its development, the very perverse nature of biotechnology, and its profound implications for equity and basic human concerns of life, food security, livelihoods and human and ecosystem health. The patenting of life forms is of particular concern. Until recently, life was considered sacred and a gift of God by all cultures and religions. However, life is now seen as a human innovation – a collection of genes and chemicals that can be engineered, bought and sold by a patent holder. In its decision on the *Diamond and Chakrabarty* case, the US Court of Customs and Patent Appeals stated that 'the fact that micro-organisms are alive (is) without legal significance'. The Supreme Court echoed this sentiment by stating that 'relevant distinction was

not between living and inanimate things, but rather whether living products could be seen as human-made innovations'. These decisions underpin the drive by TNCs to patent life forms, whether genetically modified or not. It must be stated that there is still growing concern over this issue and recently, Prof. Key Dismukes, former Director of the Committee on Vision of the National Academy of Science, USA, stated that 'Chakrabarty did not CREATE his bacterium. He merely intervened in the normal processes by which strains of bacteria exchange genetic information to produce a new strain with an altered metabolic pattern. His bacterium lives and reproduces itself under the forces that guide all cellular life.'

The current IPR regimes cannot protect traditional and indigenous knowledge and there appears to be great hesitation in creating new systems (*sui generis*) for their protection. Current IPR regimes and especially patents threaten to worsen the piracy of biological resources and traditional and indigenous knowledge (TIK) associated with the resources. Biopiracy of TIK is a double theft: it steals creativity and innovation, and patents on stolen TIK rob owners of economic options on everyday survival. Vandana Shiva states that 'biopiracy is a result of Western style IPR and not the absence of such systems in bio-rich countries'. She further states, 'the promotion of piracy is not an aberration in the US patent law. It is intrinsic to it.' The overriding issue is that the patenting of genetic resources will hinder progress in science and medicine. Recent case studies show that patenting will increase the cost of health care, and will promote unsustainable agriculture and unsustainable consumption. It must be remembered that private research has led to only marginal breakthroughs in agricultural and medical research. At the practical level, the economic self-sufficiency of many traditional communities, the unequal power relations between them and the corporate world, and the high cost of litigation, makes it very difficult for them to protect their IPRs through the patent system.

People and profits, sustainable development and economic growth

IPR and globalisation

The cliché that money talks louder than need is extremely relevant today. This will determine and shape the research agenda and ownership, access to and transfer of knowledge and technologies globally. Although politically correct statements (food security) and catchy phrases (poverty alleviation) will often be floated to try and convince the public that the corporate world is interested in doing public good, the fact remains that corporations have no souls and they are driven solely by profit margins. Research into neglected indigenous food crops is not important, because the clients (poor citizens of poor countries) cannot pay for the presumed expenses associated with R&D. The disparity in global investment in health-related R&D development will worsen under tighter IPR. Some 18% of the global disease burden accounted for by diseases prevalent in developing countries, receive less than 0,2%

of this investment. Given the current trends, this situation will worsen. The fact the TNCs are not driven by public good is brought home rudely by the observation that less than 5% of all newly introduced drugs by top pharmaceutical TNCs represent actual therapeutic advances. There have been no new drugs introduced to deal with killer diseases such as HIV/AIDS, tuberculosis, and malaria – yet the world has witnessed the introduction of Viagra, a drug that rakes in billions of dollars for its makers.

Putting profits before people will also bring new realities in biotechnology and biosafety. Biotechnology products (genetically modified plants and seeds, new drugs, cloning, etc.) are pushed into the market at an unprecedented speed, despite the fact we know very little about the impact of these technologies over time. Risk assessment and environmental impact assessment are rudely pushed aside, almost with impunity, by TNCs in their search for ever-increasing profits. Tighter IPRs as envisaged by TRIPs will have disastrous implications for indigenous innovation and the economics of many developing countries. The presence of foreign-generated products on domestic markets will undermine the demand for locally produced counterparts, thus subverting local innovation.

Legally speaking, the importation of IPR-protected goods as required by TRIPs, will further stifle innovation in developing countries, as this will rob the local entrepreneurs of access to the technology other than in its finished form. The only recourse will be reverse engineering to bypass IPR restrictions, but this is also considered unlawful under TRIPs. When combining these with shrinking budgets for public education and research under IMF prescriptions, the end will be the complete unravelling of the innovative fabric of many developing countries. TRIPs and other trade-related IPR agreements embody an erroneous understanding of the link between investment and IPRs.

The propaganda is that strong IPR protection is necessary to attract investment, especially foreign direct investment. This again is not true. In fact, one is forced to consider the possibility that IPRs may actually work as disincentives for innovation. Broad-spectrum patents can have the perverse effect of stopping R&D, as has been documented in the oilseed industry. 'Blocking technology' has, in fact, become the most used strategy of patenting today. This means that not only are adaptations of patented technologies stopped, but also that completely new alternative means of production, which may be environmentally more friendly or less costly to the consumer, are not developed. The extremely high cost of litigation in cases of IPR has ushered in a new catastrophe. Disputes between pharmaceutical and seed firms have led to mergers and acquisitions rather than litigation, meaning that the world pharmaceutical market is in the hands of five or six TNCs. The same can be said to be true for the seed industry. What is more is that these TNCs are merging across specialties to form giga-giants in life industries which will control not only what we plant, but also what and how much we harvest, store, process and eat, and what we

use for the diseases we get. I will not be surprised if they somehow control what diseases we get so that they can sell their drugs. This is truly frightening, but it is the reality of the bold new sciences in an era dominated by extremely rich and powerful TNCs and weak governments unwilling or unable to make appropriate policies.

IPR and life forms

Patenting will remove many life forms from the domain of the common where they have provided many services for humans and other creatures. Past enclosure acts drove rural societies from their ancestral lands and rights. IPRs (the *new* enclosure acts) will privatise the intellectual common and monopolise new technologies based on the common. At the beginning of the 1980s, the landlords of the past were transformed into TNCs and mindlords; at the beginning of 1990s, these TNCs and mindlords are fighting to transform themselves into lifelords and giga-giant TNCs. This transformation is happening and, be assured, through the application of tighter IPRs. Life will become the private property of a few TNCs, which will measure the value of life only in terms of the generation of profits on investment.

If we cannot contemplate a chemist patenting the elements of the periodic table, should we not find it absurd when a geneticist patents genes? In most developing countries, farmers still tend to save their own seeds or acquire them from other farmers. In Africa, where neither public nor private sectors play a dominant role in seed production or distribution, this practice will continue for a very long time. To attempt to eradicate such practices through expansive IPRs or other protection systems (terminator, junkie, suicide technologies, etc.) will cause serious economic and social problems.

IPR and ethics

Under TRIPs and tighter IPRs, life will no longer be sacred. Ethical issues raised by this will demand global and frank discussion. The inclusion of the ability of countries to reject a patent based on morality, or *ordre public* in the TRIPs agreement, should be used by countries viewing the privatisation of ownership of life as offensive to their beliefs. In a world dominated by knowledge, it is a pity that education systems in many African countries have ground to a halt. This will lead to extreme poverty in the coming years unless it is addressed urgently.

What are the choices?

We can choose ignorance and bliss, and pretend that these things are not really happening. Unfortunately, this is tantamount to suicide. The fear of getting left out often drives our government to sign international agreements before carrying out detailed studies of their implications. This 'me-too' mentality has cost Africa heavily.

We have to recognise that appropriation and privatisation of biological and intellectual resources under IPR and monopolistic regimes that are not geared to protecting our life systems, can usher in a new slavery related to bioserfdom. What is happening as we enter the new millennium is a new, more invidious form of colonialism. The goal is not just to conquer new lands *à la* Vasco da Gama or to lay claims to gold – it is to colonise life itself.

We can choose sterile prostration while we are fully aware that, screaming and kicking, we will be dragged on by globalisation. This is also not a useful venue.

We can, of course, choose what we want – reshaping technology paths and taking control of our future. To do this, we first need to broaden governance to ensure broad participation in decision-making. We need to increase public investment in technologies for development and for public good. Finally, we need to be bold enough to be able to push for changes in multilateral agreements, especially during reviews as in TRIPs Article 27.3(b) which is up for review in 1999 and the whole TRIPs agreement which is to be reviewed in 2000. There is strength in numbers even amidst our poverty. We need to coordinate our activities in order to be able to fight for the common good. We urgently need to start a rapid expansion in capacity building in all sectors, and, in this case, especially for the empowerment of our negotiators who deal with these new challenges of globalisation. We should be able to develop appropriate mechanisms and protocols to guide us in technology selection, transfer and biosafety.

The OAU and IPR

IPR and innovation

The OAU is not against IPRs. Indeed we recognise the need for IPRs in terms of driving and protecting our indigenous innovation. What we are questioning is the use of IPRs to appropriate knowledge and life. We are calling for understanding and dialogue in this area.

Innovation and development

Development has, until recently, been measured only in terms of fiscal and monetary policy reforms and dollar growth. The human being is left out of the equation. Indigenous knowledge, and technological innovations and practices have not been taken into account in these tricky mathematical calculations. The net result is that we continue to wallow in poverty despite having enormous resources. The privation of knowledge and the denial of the protection of our indigenous knowledge systems will worsen our poverty. The OAU/STRC is calling for the harmonisation of the Convention on Biodiversity (CBD), which guarantees our ownership of our biore-sources and WTO/TRIPs that aims to privatise these resources.

Equity in knowledge-sharing

For the first time in history, the richest person in the world is not an oil magnate or ship owner, but a knowledge worker. This confirms that knowledge is power. The OAU/STRC is calling for equity in sharing knowledge, and calls for discussions and response towards the increasing privatisation of knowledge. OAU/STRC further agrees and concurs with the views of UNDP, as espoused in their *Human Development Report* (1999), that 'the relentless march of intellectual property rights needs to be stopped and questioned'.

Review of IPR regimes

The OAU/STRC recognises that contemporary technology has rendered the enforcement of current IPRs very difficult. The fundamental changes in technology and economy we are witnessing today make the current IPRs unworkable and ineffective. OAU/STRC, therefore, calls for a review of these IPRs and the introduction of new regimes that will be better suited to address our socio-economic situation within acceptable cultural practices.

Conclusion

The acceptance of the fact that knowledge is an extremely powerful tool for understanding the ecosystems that support life, and the realisation that this knowledge is capable of yielding enormous returns that will directly enhance the socio-economic development and quality of our lives, have led to the belief that knowledge is too important to be left to the vagaries of market forces. The recent developments in the utilisation of knowledge, especially in the life sciences such as genetic engineering, and the escalating gap between those who have access to knowledge and those who do not, have eroded public confidence in international agreements and have raised many ethical issues. In order to guarantee that knowledge will continue to provide services so essential to human development, there is an argument for the need for the development of and adherence to acceptable relations. This relationship must be socially just, politically supported and sustainable. The public's interest and involvement in the generation, ownership and exchange of knowledge are brought into sharp focus by the indisputable observation that nations without a sound knowledge base do not have and will not have sound national security, and will suffer frequent destabilisation.

Indigenous Contemporary Knowledge Development through Research

The task for an indigenous academy

Scott Fatnowna and Harry Pickett

Introduction

Knowledge production occurs in all discourse since it is essentially a creative act, not just transmissive. And in generating new information, understandings and practices, the realities of the processes are conflictual and developmental, not just conformative. A task of the indigenous academy is to access and participate in this broader cultural discourse with a view to engaging in the continuing process of making knowledge explicit, accessible and organised, within systems of shared understanding and applications in practice.

However, indigenous cultures are perhaps the most researched in the world – by others, seeking knowledge of but ending largely with knowledge as interpreted through the lenses of perception and judgement of the researchers' own culture. 'Aboriginal people claim that we are the most researched people', both in terms of the amount and the different types of research for different reasons. But all this 'has not made a great deal of difference to the lives of Aboriginal people' (Abdullah and Stringer 1997). Often the purpose was just academic, to advantage the researchers and not necessarily the researched. At other times the knowledge produced was in response to what the researchers, not the Aboriginal people, saw as issues of interest, relevance or concern. The ways in which knowledge was obtained did not always show respect towards Aboriginal protocols, nor did the fact and the ways in which it was made public, published and 'owned' by the researcher, and even kept from the community itself. What then passes as knowledge about Aboriginal people, culture and issues is authenticated by the credentials, profession and

methods of the researcher, not in Aboriginal ways by Aboriginal people. As a result, the accuracy of that knowledge and its interpretations are suspect, despite the fact that the researcher is qualified and 'expert', the one employed with Aboriginal funding and the one who presumes to speak for Aboriginal people, on Aboriginal issues and about Aboriginal culture. Finally, applications in terms of policies or services that may on occasion result from that suspect research and knowledge, are often ineffective, having usually been developed by non-Aboriginal people somewhere outside the community, without context, incurring a reaction of resentment and resistance. Even where Aboriginal people have been involved, it often is a co-option to the knowledge paradigm of the outsider.

Indigenous and non-indigenous people working together have been seeking to deconstruct this inappropriate approach to research, and assisting in the development of research-based knowledge production by Aboriginal people in their own right. This has been aided by substantial development in collaborative critique and the beginnings of both research protocols and methodologies that promote appropriate ways and seek to contain others (Garvey 1995, 1997; Roberts, Walker and Oxenham 1999; Smith 1999; Dudgeon, Garvey and Pickett 2000).

Apart from generating new knowledge, indigenous research also has the substantial task to generate and promote appropriate methods of knowledge production. This also relates to appropriate ways of knowledge critique. Additionally there is the substantial task of rehabilitating existing areas of misinformation and misinterpretation about Aboriginal people, deconstruction, and reconstruction from a perspective within indigenous experience. Finally, there is the task of doing the same with policy and services developed from research.

'It is now time to look at the possibilities to do research with, for and by Aboriginal people to overcome some of the problems that have arisen from past practices' (Abdullah and Stringer 1997).

The Centre for Aboriginal Studies (CAS) at Curtin University has developed a postgraduate programme in indigenous research and development (PPIRD) to fulfil the main aim of developing Aboriginal researchers and ways of research appropriate to contemporary Aboriginal systems of knowledge. The Centre also has the federally funded Curtin Indigenous Research Centre (CIRC) to pursue research on Aboriginal issues, by and with Aboriginal people, raising the research capability of CAS, the university, and stakeholding Aboriginal communities and organisations. It has developed an Aboriginal Research Policy for consideration by the university, which seeks to provide guidelines and support for appropriate practices of mainstream research with Aboriginal people and issues. It has also facilitated the development of guidelines for one of the main professions engaged in such research activities and developed it further as a section in a handbook for the profession (Dudgeon, Garvey and Pickett 2000). The staff and researchers of CAS, CIRC and PPIRD are actively engaged – locally, nationally and internationally – with professional and research

forums and conferences, with other researchers and research programmes, and with publication in the CIRC Gunada Press and academic and professional journals and texts. They are also active in research on policy development and programme evaluation. Other universities in Australia and New Zealand are also engaged in similar strategic developments, and there is a constructive and supportive degree of cooperation, collaboration and coordination in research developments.

These and other associated initiatives arise in general from critically and constructively addressing the following types of issues operationally: Is it possible to identify an Aboriginal research and development paradigm? How, in our particular case, does the Centre for Aboriginal Studies protect itself from repeating past practices in research work by creating indigenous researchers who may continue to enact colonial methods of research in Aboriginal communities? How does the postgraduate programme influence and inform current university structures in process and assessment that will reflect Aboriginal people's desire to represent the creation of knowledge in an Aboriginal way? What changes to the university as a system does this imply?

Knowledge and wisdom

It is important that the indigenous knowledge initiative around the world also exercises critical self-reflection in terms of vigilance to internalised colonisations, influences and hegemonies. The most obvious and important issue here is the choice of *knowledge* systems as the focus. If unqualified, this Westernises – materialises, objectifies and marginalises – the essence of the integrated indigenous world-view, within which knowledge is an inextricable part of social and ecological values, with a sense of sacredness timelessly permeating all existence.

Maxwell (1984), for example, notes that for some time it has been recognised that 'the sanity of industrially advanced societies must be called into question', and concludes that 'at present we have a kind of academic inquiry that has, as its basic intellectual aim, to improve knowledge. This needs to be transformed . . . into a kind of rational inquiry that has, as its basic intellectual aim, to improve wisdom' which will be 'of greater human value than what we have at present'. He argues for developing a philosophy of wisdom, as pre-eminent to current concern with philosophies of knowledge, based on 'seeking after the realisation of what is of value' (Maxwell 1984: 4–5).

Weber saw values as determining what we take for reality, for knowledge (Freund 1968: 52–53). The pursuit of value-free science has therefore put aside much of what Aboriginal culture takes for reality, as knowledge, and indigenous experiences of knowing. Currently we are beginning to appreciate that these knowledge systems and different ways of knowing are complementary and, considered together, promise

a knowledge that begins to engage the richness and subtleties of what together we may begin to see and engage as a fuller reality.

The opening to indigenous wisdoms has coincided with an opening of indigenous systems to each other, an opening within the West to its own old-world wisdom, and a growing opening to the depths of Eastern cultures. Each reinforces and enriches the other, and the honeymoon distraction with rationality and scientific method in the West begins to be rebalanced. Integrating indigenous knowledge systems necessarily situates within this broad context, this global dynamic of seeking and connecting the wisdoms developed in different ways, in different places, at different times and through different experiences; looking across, yet also preserving this diversity. All speak of the nature of humanity, and how we might understand and conduct ourselves appropriately in the larger scheme of things.

As an indigenous academic among prominent Australians talking about our future as a nation, Dudgeon challenges reliance on continued technological progress for our enjoyment and happiness, emphasising that to ensure a quality of life for the future, 'we need to be careful not to disregard the wisdom of the past; the importance of belonging to a community and the importance of our spiritual development. Otherwise life could become empty' (Dudgeon 1998: 273).

Spiritual development is at the core of being Aboriginal. It is not about creating space in our daily lives to explore spiritual development, it is about using spiritual development as the basis of and starting-point in all our daily activities, to ensure that what we do and how we do it has spiritual meaning and provides purpose for this present life.

David Suzuki had revisited Australia after having previously published the outcomes of discussions he and a colleague had with elders here and in other indigenous cultures around the world (Knutson and Suzuki 1992). All emphasised the importance of the preservation of ecological values in which humankind has a responsibility, and all were concerned with the fundamental clash that exists between this view of people and the world and that of Western society which privileges (some) people above all and commodifies the environment as the controllable, exploitable, alienable 'Other'.

Earlier, Stanner (1960–63; 1968), as well as Eliade (1959), had seen the separation of the sacred and the profane in Aboriginal Australia as a break with the wisdom of the past that produced a profound tension between the two world-views. This all-pervasive spirituality was researched in Aboriginal groups across the country and documented by Berndt (1974). More recently, Pattel-Gray, executive secretary of the Aboriginal and Islander Commission of the Australian Council of Churches, writes that 'the colonisers used Christianity as a weapon against the Aboriginal people', and that 'White churches participated in causing the oppression to which Aboriginal people are subjected' to 'maintain privilege and power' (Pattel-Gray 1991). In contrast, she sees contemporary Aboriginal spirituality, and the mandate of the

Commission, as reclaiming centredness in re-strengthened Aboriginal spirituality and its expression in law, traditions and customs, reinforced by a positive relationship with Christianity within 'a theology of justice and human rights' and a 'liberation . . . from the oppression and indoctrination of the imposed European system and culture' (Pattel-Gray 1991: 99).

Tacey (1995) writes of 'an authentic rediscovery of the sacred' and later of 'the re-enchantment of Australia' following 'a thoroughly secular age and widespread disenchantment and loss of religious perspective', a 'secular humanism that has made us less than human . . . A "post-rationalist" and truly postmodern enlightenment must involve a fuller wisdom and a broader grasp of human experience . . . a step back from the rational intellect toward our culturally abandoned intuitive and wisdom faculty . . . We need to develop not pre-modern mysticism but *postmodern spirituality*', a 'resacralisation . . . restoring our relationship to the sacred' (Tacey 1995: 1-4). He sees a tension between Western materialism and Aboriginal sacredness, but contests the degree of projected romantic sentiment in this construction of Aboriginality as the colonisation experience has seriously effected a very considerable spiritual loss in contemporary Aboriginal life. He also warns of 'consuming Aboriginal cosmology' as 'the white imperialist appropriation of Aboriginal spirituality . . . stealing the Dreaming', but, on the other hand, cites contemporary black African writer Malidoma Some's notion of the 'indigenous archetype in all of us' that may be stirred to its own authentic reaffirmation in resonance to Aboriginal spirituality (Tacey 1995: 129). Huntington (1996) addresses this in the context of a contemporary global 'indigenisation', a process of re-grounding by reaching back within their own wisdom traditions of each of the world's cultures.

Christianity must come to terms with the ideology found in Aboriginal spirituality. Unless this occurs, the notion of a truly recognised and reconciled Australia will remain out of reach. Stockton, a Catholic Christian, recognises 'religious imperialism' in the history of Australia and its relation to Aboriginal people and their spirituality. He suggests a liberation from this through a process by which Aboriginal people, working together with non-indigenous Australians, can reconstitute an Australian spirituality that recognises, retains and builds on Aboriginal spirituality from the multicultural spiritual legacies of the contemporary Australian population. It means the participation of non-indigenous and indigenous people who are in a transcultural way 'able to grow through the matrix of their culture and beyond to a certain autonomy, where without abandoning their culture, they can yet judge it objectively in relation to other cultures and to the social and physical environment' (Stockton 1995: 9).

This is, in fact, happening in various ways around the country and is a reflection of what is observed to be happening also at a more global level. Houston, after time spent in Australia and with other cultures under the auspices of the Institute for Cultural Affairs, UNICEF and other agencies, describes this as 'the historical

moment' when 'the world is set for a Whole-system transition', involving the re-inwarding of high-tech societies, co-incident with the strengthening of 'cultures of depth' following the 'tragic intervention of colonialism', and a path forward for both in a 'creative symbiosis' whereby each adds to the other while preserving its own individual cultural style and difference (Houston 1993: xi-xii).

There is a double-sided tension involved here with the traditional religious knowledge systems, practices and institutions, indigenous and non-indigenous, and with the eclectic esoteric of 'new age' spiritualities. Nevertheless it seems inevitable that in between a path is being navigated.

The tension on the other front is a legacy of Western culture that is trying to resolve itself, that 'to ensure quality of life . . . rather than setting scientific truth separate from spiritual truth, it must embrace the larger interrelated whole of truth' (Johnston 1991: 25).

Spirituality in an Aboriginal sense is encompassing and holistic in nature. It is the starting-point that requires no demonstration of proof; it exists and all truths begin and end there. This is the fundamental difference between what is seen as scientific truth and spiritual truth in contemporary society. To look for objectivity in the Aboriginal world is to question one's identity and sense of being. Objectivity as a notion is culturally inappropriate and should not be linked to Aboriginal spirituality and holistic well-being. One does not look for something that is not there.

'Native priorities of spiritual values could be one of the greatest gifts to a society that seems hell-bent on destroying everything now' (Suzuki 1990: 234). Suzuki re-emphasises this with a degree of concerned urgency in a more recent publication and update of the position as humankind enters the new millennium without a significant turn-around in the values and priorities necessary to address the growing catastrophic effects of the human devastation of 'the ecological capital of the planet', requiring a new ethic to abate what increasingly amounts to an 'extinction spasm' of nature and ultimately ourselves (Suzuki 1998). Fox (1995) writes of an emergent sense of 'deep ecology' in Australia and elsewhere around the globe that draws considerably on reconnecting with indigenous perspectives – 'a deeper and more spiritual approach to nature resulting from a more sensitive openness to ourselves and non-human life around us' (Devall and Sessions 1993: 242).

The indigenous connection to land is the spiritual link that binds the individual to content, process and protocol. This link is also experienced by others, which ensures the need to build relationships with others that have structure and purpose. It exists within all of us and when we ignore it, we severely undermine our full potential as participating members of society.

Another issue is that knowledge is becoming more synonymous with information rather than with understanding and wisdom – 'We are all drowning in information, while starving for wisdom' (Wilson 1998: 269). In this 'information age' information, and the corresponding communication processes, is increasing at an alarming

rate on all fronts, with a much slower increase in our capacity to integrate it into patterns of understanding and into our moral sense of guiding values concerning how to relate responsibly to it.

'Scientific knowledge is fragmented into disconnected bits and pieces that provide little insight into how they fit together and behave as a whole' and 'Science would fracture the comprehensive way human beings had integrated their observations, insights, and speculations and eliminate the sacred' (Suzuki 1998: 15, 7). Birch argues for the priority of regaining a sense of connection in the whole of life at this stage, a relatedness that entails an 'at one-ness' that might be called empathy and compassion, and one that stimulates mutual transformation – through a re-integration of science and spirituality. Within a postmodern perspective, he talks of spirituality as 'a special way of knowing' that is the dimension of depth in relating that has a sense of ultimate concern (Birch 1993: 14–17). Rozak recognised in industrial society the 'secularisation of Western culture', but 'we can at last see where the wasteland ends and where a culture of human wholeness and fulfilment begins' (Rozak 1974: xxii). To be just objective requires a dehumanising process. The making of truth is not only a scientific process, it is also a method that encapsulates holistic well-being through the journey of self-discovery through one's cultural process. It is also about the dangers of decontextualising the very nature of indigenous knowledge. Rains (1999) writes that in responding to the need for 'an articulation and understanding of indigenous knowledge . . . it is imperative not to objectify it' in the sense that 'to examine indigenous knowledge in isolation is to perpetuate a paradigm contrary to most indigenous knowledge' itself (Rains 1999: 317).

Many authors speak of a loss of depth of understanding, a shallowness, a commodification (Smith 1993 in Mead 1996; Smith 1997) of the consumption of information that prioritises entertainment over understanding, a fractured sense of reality, and overall a consequent anxiety and tension that things are somewhat adrift and out of control, particularly ethically, in a materialising world.

With growing awareness of the astounding 'layer upon layer' of the complexities of life, we are conscious that we have only ever gained access to very small bits of the existing information, and even less to the inordinately interdetermining relatedness of it all. Despite the incredible advances in technology, we are conscious of our amazing but small place in the grand scale of things. The sense of humility, responsibility and respect for the natural world is in tension with the confidence of technological progress, just as the right of the human species to dominate nature and exploit the environment is in tension with a rights perspective beyond the human-centric. The extension of the human rights perspective on environmental protection argues for moving beyond privileging the human perspective, to a conceptualisation of rights that protect people within a broader perspective, where, for example, nature 'in its own right' is afforded protection from human exploitation (Suzuki 1990; Birch

1993). In the face of human intervention there are arguments for the protection of the knowledge systems inhering in the 'intelligent' universe, and other species.

This has coincided with a post-modern world that has the advantages of critical interrogation and deconstruction of meta-systems of belief and ideology, including science itself. The disadvantage, not to criticise this change, is that humanity is now left in a cusp of high information, control and action, but still without the development of relevant, new, appropriate systems of knowledge and responsibility from this that will guide its safe and effective use for just and equitable quality of survival. The default is an escalating continuation of short-term exploitation for politics and profit that fuels the delusion of unending capacity for exponential growth in population and consumption. Set against this, however, is the recognition of the construction as well as the deconstruction in post-modernity, in particular that thread running through that serves 'to locate a deeper commonality' (Anderson 1995: 239).

The loss of a sense of embeddedness in and a co-nurturance and responsibility for nature, and the assumption of control over and commodified exploitation of the natural world, including other people, result in a profound tension between indigenous and non-indigenous peoples. For example, it raises the question of the ethics of releasing indigenous knowledges for access by this exploitative non-indigenous ethic. This problematic has in itself profound spiritual concern for indigenous elders, not just concerning access to indigenous knowledge by non-indigenous people, but also a withholding and real soul-troubling dilemma about the passing on of that knowledge within the indigenous context, an anguish concerning the continuation of an indigenous ethical system to utilise that knowledge responsibly and appropriately.

A further concern is the importance of the active maintenance of cultural knowledge and language in relevant ways in contemporary contexts. While there is (minimal and inadequate) activity to document the knowledge and understanding held by the seniors in Aboriginal culture, of particular concern in this time of rapid social change, its preservation as museum knowledge is not what is wanted, nor is its commodification. Many seniors express concern and considerable anguish that few young people want to know the old stories, and few are seen as appropriately prepared to have these passed on to them. With knowledge highly 'located' in geography and most of the Aboriginal population dislocated from the sites of significance special to cultural meaning and maintenance of stories, and over half the Aboriginal population now urbanised, there is a critical issue of living versus museum knowledge. Apart from its value in the recent reconnection process of people with kin and with land, the task also seems to be to develop the contemporary relevance of this knowledge to the lives of modern children and youth. The wisdom held by the older people can provide a depth of being, meaning and moral guidance in the present,

and, with their historical knowledge, can provide a sense of identity, belonging and continuity.

It is a chance to re-enact 1788 and develop meaningful relationships that ensure that roles are defined and society is reshaped and restructured to reclaim Aboriginal identity as something that is meaningful and has validity for clear purpose. One such purpose is the continuation of the wisdom tradition in ways appropriate to the contemporary context.

Overall, it is hoped that, with the coming together of indigenous and non-indigenous knowledge systems and world-views, much more than information will be shared both ways. Although sharing will always remain important, the opportunity to struggle together through this period to develop systems of knowledge and ethics appropriate to guide contemporary life generally, both now and into the future, is even more important. This co-operation will guarantee a future with a quality of life ensured by a re-engagement and re-integration of its material and non-material aspects.

Types of knowledge

Another tension that exists within knowledge systems relates to what is taken for knowledge. There is a tension between formal, academic and scientific knowledge on the one hand, and colloquial, everyday, common sense knowledge on the other. Most of our thinking and actions are informed by understandings we develop together in the course of our day-to-day lives rather than the formal knowledge systems of academia and the professions. Bruner (1990) addresses the need to recognise, engage and encompass everyday knowledge in our understanding of the operational knowledge of a culture.

Like everyday knowledge, cultures that are seen as not 'scientific' have been excluded from the formal knowledge discourse, even about themselves. With the recent advances in qualitative methodology, deprivileging measurability and generalisability, there has been a gradual opening up of awareness of both local and informal knowledges, and, as appropriate, the value of these forms of representation, interpretation and analysis of experience, either partnering with more formal knowledge or standing in its own right.

In particular, in seeking knowledges, revisiting the function of narrative in everyday life has the potential to provide access to meaning and processes of meaning-making and change, especially the directness of lived experience 'as a culturally mediated phenomenon' (Bruner 1990: 69). It is necessary to reclaim the empiricist shift of our attention from 'the construction of meaning to the processing of information' (Bruner 1990: 4) to re-humanise the conception of man. Contemporary indigenous writings in Australia are frequently autobiographical narrative or dialogue, documentation of the knowledge of experience by those who have lived it.

Adapted oral narrative approaches to therapy are proving effective with Aboriginal people, such as in the *Reclaiming our stories, reclaiming our lives* project (1995: 18–22), ‘yarning’ (Yavu-Kama 1994), and ‘telling one’s story’ (Koolmatrie 1997). The former was developed on the initiative of the Aboriginal Health Council of South Australia in response to the recommendations of the Royal Commission into Aboriginal Deaths in Custody; and the latter in response to the Human Rights and Equal Opportunity Commission’s Inquiry into the Effects of the Removal of Aboriginal and Torres Strait Islander Children from their Families. Indigenous forms and processes of dialogue, description and expression have become powerful ways for facilitating recovery of personal and shared history, and of dealing in healing ways with individual and collective intergenerational trauma, loss and grief. Shared narrative has also been providing the holistic and experientially grounded training base for indigenous culture-based counselling programmes, and for the research from which Aboriginal people theorise their experiences, issues and realities (Dudgeon, Grogan, Collard and Pickett 1993).

The fundamental truths of life are derived from lived experience. This can be facilitated by structures that enable people to critically reflect on and make sense of their experience. At times this is seen as simplistic and that it does not fully represent the broader context. However, most would argue that deep quality learning occurs when strategies are simple and can be connected to the lived experience of the identity of the individual and people concerned. We seem to need to feel that our lives must have purpose and direction, and this comes about most centrally through the process of knowing and being clear about who we are and where we have come from (the living out of one’s individual and collective identity) (Smith 1999: 186–7).

There is concern about ‘scientific’ approaches to the production of knowledge of indigenous realities, apart from the hegemonic other-ness of the conceptual frameworks employed and the appropriation of information into these alien systems of attributed understandings, and apart from objectification that dehumanises that information through privileging and losing actual lived meanings. Scientific generalisations also create homogenisations that can over-focus on apparent similarities among Aboriginal people and their experiences, and neglect the multiple dimensions of diversity within, leading easily to stereotyping and ‘essentialising’. Using reductive approaches that separate out one or more variables of interest, this stereotyping is also minimalistic in that only very partial views are available, leading to fractured and simplistic reduced notions of Aboriginality. Scientific methodology also seeks significant differences between ‘variables’ such as cultural groups, for instance Aboriginal versus non-Aboriginal, reporting those that are ‘discovered’, but rarely those that are not different. The outcome can be a focus on differences between Aboriginal and the ‘Other’, to the neglect of similarities, an artificial degree of separation or dichotomising. Combined with a degree of conceptual abstraction as systems of scientific explanation are constructed, each of these problems becomes

easily complicit in the dehumanisation that facilitates the domination, exploitation and exclusion characteristic of imperialism and colonisation in both their historical and modern forms.

As a way of recovering more authentic knowledge of indigenous peoples, ethnographic narrative endeavours to prioritise the wholeness, fullness and directness of lived experience in particular locations by particular people at particular times. Where this examines local processes, such as knowledge production, protection and transmission, it is seeking ethnomethodology. In so doing, it serves as a corrective to and protection against the dangers of generalised objectified and reductive constructions deriving from the use of scientific method in cultural populations. Recent research favours the combination of these quantitative and qualitative methods (e.g. Roberts and Pickett 1998; Smith 1999), preferably in an action research approach (Stringer 1996).

Within Western culture there has been a long-standing concern for values and that ethical behaviour is at risk in the scientific quest for objectivity, where science separates from the humanities. Similarly, there has been concern for the specialisation of knowledge into often competing fields of understanding that makes an integrated view of the world difficult and conflictual (Huxley 1978: 1–11). Garcia (1971), for example, expresses concern about the difficulty in developing and maintaining a sense of values and moral order in this situation, and advocates a balance of generalist education with specialisation. Concerned about ethics, and speaking for the integration of knowledge, especially of the sciences with humanities, Wilson sees 'the ongoing fragmentation of knowledge and resulting chaos in philosophy as not reflections of the real world but artefacts of scholarship' (Wilson 1998: 8). Part of an already apparent groundswell recognised by Maxwell (1984: 280–283), each emphasises the need for a new relationship between the 'standard empiricism and philosophy of knowledge that predominates in science' with the social sciences and humanities, one necessitating 'a comprehensive intellectual revolution . . . a co-ordinated and comprehensive change in intellectual aims and methods throughout all of academic inquiry and education' and related institutional and social change (Maxwell 1984: 276).

This raises the issue of academia and the place that universities play in the perpetuation of objective notions of meaning-making and the strategies by which these are learned.

In broad historical context, Tarnas (1991) sees this as the age of re-integration, a remaking of these connections, following the long period of differentiation during the Western scientific tradition – 'the essential issues no longer primarily concern technical advancement, invention, competition and expansion, but questions of "living" purpose in a "living" reality' (Johnston 1991: 24). Coinciding with this is the reconnection with indigenous world-views, and connection back within the Western culture itself to pre-scientific knowledges of its cultural origins – not in

either case so much a return to the actual knowledge itself, but more a return to the integrated perspectives and non-objective domains and processes entailed. And, at the same time, a reconnection with the colloquial lived experience in each culture. It is the identification of the whole, directly and not only through its parts, and the ways in which one relates to this through one's own lived experience.

What Tacey (1995) describes as a process of temporary ego-dominance characteristic of Western civilisation, is naturally also played out in Australia. The uncertainty, fear, threat and violence of the culture-contact situation adds other dimensions to the problem, heightening this tendency. Basically, this is a phase of predominance of ego, when faced with issues of immediate survival and the disintegration of older forms of guiding systems of knowledge, understanding, skills and belief. Feelings of vulnerability and threat, and a sense of diminished control, mobilise the male principle (to borrow from Jung), a 'machismo' that brings forward the rational and the violent to regain a sense of control within the situation.

The Copernican revolution in the West caused the loss of a sense of deific order and the authority of its earthly counterparts of protection and control. As a result, humanity felt that it was thrown back on its own resources with ultimate responsibility for its own survival. Then arose a human-centred struggle, an age of materialism and rationality, of assertiveness, dominance and control. Fear and opportunity co-existed; nationalism, imperialism and the prioritised growth of science and technology, economics and production, capital and consumption, human and environmental exploitation and waste, went hand in hand. Initially, the old theocratic order entrenched in the West fought against loss of control to secularism and its expression in governments – a process which may now be replayed in the East. Within and part of this have been the local and regional liberation struggles from unsatisfactory replacement regimes that re-introduced control within different socio-economic ideologies. Miller describes a similar process with Aboriginal males within an Australian regional scenario (Williams, Swan, Reser and Miller 1992).

Further, the rate of change has increased exponentially since ancient times, becoming part of the normative ethos of the post-modern world, with a 'power shift' from knowledges based on expectations and responsibilities for sustaining conditions of stability, to knowledges based on not just coping, but on managing and proactively participating in change (Toffler 1990).

Since the agrarian, industrial and technological 'revolutions', this change has also been happening increasingly in the material part of life (material capital). There has not been a concomitant development in non-material values (social capital) and the associated wisdom to see the implications of and manage such change in terms of pre-eminent human and environmental values for quality and sustainable life. Technological knowledge has far outstripped our understanding of ourselves as social and cultural beings, and of our place in the web of relationships that form the environment in which we live and which we still despoil in the interests of market

gain. The 'fall-out' from this has been a growing distrust of science and of market economics as the driving force in politics, or in closed society politics and control.

With the invasion, settlement, colonisation of Australia, the same complex of Western cultural phenomena arrived, but were magnified by the fact of being in a new environment with which settlers were both unfamiliar and inexperienced, and which was seen as threatening, harsh, unforgiving and hostile. There was a good deal of hardship and loss of life simply from privation and no experience of surviving in those conditions. Added to that, people felt very much alone, cut off by time and distance (Blainey 1982), and from their familiar sources of support, which had limited relevance as their knowledge and skills were not applicable to the new conditions. Not unlike the machismo of the 'Wild West', a similar 'survival and opportunity' frontier mentality developed. As a young society of only a few generations, there has until recently been some continuation of the entrenchment of the English attitudes of landed privilege and monarchy, and its colonial attitudes toward indigenous Australians and minorities as exploitable labour. This enabled the exploitation of land in pastoral, farming, mining and timber activities, enriching London-based companies. Subsequently, the parent (England) gradually withdrew and the growing child (Australia), left to its own devices, sought protection of this separate and recently hard-won privileged lifestyle through the White Australia immigration policy and 'fortress Australia' of the Menzies era, the subsequent transfer of trade relations and the nation's military allegiances with the North American umbrella, and associated rites of passage from the Boer War, North Africa and Europe, to Korea and Vietnam. Recently, that relationship has been subject to growing uncertainty, as an emerging independent Australian maturity has developed some separation and autonomy in its internal and regional affairs. These events, particularly the transitions from the two main dependencies, have sustained an uncertainty and consequent location in ego-determined ways of materialism and control ideology.

Australia has sought to find and locate its identity. The systems of colonial society have tried to make meaning of its past by only depending on 1788 as its beginning-point and then looking beyond its shores for further meanings to help define national identity in the present. Until Australia looks within and acknowledges that the national identity is very much interconnected with the ways in which Aboriginal people(s) have been treated as outsiders and the ways in which Aboriginal people(s) have resisted, persisted and survived the past 211 years, this country will be looking in the wrong places. Australian society can certainly tell what it is not, but it has great difficulty in representing what it is. A source of this difficulty is not acknowledging the significance of the part Aboriginal people have played since 1788 and not developing processes to reflect this in mainstream society. For example, Australia celebrates and remembers the ANZACS (the Australia and New Zealand Army Corps who fought at Gallipoli), but chooses not to acknowledge the many groups of indigenous people who laid down their lives to protect their freedom.

As Western and indigenous societies together 'we cannot expect a return to the past'. However, respecting and incorporating cultural systems and histories, both within countries and globally, a new integration of 'meaning and significance of human life and human community . . . have to be painfully rebuilt for a new age' (Hetzel 1975: 276, 279).

To return to the Jungian metaphor, the masculine age needs to be balanced by a return of the female principle, a sense of belonging, co-nurturance and de-individualized identity – of relationship and empathy (Hetzel 1975; Birch 1993), with and within life, as 'part of' again, as the sense of 'separate from', and dominance is relaxed commensurate with a return of a deeper confidence and basic trust in life. Humanity needs to recover itself as an integral part of a deep ecology of existence in its total and all-inclusive sense.

Psychologists of broader vision see humanity as going from an age of anxiety (Horney) and power needs (Adler) to redevelop a sense of meaning (Frankl) and of human, environmental and ultimate relationship beyond the material (Assagioli).

It is a return in one sense, but in another it is a re-integrative process of recovering wholeness. Yet in doing so, it goes beyond itself and the process also engages us in *transformation*. Ferguson (1986) describes this age of transformation as involving liberating knowledge, and being intimately bound up with transformation of values and a sense of belonging to a whole-earth, a perspective that privileges the local within commitment to the global. These are the more profound dimensions of globalisation. The protection of the wisdom of indigenous knowledges within this is vital. There is a need for avoiding the dangers of assimilative co-option within a larger dominant perspective and paradigm. Without partnering with indigenous knowledge, that paradigm is itself a dangerous field of materially driven, ideological and informational hegemonies through its lack of grounding in the perennials of older ecological wisdoms, including its own. Suzuki (1990, 1998; Knudtson and Suzuki 1992) advocates the integration of indigenous knowledge systems within this new global ecological awareness and responsibility. This integrative and transformative phase is with us in all areas of knowledge. Integration of knowledge systems and other aspects of life is a part of the broad contemporary scenario. This will play itself out locally and at all levels, in various ways and with differing timetables due to the diversity of peoples and circumstances.

Within modern science there is a concerted effort to search for a connection within and between the paradigms of modern physics and everything else (Hawking 1998; Davies 1992), an effort to search for the connection of all with the perennial (Huxley 1985) and the pattern that connects (Wilber 1996). There is also a need to understand the nature of transformation. This is not just the knowledge content of transformation, but both the processes of transformation in the knowledge and wisdom systems themselves, and the processes of transformation in human

consciousness, both driven by and necessary for those changes in knowledge systems (Wilber 1981; Kegan 1994; Torey 1999).

Just as current forms of Western culture are re-engaging with the relational nature (although not the forms and content) of pre-Enlightenment times and with similar aspects of Eastern cultures, indigenous knowledges and world-views are attractive in this search as integrative paradigms in their own right and because they similarly privilege connection and the relational nature of all things, rather than their essence in themselves.

Socially responsive knowledge and social justice

A further tension in knowledge protection and development relates to the issue of disjunction between both foundational and professional knowledge and the community. Foundational knowledge, both within academic disciplines and cross-disciplinary 'liberal' knowledge, and its applied versions as professional knowledge, both institutionalised and subject to accreditation and controls, have a tendency to develop a distance in space and time from the immediate and changing problems and issues of society as it is lived at any moment, thus creating a problem of relevance. Altman (1996) argues for an additional domain that he and his colleagues call 'socially responsive' knowledge to become an integral part of tertiary education with foundational and professional knowledge at the University of Utah. This is knowledge of how to apply foundational and professional knowledge to social action regarding community needs.

Where that body of foundational and professional knowledge is largely derived from non-indigenous society and culture, the divide within the realities and issues related to Aboriginal life is considerable and the possibilities of relevant social responsiveness are remote. Davidson argues for social action as an inevitable operationalising of necessary social responsibility by the profession(s), in particular, 'respect for indigenous perceptions of priority social needs, constructions of social issues, and methods of social inquiry can really only be achieved if indigenous people are doing it, or if they are in a meaningful partnership with non-indigenous researchers who are doing it' (Davidson 1998: 48).

For this reason, culture-based programmes have been developed that endeavour to build up a body of indigenous Australian knowledge and professional practice in community management and development, community health and mental health, science and technology, and education. These programmes also establish secondary working partnerships with relevant non-indigenous knowledge and practices, so that, overall, the information and skills base of participants reflects community needs and aspirations in an ongoing dynamic way. The 'text' for such programmes is a sharing of contemporary issues and a modelling of understanding and practice

arising directly from Aboriginal life, developing theory grounded in experiential narrative.

Complementing this is the development of critique of knowledges and practices inherent to mainstream education and training as accessed by Aboriginal people in schools, technical education and universities,² and as held and practised by non-indigenous colleagues when dealing with Aboriginal people and issues.

These learning processes seek to re-create not only the individual but the context in which learning is taking place. This is related to providing relevant and useful information that causes individuals to evaluate themselves and their understanding of contexts and the structures that operate around them. The value of this work is beyond measure because the cultural positioning and critique created are beginning to question the fabric of mainstream society. Aboriginal educators are working in ways that reflect non-Aboriginal values back to non-Aboriginal audiences and ensure that their own indigenous values are embedded in their own knowledge systems that they identify and take as Aboriginal. The contrasts challenge non-Aboriginal people to see how inappropriate content, process and structures of education are detrimental to the integrity of Aboriginal identity and progress.

These programmes work with indigenous knowledge and its development and application within an Aboriginal social justice context (*Social Justice Report* 1998), where the skills to effect social change are a necessary companion to the capacity for effective social participation in both the cultural milieu and its interface. At least one professional group, the Australian Psychological Society, includes this in its guidelines for ethical practice – ‘psychological solutions to the current-day work, health, educational and social issues confronting indigenous people are likely to be unsuccessful, unless political, legal and social solutions for the restoration of their cultures and individual human rights, privileges and dignity are also found’ (Davidson 1998: 1, 48).

Ife (1999) unpacks the notion of social justice, favouring a human rights approach, but acknowledges ‘the inevitable tension’ in post-modernist discourse between privileging the diversity of the individual, local and particular, and ‘constructions of “universal” human rights’. It is acknowledged that more affirmative or critical forms of post-modernism can be used as a framework to work with this ‘critical theory – which attempts to value and legitimise alternative voices and aspirations, while at the same time acknowledging the importance of universal themes of human suffering and oppression’ (Ife 1999: 59).

Ife critiques the current enthusiasm for preferring a concept of *inclusion* to either a *justice-* or *rights-*based approach. He regards inclusion as essentially conservative, paternalistic and protective of the *status quo*, the concern being with access to dominant systems, with equity rather than equality. Inclusion is seen as a necessary but not sufficient condition to guarantee fairness to minorities (Ife 1999: 53–54).

A local example of this is a report of the state government-driven 'Western Australia Task Force on Aboriginal Social Justice' where 'social justice' is operationalised in the aims and terms of reference as seeking 'to remedy the disadvantage' and 'equality of opportunity' (1994: 4) as well as 'mutual understanding, acceptance and support' and 'information', to 'identify' issues and 'advise' the government (1994: 3). There is no evidence of movement beyond assimilationist inclusion, only toward partnership within and subject to the existing governmental systems. This reflects the tension between the Aboriginal population and the government in moving toward 'empowerment and self-determination' as part of the human rights of indigenous peoples.

Similarly, Ife sees a *justice* approach as too often entrenching a 'legal hegemony' on procedural matters, with little assurance of protecting the values that people may implicitly mean by, and variously contest as, embodied in the notion of a 'just society' (1999: 52).

He advocates a discursive and positive concept of *human rights* that includes but goes beyond the necessary guarding against breaches of the civil and political rights of the individual. He also advocates the inclusion of economic, social and cultural rights, and 'a third generation of human rights . . . that arise from the twentieth century struggles against colonialism' . . . for the 'self-determination for colonised peoples' (and the struggles against unsustainable economic and social development). 'It is important to acknowledge that human rights extend beyond the conventional Western, patriarchal assumptions' of 'liberal political philosophy' that, to date, has dominated the human rights discourse and in so doing has protected Western cultural systems of knowledge, values and process against the challenge of the implicit assumptions that this best represents the basic universal structure for society (Ife 1999: 54–57).

A local example of this tension is the largely equity and access thrust of the National Aboriginal and Torres Strait Islander Education Policy. This was derived in a mainstream-*preferred* way from a Senate Inquiry into Aboriginal Affairs that documented community recommendations that education in local regions should address local Aboriginal culture and educational practices, as well as prepare Aboriginal people to exercise choice to participate in mainstream culture, so that they may determine what is relevant and appropriate to their own needs and aspirations. Policies reverse these priorities. Attempts to include local culture and to privilege local indigenous decision-making and choice in this way, have had varied and limited success over the years (Garvey and Pickett 1996).

Not only is there is a hegemony of academic knowledge and theory, and a loss of the natural wisdom in everyday life and its mechanisms of consultation and transmission, but this academic hegemony is held largely by the non-indigenous culture, unilaterally promoting Western systems of understanding and its own constructions of Aboriginal realities. This situation is reinforced by the fact that education is

becoming increasingly information-based and privileging a scientific rationality. Reclaiming a respected place and function for Aboriginal knowledge and its development and transmission in this process is happening, but there is still a struggle in general education, as there is in other conservative areas such as health and law.

Yavu-Kama (1998) writes of 'empowerment through learning from a black Australian perspective' 'since 'most texts are written from a white Anglo-Australian perspective' (Yavu-Kama 1988: 91). Rains (1999) refers to her experience of American-Indian life as an 'intellectual apartheid' based on the denial of indigenous knowledge and a 'hegemony composed of historical amnesia, and intellectual authority' that essentialises an objectified 'Other' and 'appropriates indigeneity'. Concerned with the implications for curricula and the transmission of this knowledge to our children's children, and to their children, she emphasises that 'it is essential that indigenous knowledge be acknowledged as legitimate and valuable', and articulated by indigenous people themselves.

Change and control

In the early 1970s Gilbert commented that 'changes in Aboriginal affairs are happening at such a fast pace these days' (Gilbert 1973: x). Then, conducting surveys of the Australian population since 1979, Mackay describes the past twenty years as 'a period of relentless, social, cultural, economic, political and technological change' (Mackay 1993: v). Hunter (1993) provides a well-researched account of the relationship of the conditions of Aboriginal people in the Kimberleys to the impact of and responses to social change. The first national survey of Aboriginal mental health (Swan and Raphael 1995) concludes that most of the mental health problems of contemporary Aboriginal people are of a social-emotional nature and result directly and indirectly from the continuing experiences of the conditions and changes brought about by colonisation.

The issue has not only been the massive and relentless nature of the changes experienced by Aboriginal people. It has not only been that nothing like this had been experienced ever before in cultural memory. It has also not only been the destructive and devastating direct effects of the changes on the Aboriginal population and culture. The core issue has been the fact that Aboriginal people were more *subjected* to this change, rather than participants in it. In the social psychological literature, Holmes and David (1976), and Lazarus and Folkman (1984), for example, document the effects of powerlessness in situations of change, especially when those changes involve distrust, are imposed, threatening, infused with uncertainty, persistent and inescapable, and where the outcomes are likely to be of considerable negative consequence. The above describes the experience of Aboriginal people over several generations (*Social Justice Report* 1998: 18).

On the other side of the equation, studies like those of Milgram (1974) and Haney, Banks and Zimbardo (1973 in Lovibond et al. 1979) illustrate the lengths to which ordinary people will go in exercising power over others, in being influenced to enact and excuse their own perpetrative behaviour, and that of others, towards victims of pain and suffering. 'Even at the height of egalitarian zeal' . . . 'however much Australians may have touted themselves as being committed to social justice and equality', there persisted a 'lingering prejudice against Aborigines' and their social positioning along with the 'homeless, unemployed and dispossessed' (Mackay 1993: 141). In an era of increasing change, there are increased consultation, negotiation and sharing, but Aboriginal lives and futures are mostly still directly or indirectly in the hands of the mainstream culture and its institutions, and indigenous gains are frequently compromised at times of economic threat or opportunity.

From a history of exclusion and marginalisation, there has been progress towards consultation, participation and negotiation (Riley 1997). On both sides, this process has required the knowledge and skills to bridge indigenous and mainstream cultural ways of communication and to exercise representation, problem-solving, advocacy and conflict resolution. Setting this in a developmental context, the future challenge is also to find a confluence of knowledge systems and practices for initiating and managing change, so that partnership replaces being subjected and subjecting others. More important, like the cross-fertilisation in all areas of knowledge, are the transformative elements arising from that interaction, a co-construction of knowledge, understanding, values and practices that are informed and enriched by, that move beyond yet preserve, the indigenous and non-indigenous.

Language is knowledge is power

Knowledge, language and power have an interdetermining relationship. The main door into a knowledge system is through its language. The words and their meanings are the vehicles for the conceptual ordering of categories and relationships that constitute the world-view of the speakers of that language or community of languages. Control the learning and use of language and you control the way in which people see and relate to the world around them, including themselves and each other. Language also orders the moral universe of values and the protocols of life that govern the language group; it also usually has words that define deviance from normative and expected ways.

For this reason, Freire (1972) created productive political tension for achieving change through encouraging critical reflection on language use in the development of a literacy that derived from facilitating action on practical issues of immediate concern. This was a technology for people suffering oppression. By creating their own subjectivity, awareness, critique and agency, they liberated a space and a process

that displaced and challenged imposed knowledge, understanding, controls and conditions.

Aboriginal linguist Eve Mumewa Fesl (1993) describes 'linguistic imperialism' over Aboriginal people in Australia as an extension of the use of language to maintain class status in England. She cites Haugen (1985), 'to an Englishman his language was his badge of status', and goes on to say 'the way he spoke it marked his personal status, while the fact that he spoke it demonstrated his supremacy over speakers of other languages . . . English thus became a language associated with supremacy, and eventually it became an instrument of dominance' (Fesl 1983: 27). This was supported by 'the belief systems' and 'philosophies which rationalised their ethnocentricity', such as the idea of the Great Chain of Being where all other than Western culture was regarded as 'primitive' and 'backward' and culturally deficit (Fesl 1983: 28). Christie (1988) describes examples of the use of language, and the concepts and attitudes it carries as a tool in the process of oppression and in the justification of violence and oppression. This process continues, 'linguistic imperialism lives on long after empires have been conquered or have disappeared' (Fesl 1983: 32). It is our experience that, even now, there is a constant tension within academic and professional programmes and policies to resource and privilege indigenous languages sufficiently to maintain indigenous world-views, concepts and values, balanced against the need for English to effectively access mainstream higher education and careers.

The tension is not just between the different world-views, concepts, understandings and values carried by an imposed language. 'White settlement in Australia . . . marked the imposition of a written culture upon oral cultures' established through a very long history. 'The history of the written word is bound up with the history of imperialism. For Aboriginal culture, the confrontation with the written word has had far-reaching consequences' and is 'still deeply affected by the survival of oral culture and its conflict with a new culture increasingly based on reading and writing' (Gillen 1988: 190). This changes the processes of knowledge exchange and negotiation, of roles of power and influence. Indigenous processes were displaced, replaced and increasingly dominated and disadvantaged by different ways of communication, of exercising authority, and doing business mediated by the written nature of the language.

Raymattja Marika, Yolnu teacher-linguist, presented the 1998 Wentworth Lecture arguing for the recognition, continuation and better resourcing of the bilingual education programme developed at Yirrkala in Arnhem Land, Northern Territory, where early proficiency is established in the local language and gradually also in English. Before, the mission schools banned local language and cultural content and thus provided the government assimilation policy's non-indigenous teachers, language, stories and activities – the mainstream language access and local language denial as a vehicle for facilitating socialisation into the dominant culture (allowing for both participation and advantage, as well as further exploitation). The 'control

of curriculum, teaching, learning and literacy is all about power . . . We need to create the space for us to express ourselves' (Marika 1999: 7). She refers to the address by Mandawuy at the 1997 Language, Learning and Culture Conference that described the years of struggle to gain local and cultural control of the education process, and concludes her own address by stating that, at a state level, 'the current system (still) does not take into account' this 'Yolnu "both ways" pedagogy and curriculum' (Marika 1999: 9).

Marika comments from her own life experience: 'It was not until I spoke my own language, Rirratjingu, that my view of the Yolnu world would become more meaningful.' It was especially the hard language, the esoteric language, that exposed a high level of Yolnu knowledge that 'gave me a new understanding about my place . . . a fresh understanding of the world from a Yolnu perspective . . . helped me to grow in my own thinking about the complexities and the context of the Yolnu world-view . . . our values . . . ourselves' (Marika 1999: 4).

'Our elders . . . realised that the younger generations needed to be competent to a very high level within their own language (also) to be able to translate the principles of Yolnu world-views and Yolnu law' from elders for themselves, and to others. This related particularly to their fight for land rights, having seen the Larakia people dispossessed of both land and language to become 'a dominated and marginalised people'. Marika cites the bilingual education programme described in the *Commonwealth Department of Education Report 1974-75* as including not just the language, but also 'the study of history and culture associated with the mother tongue' (Marika 1999: 6), ' . . . exploring alternative visions of what it means to be educated and literate' (ibid: 7).

Christie (1988), in the same part of Australia, describes the 'invasion and colonisation' of traditional Aboriginal education: ' . . . white education is in some way the essence of the invasive aspects of our culture', from which we must 'hold off' and reconsider the resistance of the Aboriginal people and their demands for reconstituting and controlling the centrality of their own education. The rest of Aboriginal Australia looks with a keen eye to the Yolnu struggle, as most Aboriginal people in the education process throughout the country are subjected to the same overall curriculum as non-Aboriginal Australians, with little if any accommodation for the importance of their own cultural knowledge, values or ways.

Yet, at some universities and in technical and further education (TAFE) programmes, this cultural awareness and concern for strengthening identity and resilience has recently increased, and finds expression right through into postgraduate studies. This is the case at our own university, and others throughout the country (Brown 1988; Sonn, Bishop and Humphries 1997, 1999; Abdullah and Stringer 1997; Walker and Humphries 1999). Along with enabling programmes to facilitate access to and success in mainstream courses, indigenous culture, contact history and language in the curriculum, especially in bridging programmes, prepare

Aboriginal students with a cultural inoculation or strengthening against the assimilatory effects of both the dominant, largely monocultural, 'one way' mainstream professional education programmes, and the developing pressure to accommodate a broadly plural multicultural perspective. In this way, space is gradually being opened up for indigenous content in courses, and for an appreciation, understanding and respect for indigenous views of knowledge and its development, transmission, learning and application that can differ in a number of significant ways from that of the mainstream culture (Brown 1988, Monash University MOSA Programme).

Our own enclave educational process is about creating spaces where students (and staff) can learn about themselves and the content being studied. This must happen in such a way that their own individual and culturally collective ongoing experience, identity and purpose, are positioned and maintained at the centre of the complex functionally integrated mapping of all they will learn. This personally integrated and culturally shared sense of being, value, understanding and purpose is facilitated by appropriate learning strategies that strengthen this meaningful position. This naturally integrated and meaningful perspective and sense of functional well-being can be at risk on transition into learning within compartmentalised mainstream programmes, where the knowledge has no direct lived connection to one's cultural identity and role. The support programmes focus on retaining a strong sense of identity, value of self and culture, and transforming the foreign structures into useful relationship with one's own core indigenous knowledge system.

This approach can then flow into practice. Indigenous graduate practitioners will retain their cultural identity and perspectives. They will also expect the professions and work organisations to similarly 'make space' for their indigenous knowledge and processes, and allow them to operate as indigenous practitioners utilising indigenous knowledge in indigenous ways in functional partnership with their Western-oriented training. When this expectation is accompanied by strategic facilitation within the professional societies, service organisations and academic disciplines, in training, research and practices, considerable gains can be made (recent examples include Gridley, Davidson, Dudgeon, Sanson and Pickett 2000; Smith 1997; Collard 1997 (in psychology); Mead 1996 (in education); Nakata 1998 (in anthropology)).

Conclusion

Producing graduates with some degree of 'integrated knowledge systems' is not considered sufficient. The transformation needs to be driven from all quarters so that students graduate into a situation where work is already being done with their organisations and colleagues, with policy and practice, and with cultural awareness and participation. This will mean that the ground is already prepared for the new practitioners, and support and participation mechanisms for them are in place. Similarly, graduates should return to their indigenous communities rather than seek

employment in mainstream culture. This can happen through field visits to block-release students throughout Australia, in remote as well as rural and urban areas. It has been important and most effective where time is spent with the families and community in familiarisation, discussion and negotiation that seek to integrate academic and local knowledge and practice, with family and community expectations and understandings. This can provide a depth of ongoing support and purpose that will be extremely valuable to the students during their studies, and when developing and employing that knowledge and those skills in and for the community. In the Sonn, Bishop and Humphries (1997, 1999) study 'a number indicated that they saw themselves as having obligations to their communities or as social change agents'.

So, in order for graduates to meet the aspirations of their families and communities, they need personal management and development skills to navigate these different knowledge systems successfully; they need the skills of appropriate participation in culture maintenance and cultural development; and they need skills related to social change in its many aspects. Planning for integrating knowledge systems requires practical planning for these multiple actualities at different levels and in different content areas – not only as an academic task, with the practical and the academic domains intimately and dynamically informing each other.

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Stories of the Hunt – Who is writing them?

*The importance of indigenous research in Africa
based on local experience*

Birgit Brock-Utne

Introduction

*Stories of the hunt will be stories of glory until the day when animals
have their own historians*

Zimbabwean proverb

I was recently asked to take part in a meeting of the African Virtual University (AVU) held at the University of Oslo where I work. The AVU is a World Bank concept constructed in the Secretariat of the World Bank in Washington. So far, AVU has sent lectures and course input from professors at universities in the USA to Africa in order to 'build research capacity' at African universities. Norway has recently decided that more of its development aid shall go to education and has, instead of strengthening a truly multilateral organisation like UNESCO, transferred money to the education sector of the World Bank. Since Norwegian money is probably going to be put into AVU, some Norwegian professors were asked how we could contribute to AVU. There was a pronounced scepticism to the whole AVU concept in the meeting of Norwegian professors. Whose knowledge was going to be exported? Was there not reason to believe that we in the North also had a lot to learn from the South? What was being done so that the South could do research based on their own roots? Could we learn from each other? In a meeting among African students, after the professors' meeting, the African students, asked: Is this what we need? How will this strengthen our understanding of our own society? Could we not get the same amount of money poured into sophisticated technology to strengthen our universities the way we think best?

In recent years, the World Bank has, according to Samoff and Stromquist (2000), started to view itself as a Knowledge Bank, claiming that its greatest source of competitive advantage is advice more than lending (World Bank, 1999: 8–9). In the *World Bank's World Development Report 1998/1999: Knowledge for Development*, we read: 'Launched in October 1996, the World Bank's knowledge management system seeks to make the Bank a clearinghouse for knowledge about development – not just a corporate memory of best practices, but also a collector and disseminator of the best development knowledge from outside organisations' (World Bank 1999: 140). The same report states: 'developing countries will remain importers rather than principal producers of technical knowledge for some time' (1999: 24).

Samoff and Stromquist (2000) maintain that the aid agencies' initiative to create and manage development knowledge databases is fundamentally problematic: 'What is deemed valid and legitimate knowledge, that is, information, is likely to become increasingly centralised in the North. While as we have noted there will be efforts to collect information in the South, that information will be filtered, perhaps modified, and approved in the North before being incorporated into the corpus of official knowledge . . . With the rules of science as the ultimate measure, and with those rules largely set and maintained by a small elite in the affluent countries, valid knowledge production will become an increasingly expensive endeavour, an effort beyond the reach of most people, including scholars, in poor countries. For example, large, controlled sample surveys will be considered more reliable sources of knowledge than individually conducted case studies, which in turn (since there are in fact rules and procedures to guide case studies and simulate reproducibility) will be considered more reliable sources of knowledge than local folkways and customs. Ironically, the collection of "indigenous knowledge" may marginalise indigenous researchers' (Samoff and Stromquist 2000: 5).

In his book *Educate or Perish*, the historian Ki-Zerbo (1990) from Burkina Faso voices an SOS call to educators in Africa to set immediately to the task of designing an education that is *of* Africa and *for* Africa. It is important for Africa to return to her roots, to restore the culture of Africa. He tells how the breakup of the African educational system was completed by colonial domination. The colonialists replaced the African educational system with an absolutely different system designed to serve the overall aim of the subjugation of the continent to European needs. For African societies, education lost its functional role. The pre-colonial educational system had many positive points. The system can be described as a system of linkages:

- There was a linkage between general knowledge and practical life. The normal method for the transmission of knowledge was a series of practical exercises.
- Education was linked to production.
- Education was linked to social life.
- Education was linked to culture through the use of the mother tongue.

- Education was linked to culture through the incorporation of cultural practices like games, dancing, music and sports.
- Links between the pre-colonial educational system and ethical values were absolutely clear.

Ki-Zerbo (1990) quotes Amadou Hampate Ba, who rightly said: 'When an elder dies in Africa, it is a library that burns.' The truth is even more tragic, however. For in the event of a library burning, other copies of the books lost may be found, and another library set up. Given Africa's situation of poor geographical, historical and linguistic intercommunication, and with oral traditions being the dominant mode of transmission to this day, it can be said that an elder's death is the equivalent of the burning of a unique and living manuscript. Day by day, such living manuscripts pass away, and Africa's school system thus loses more of the roots of its cultural truth. Rather than retrieving bits of information stored and managed in the North, Africa needs the time and opportunity to record her own knowledge built on her own roots. Ki-Zerbo quotes the African proverb: 'When lost, it's better to return to a familiar point before rushing on.'

The Ugandan educational researcher Catherine Odora (1994, 1998) discusses the need for creating a space in contemporary education discourse that is more tolerant, more sensitive to realities *other than* the overwhelming Western one. She finds that discussing indigenous education today compels us to come to terms with the situation in which even the social construction of a people's reality is and has been constantly defined elsewhere. Discussing indigenous education, she says, is 'about asking why the school building is always quadrangled even where the local setting around it has round huts' (Odora 1994: 62).

Colonial times

The experiences of Odora, who went to primary school in Uganda right before her country achieved independence from Britain, is a good example of the colonisation of the African mind being practised by the colonialists of Africa. Odora recalls the rigorous choir practices of her primary school and how the teachers spent weeks getting the Ugandan kids to sing 'Auld Lang Syne', 'I Sowed Barley in the Meadow', 'London's Burning' and 'Land of the Silver Birch, Home of the Beavers' (Odora 1993). None of the teachers had ever seen barley, let alone meadows, birches or even London, either the one that was burning or the parts that survived the fire. She recalls how she received an award from the headmaster on a parents' day for reciting by heart a whole chapter from *Rip van Winkle*. The parents clapped and cheered, but none of them had ever heard of Rip van Winkle, and most of them could neither speak nor understand English, which was the language of the text.

She further tells about the primary leaving examination and one question in it that has never left her mind: 'It was in the General Paper and the question asked

about who discovered the Murchinson Falls (a waterfall situated not too far away from my father's ancestral home). The objective options a, b, c and d had several European names and option e had "none of these". I had chosen the last one (e), but the teacher insisted that it was one of the Europeans who had discovered this waterfall.

'This waterfall, on the River Nile, is part of the boundary between two major ethnic groups in Uganda, with the Acholi – my tribe – to the north of it, and Bunyoro to the south. It was a respected site for ancestral worship by the people who lived close to it. My great grandfather, who had died while on the Bunyoro side of the river early in the nineteenth century, had been brought to and buried on the Acholi side as he wished. A memorial tree had been planted on the grave (way before any of those explorers saw that waterfall) which our family visited regularly. But in the school we were to say it was some European who had discovered it' (Odora 1993: 3).

Odora wonders why the teachers felt so comfortable educating the children on what Rip van Winkle did on Catskills mountains, while ignoring the fantastic narratives of the kind her father told the children in the neighbourhood regularly of famous events that had occurred to the Acholi people on different mountains long ago.

After independence

The experiences described by Odora stem from a time before Uganda became independent. But what happened to the content of schooling after the African states achieved their independence? I have elsewhere attempted to analyse this question and also looked at the renewed curriculum dependency which may be a likely outcome of the World Conference on Education For All, held in Jomtien, Thailand, in 1990* (Brock-Utne 2000). Here the concept of cultural conditionality seems useful. A cultural conditionality is a conditionality set up by the lender or donor that has direct implications for the content of schooling – for instance, the insistence on textbooks written and published abroad, the use of examination systems devised in the West, insistence on 'international' (read 'Western') standards and the negligence of African culture, including African languages. In an article I also raise the question

*The World Conference on Education For All (WCEFA) was held in Jomtien, Thailand, from 5–9 March 1990. I have elsewhere posed the question: Is the new EFA strategy likely to lead to a 'self-reliant development' for Third World countries? (Brock-Utne 1995, 2000) 'Self-reliant development' is an expression that is used in the preamble of the World Declaration on Education For All (1990: 3). The World Conference on Education For All was sponsored by the World Bank, the United Nations Development Programme (UNDP), UNICEF and UNESCO. Some 1 500 participants met at the EFA conference in Jomtien. There were delegates from 155 governments, 20 inter-governmental bodies and 150 non-governmental organisations. 48 roundtables were arranged along with some 70 exhibits. There were cross-regional caucuses amongst NGOs, donor agencies, and national delegations. There was South-South caucusing, as well as North-South.

whether there is such a thing as 'educational aid for empowerment', mentioning a couple of examples of aid projects within the education sector which have been helpful – one, assisting in creating monolingual dictionaries for some African languages (Brock-Utne 1995).

It should also be mentioned here that attempts are being made in a recently independent country like Namibia to monitor the countrywide examinations for cultural bias and gender bias (MEC/NIED 1994). This monitoring of exams is quite impressive and can serve as an example to other African countries. The monitoring of the Junior Secondary Certificate examination in 1993 showed, for instance, that the examination in the home science subject had a clear cultural bias towards urban living and European food. All the illustrations were of Europeans or European home environments; all the recipes were of European dishes. There was nothing in the examination paper indicating that it was from Africa or Namibia. When it came to the examination paper in accounting, it drew on a variety of cultural settings, but nearly all persons mentioned were males. When it came to the examination paper in art, it was found that only 16% of the marks could be earned on anything to do with Namibia – 84% of the marks were devoted to European art history. The monitoring paper concludes: ' . . . with only a token to Namibian or African art, this examination continues the cultural disinheritance of Namibia, strongly criticised in Ministry documents, and counter to Ministry policy. The paper as a whole is also devoid of gender awareness' (MEC/NIED 1994: 9).

Likewise, the examination paper in music is said to have had a dreadful cultural bias. Of 100 marks, 74 could be gained on specifically European music, 10 on specifically African music and 16 on culturally neutral music theory. Only male composers were referred to. The history paper was, however, praised for promoting awareness of Namibian and African history, but criticised for making women and their contribution to history invisible. The monitoring of exams in Namibia goes on and a small improvement in the examination papers set in the year 1995 has been detected (Avenstrup 1995).

Indigenisation of the universities in Africa

What are the challenges for educators who want to root African education in African traditions? Examples here are taken mostly from Tanzania, the country in Africa with which the author is most familiar.

Mazrui (1980), already 20 years ago, saw the contemporary African universities primarily as institutions for the promotion of Western civilisation. The first task toward decolonising the African mind was, according to him, to enable the indigenous populations of Africa to influence their educational systems. Mazrui (1978) suggested that the local African society's influence on university policy should at least balance that of the West. There is a need for schools of oral tradition and oral

literature, for faculties of traditional medicine, and departments of African languages. There is a need to rewrite school textbooks and build them on African experience. Mazrui insisted that admission to a university in Africa should include a requirement for a pass in a university entry examination in an African language. African dance and music should be given a new legitimacy in all secondary and primary schools. In African societies, dance and music are much more fundamental than games and sports are in British schools, and should certainly be given equal weight with soccer and athletics in African schools, he argued (Mazrui 1978: 308). He claimed that departments of sociology should have indigenous specialists in oral traditions, and that faculties of medicine should give attention to traditional herbs and might examine medical implications of sorcery and witchcraft as part of the general training of a rural doctor in Africa. In my most recent book, subtitled 'The Recolonisation of the African Mind' I show how little of Mazrui's dream for Africa has come true (Brock-Utne 2000). With the AVU lowering the curtain further, intellectual recolonisation of Africa is likely to take place.

Ki-Zerbo (1990) reminds us of the fact that well before the other continents, Africa (e.g. Egypt, the 'Universities of Northern Sahel') was a producer of education and of teaching systems: 'It is forgotten, all too often, that Africa was the first continent to know literacy and to institute a school system. Thousands of years before the Greek letters *alpha* and *beta*, roots of the word *alphabet*, were invented, and before the use of the Latin word *schola*, from which the word school derives, the scribes of ancient Egypt wrote, read, administered, philosophised using papyrus' (Ki-Zerbo 1990: 15).

In their book *The African Experience with Higher Education*, Ajayi, Goma and Ampah Johnson (1996) also note that the roots of the university as a community of scholars can be traced back to two institutions that developed in Egypt in the last two or three centuries BC. One is the Alexandria Museum and Library, and the other is the monastic system. They mention, for instance, that one of the librarians at the Alexandria Library, Eratosthenes, an African from Cyrenaica, was the father of scientific geography and had measured the circumference of the Earth.

Before looking at the content of courses at African universities, it is also necessary to mention that the economic crises in which these universities are make reorientation difficult, though not impossible.

The effects on higher education of a concentration of resources on basic education

Knowing the attitude of the World Bank to higher education in Africa (Brock-Utne 1996; Brock-Utne 2000; Colclough 1995; King 1995) there is reason to fear that the renewed emphasis on basic education will indeed lead to a further starvation of higher education and intellectual life in Africa. Studies after the Jomtien conference

have shown that the focus of education aid among many multilateral and bilateral donor agencies is increasingly shifting to the level of basic education. Buchert (1995) shows that even agencies that had generally allocated by far the larger proportion of their bilateral education assistance to the higher education sub-sector, have now adopted policies in favour of the basic education level. This includes, for example, the Italian Development Cooperation, DGIS, ODA and the French Ministry of Development Cooperation. The increase in resource allocation towards basic education by the donor agencies is often clearly at the expense of higher education. Conditions insisted upon by the World Bank and the International Monetary Fund, and by bilateral donors to the education sector in Africa, usually include the re-introduction of school fees in secondary schools, so-called cost-sharing measures at the university level, liberalisation and privatisation of the school book sector, and general cuts in public expenditure. (For an analysis of the education policies for Sub-Saharan Africa as viewed by the World Bank, see Brock-Utne 2000). Donor policies have two direct consequences for the universities in Africa:

- The increase in user fees at the universities in Africa (and the dropping of book allowances, food allowances, free tuition) makes them places of learning only for the well-off.
- African university people feel compelled to seek donor support for a department, a faculty, a research institute, and building up link arrangements with more affluent universities in the West.

When it comes to the first point, even World Bank figures are unequivocal that the majority of students in Africa – an average of about 60% – come from the ranks of the peasantry, workers and small traders who are not likely to have the means to meet the increasing cost of university education. The natural outcome will be an increase in drop-out rates among students from poorer family backgrounds. In Kenya's Moi and Egerton Universities, for example, with a combined population of about 6 000 students, over 2 000 students were deregistered in early May 1996 over non-payment of fees and tuition (Mazrui 1997). These tuition 'defaulters' are more likely to have come from lower than upper-class families. Mazrui (1997) is probably right when he claims: 'The net effect of the World Bank's structural adjustment programmes in education, therefore, is increasingly to transform the African university into a "white collar" institution in terms of the parental background of its student population' (Mazrui 1997: 40).

When it comes to the second point, the support to the universities in Africa from the North could, in theory, come as a grant that the universities themselves could use as they wanted. This is, however, seldom the case. The support normally comes in the form of link arrangements between universities in the North and in the South. 'Experts' from the North are normally part of the link phenomenon. So are books written in the North, computers from the North and scholarships for Masters and PhD students to go to the North to study the curricula offered in the North.

There are no provisions for students from the North to study in the South, or for professors in the South to visit professors teaching in the North.

Mkandawire claims in his article on the 'African Social Science Research Environment' that national priorities within research and education are vanishing all over Africa. 'In more recent years, with the decline in "national planning", the triumph of the market, the preponderance of foreign institutions in policy-making (through so-called "policy dialogues") any pretension to national priorities providing guidelines to research has simply vanished. Where national research councils still exist, the statement of priorities is never more than a wishful declaration of intent. One may note, parenthetically, the irony in the fact that, at the time when most African governments insisted on their national priorities, there were few indigenous social scientists and most of the experts were expatriates who were not bound by national priorities. Now that Africa has large numbers of social scientists, African governments have lost a significant degree of autonomy and, in one way or other, are pursuing objectives imposed by external financial institutions' (Mkandawire 1990: 28).

Yet despite the economic difficulties, there are attempts to indigenise the curriculum in the universities of Africa. Above we have mentioned Africa's situation of poor geographical, historical and linguistic intercommunication. The fact that geographical intercommunication is poor in Africa is well known to everyone who has tried to travel, for instance, from Dar es Salaam to Senegal. The quickest route is via Paris!

The language issue

In 1884, Berlin saw the division of Africa into the different languages of the European powers. African countries, as colonies, and even today as so-called 'independent' countries, came to be defined and to define themselves in terms of the languages of Europe: English-speaking, French-speaking or Portuguese-speaking African countries. The Kenyan author Thiong'o (1986) writes that Berlin of 1884 was effected through the sword and the bullet: 'But the night of the sword and the bullet was followed by the morning of the chalk and the blackboard . . . The bullet was the means of physical subjugation. Language was the means of spiritual subjugation' (Thiong'o 1986: 9).

He then goes on to tell movingly of his own school experience. His mother tongue is Gikuyu and that was the language of all the evening teach-ins around the fireplace when he was young, the language used with friends and in the field where he was working. In his first school years, he went to a school run by nationalists grouped around the Kikuyu* Independent and Karinga Schools Association. The language of instruction in this school was Gikuyu, so for the first four years of his schooling there was harmony between the language of his formal education and the

language he spoke at home, in the fields and with his friends. He tells that after the State of Emergency in Kenya in 1952, all the schools run by patriotic nationalists were taken over by the colonial regime and were placed under district education boards chaired by Englishmen, and English was made the language of instruction. Thiong'o recalls that, in Kénya, English became more than a language – it was *the* language and all the other languages had to bow to it in deference. He tells how one of the most humiliating experiences was to be caught speaking Gikuyu in the vicinity of the school. The culprit was given corporal punishment – three to five strokes of the cane on bare buttocks – or was made to carry a metal plate around the neck with inscriptions such as 'I am stupid' or 'I am a donkey'. Sometimes the culprits were fined money they could hardly afford. And how did the teachers catch the culprits? Thiong'o tells how a button was initially given to one pupil who was supposed to hand it over to whoever was caught speaking his mother tongue. Whoever had the button at the end of the day had to come forward and say from whom he had received it, and the ensuing process would bring out all the culprits of the day. Thus children were turned into witch-hunters and traitors of their own immediate community.

Language is, as folklorist Crats Williams writes, 'culture expressing itself in sound' (quoted in Ovando 1990: 341). It gives individuals and groups their identities. There is a powerful connection between language and sociocultural identity. The language in which you learnt your first words, the language in which your mother talked to you, the language that was used in your nearest surroundings and that you use with your closest family and friends, will always be a part of your identity as a person.

One of the few countries in Africa that, at one point, made the decision to have an indigenous African language as the language of instruction at university level is Tanzania. I have described elsewhere how this decision was reversed (Brock-Utne 1993). A study conducted in Namibia revealed that the African languages are worse off there now than they were before the end of the apartheid period (Brock-Utne 1997). At present there is no university in Africa that has an indigenous African language as its language of instruction. In its publication on Higher Education in Africa, the World Bank does not even mention the language question. In an analysis of the World Bank, the language question and the future of African education, Mazrui (1997) mentions the great concern that the World Bank shows for the declining academic standards in African education. He further notes: 'Yet, neither the World Bank/IMF, nor the British Overseas Development Agency have attempted to question the wisdom of educational instruction in European languages' (Mazrui 1997: 43).

**Kikuyu* is the name of one of the largest tribes in Kenya. Gikuyu is the vernacular of the Kikuyu and their god.

Mazrui mentions that a World Bank loan to the Central African Republic, supposedly intended to improve the quality and accessibility of elementary education, came with a package of conditions that required the nation to import its textbooks (and even French language charts) directly from France and Canada. It has been estimated that, due to similar World Bank projects and linkages, over 80% of school books in 'Francophone' Africa are now produced directly in France (Nnana 1995: 17). In the process, the World Bank has not only empowered the West to control the intellectual destiny of African children even more, but has also continued to weaken and destroy infrastructural facilities, primarily publishing houses, for the technical production of knowledge locally. It is easy to agree with Mazrui that, in terms of sheer cost effectiveness, French and Canadian publishers would have found it far more difficult to participate in this World Bank agenda had the languages of instruction in African countries been African instead of a European language. Mazrui claims that, because of the Euro-linguistic policy of Western donors (and I would like to add, much of the African elite), intellectual self-determination in Africa has become more difficult. To quote Mazrui: 'For the time being, the prospects of a genuine intellectual revolution in Africa may depend in no small measure on a genuine educational revolution that involves, at the same time, a widespread use of African languages as media of instruction' (Mazrui 1997: 46).

A university department and a university institute with an African language as the language of instruction

At the University of Dar es Salaam, there is one department and one institute that use an African language as the language of instruction. The department is the Department of Kiswahili, and the institute, the Institute of Kiswahili Research. Roy-Campbell (1992a, 1992b), arguing against the frequently heard argument that the African languages do not have a vocabulary that is developed enough to be languages of instruction at higher levels in the educational system, gives the history of the Department of Kiswahili as a counter-argument. She holds that this department gives a good, practical example of the coinage of technical words that was undertaken in the process of changing from English to Kiswahili medium instruction. Prior to 1970, the courses in this department were taught through the medium of English. There were no terms for guttural sounds and phonemes, not even for linguistics and vocabulary in Kiswahili. However, once the decision was made to teach the courses in this department using the Kiswahili medium, words were developed in the process of teaching and later standardised. Some words were used as synonyms. English terminologies were used until Kiswahili terms were developed. Some English terms became Kiswahili-ised, and some terms were found in other languages of Tanzania. The process of creating new words was done with the assistance of all teachers in the Department of Kiswahili and the Institute for Kiswahili Research at the same univer-

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sity. For the further growth and development of a language, its use as a language of instruction at higher levels is of fundamental importance. As the West African educational researcher Adama Ouane from Mali has accurately observed: 'Unless these languages (the indigenous African languages) can step beyond the door of primary schooling, and face the challenges of secondary and higher education, with an increased number of subjects to deal with, their modernisation will be achieved only half way' (Ouane 1991:10).

The teaching of philosophy at African universities

Mafeje (1992), writing on the indigenisation of intellectual discourse in Africa, reminds African intellectuals of the guiding principle in Socratic thought: 'know thyself'. Looking at African philosophical thought, he finds grounds for a new reconstruction and self-realisation. He sees that unwritten accounts transmitted in stories, legends, myths, and so forth, that reflect African philosophical thought in various ways, are sources of high significance and of authenticity.

In an article on the teaching of philosophy in African universities, Kwasi Wiredu (1984) laments: 'An African may learn philosophy in a Western institution of higher learning abroad or at home and become extremely adroit in philosophical disputation; he may even be able to make original contributions in some branch of philosophy. The fact remains that he would be engaged in Western, not African philosophy. Surprisingly, many Africans accept this; they have even seemed to take it as a matter of course. The usual practice seems to reserve all references to African conceptions to classes on African philosophy. As far as the main branches of philosophy are concerned, African philosophical ideas might just as well be non-existent. This trend, I suggest, ought to be reversed' (Wiredu 1984: 31–32).

Wiredu makes himself a spokesperson for the strategy of counter-penetration. This strategy is a strategy meant to impress upon the world that it has something to learn from Africa, that in the global culture that is evolving, the West will do well to listen to Africa. The strategy will not work, however, unless Africa builds on its own foundation and stops mimicking the West. Mahatma Gandhi gave the same advice to women, in whom he had much greater faith than men when it came to creating peace in this world. This is what he said about a woman behaving like a man: 'She can run the race but she will not rise to the heights she is capable of by mimicking men' (Gandhi 1940). (See Brock-Utne 1985 and Brock-Utne 1989 for further discussion of women and peace.)

There is a lot the West could learn from the black people of Africa when it comes to leading a good and harmonious life, taking care of each other and beloved dead ones, being one with nature and the spiritual world.

The field of law

The so-called 'experts'* and university people from the North go to Africa to teach, to 'transfer' knowledge. In reality, we may have more to learn from them than they from us. The fact that we are 'experts' in our own countries – for instance, in a competitive sport of a Western kind, women's law in Norway, AIDS-prevention in the North, commercial forestry or fishery in the North Sea – does not make us experts on the use of the body in Africa, women's law in Africa, the spreading of AIDS in Africa, sexual norms among various African groups, African agro-forestry or tropical, multi-species fishery in shallow waters.

Within tertiary education, Norway took the initiative in starting diploma courses in women's law in universities in East Africa. It is important to note that the courses were not started as a result of requests from institutions outside, but as an initiative from the Norwegian Development Agency, NORAD, itself. At the time of the first course review, four courses had been conducted; the first three took place at the University of Oslo (UoO) and the fourth at the Institute for Private Law at the University of Zimbabwe (UoZ). Participants came from Kenya, Lesotho, Mozambique, Swaziland, Tanzania, Uganda, Zambia and Zimbabwe. An evaluation of these courses concluded: 'The Institute of Women's Law in Oslo seems to have over-played their role in terms of administrative and professional contribution to the implementation of the course. They seem to have disregarded, perhaps because of time constraints, the points of view of partners at the UoZ who, at times, felt that their role was minimised to being host for the Norwegian "directors". Clearly, also selection of candidates and the course content were taken out of the hands of the UoZ.

'Many participants question the relevance of the Norwegian approaches in various lectures. It appears that there were too many Norwegian lecturers with rather limited competence in African women's living conditions and reality . . . In the future, concerted efforts must be made to develop a course content taking the perspective of African women as a starting-point' (Hyden, Kazembe, Lexow, Wirak 1991: VIII).

The review mission quotes African researchers who maintain that there are difficulties regarding the application of feminist jurisprudence developed in Norway in an African context. They point to historical, cultural, social and legal differences, and the fact that, in Africa, the cultures and societies are deeply gender-rooted. They point to the fact that the position of an African woman is relational in terms of her position in the extended family and kinship system, rather than individually based as in Europe. Furthermore, the dual system of customary and common law that often

*The Tanzanians have the following interesting way of describing an 'expert': '*Mtaalam ni mtu ambaye anakuja nyumbani kwako na kuazimba saa yako na kukuambia ni saa ngapi*' (translated into English: An expert is a person who comes to your house and asks to borrow your watch, whereafter he tells you what time it is).

coexists in many African countries, makes matters even more complex than in Norway.

The review mission cites the report of Mary Maboreke, the diploma course leader and lecturer at the Department of Private Law at the University of Zimbabwe. She states that increasingly, both in methodology lectures and in dealing with substantive topics, discussions tended to turn more and more towards customary law to try to identify aspects that could be used as bases for solutions which are both native/indigenous and appropriate to Africa, as people felt that perhaps they should look 'inward' for customary solutions for African problems, rather than looking 'externally' for imported solutions in general law or other importations from Western countries.

Maboreke illustrates this by looking at the way battered wives are sheltered in Western and African societies. In the African tradition, she claims, a woman who is beaten by her husband could always find sanctuary with one of the relatives, either on her own or on her husband's side, thus leaving the problem 'a family matter', which is all-important in African tradition. The Western form of 'outside intervention', without first exhausting the process of family dispute resolution, is foreign to African thinking.

Another African participant, Janet W. Kabebere-Macharia, a lecturer of law at the University of Nairobi, who was a guest lecturer at the diploma course in 1990, states: 'So far the subjects/topics have been centred on a comparison between the Norwegian perspective and the African perspective. If we continue teaching women's law, using the above comparisons, there is a danger of regarding the Norwegian perspective as being the ultimate goal for "African" women's law. It is high time that this scope was expanded to include other perspectives from other countries. *However, what is most important is the development of an African perspective on women's law, centred on the need of African women and their experiences*' (from Hyden, Kazembe, Lexow and Wirak 1991: 30).

One would think that the differences between a Norwegian perspective on women's law and an African one would make it interesting for Norwegian lawyers to come to Africa to learn about African law, to study the fascinating clashes between traditional law and codified law so well described, for instance, by Rwezaura (1985). The danger that Norwegian academics will be cultural imperialists is clearly there if we come with the attitude that we are the teachers, the ones who know. We are there to impart our knowledge, to enlighten and to inform – not to learn.

Rwezaura (1985), who teaches law at the University of Dar es Salaam, has written a most fascinating study of the Kuria social system and traditional law in Tanzania. He writes about marital disputes over property rights, regulations on bride-wealth, disputes over the control of children and judicial allocation of matrimonial assets. The *makamona* (woman to woman) marriages are explained through their economic and social significance, and the legal problems they represent when met by codified

law built on Christian principles. This was done by someone who has studied these systems and has first-hand knowledge of them. It was sad to see that a book of such high importance for legal studies, especially in Tanzania but also in Africa generally, was published abroad and impossible to buy in Tanzania.

A department of physical education at an African university

Sendeu Titus Tenga, completing his doctoral degree at the University of Sport and Physical Education in Oslo, Norway, wrote a very interesting Masters thesis in 1994 on the Norwegian Sport for All Project (SPA) in Dar es Salaam, Tanzania. The project was organised by the Norwegian Federation of Sport (NIF) with support from the Norwegian Development Agency, and ran in Dar es Salaam from 1984 to 1990. In his thesis, Tenga (1994) mentions that the Sport for All project was initially an idea from NIF, which the Tanzanian side found undesirable but was later manipulated into accepting. He shows how the SPA project was totally Norwegian-dominated, and did not take into account the indigenous culture or ways of doing things in Tanzania. For instance, the SPA people saw it as their aim to organise all soccer players into clubs, whereas in Tanzania, one just joins in when one sees someone kicking a ball. Young boys would play soccer barefoot and with a homemade ball – a ball made out of newspapers and string – well suited to bare feet. Now the Norwegians organised the boys in clubs and supplied them with shoes and real footballs, sports equipment that made Tanzanians dependent and undermined their self-reliance strategy.

In his thesis Tenga discusses how ‘sports for all’ is a concept from the West to keep people fit. It is aimed at people who, because of a sedentary life-style – moving around in cars, sitting at work or in front of the television and eating a lot – suffer from heart and obesity problems. They need regular exercise and the sports equipment industry profits for this need. Tanzanians get exercise in their daily activities (a lot of walking, working in the fields, etc.). Their health problems are different; they include: lack of nutrient food and clean water.

In another paper, Tenga (1997) discusses how the traditional sports and games in Tanzania, like wrestling, rope-skipping, gambling and canoeing, were integral to the traditional process associated with the general survival of people. Exercise also took place during the traditional dances in which everyone participated. There was a richness of indigenous games, initiation rites and rituals. Modern sports, as they have been exclusively developed in the Western societies of Europe, were introduced to Africa during the colonial period. Tenga claims: ‘The introduction of modern sports was the most useful strategy used by the British colonial administration in molding the people in order to serve the interests of the colonial masters. It introduced the people in the colonies to Western ways of life and value systems, and thus made it easier for colonial administrators to control and rule the people . . . During this

period, traditional sport and games, just like the tribal languages, were completely prohibited in schools and missionary settings' (Tenga 1997: 3).

Post-colonial Africa was faced with the task of reconstructing society along the lines that emphasise Africanisation, the restoration of pride and cultural heritage, as well as unity among various ethnic groups. Tenga describes how Tanzania aspired to adopt the Ujamaa ideology whereby Africa should be developed on the basis of the traditional patterns of social life in African societies. Sports, both traditional (*ngomas* and dances) and modern forms, were included in the curriculum in order to promote the values of 'cooperation' and 'solidarity', the two principle values of Ujamaa ideology. The Sport for All project in Tanzania was dysfunctional because of its non-recognition of the socio-economic realities in Tanzanian society, its manipulative policy of free distribution of sports equipment and sport gear, and the non-incorporation of traditional sports and games into their programmes.

'What needs to be emphasised here is the fact that, rather than promoting mass sport, the project had been effectively promoting modern competitive sport, especially through its emphasis on "street club" formation. It should be noted that if the emphasis on "street club" formation had succeeded, it could have destroyed the whole flexible and accommodative culture of sport participation in Tanzania, since that would have implied that an individual can only participate in sport through her/his registered club, a typical Norwegian model of sport participation' (Tenga 1997: 5).

In his paper, Tenga (1997) tells in a footnote how he, in his first week in Norway, was personally caught in this clash between the Tanzanian culture of anybody joining in when they see someone playing football and the Norwegian culture of organised sports. On his way home to the student village, he saw some people playing football on the grounds beside a sport stadium. Very happy that he had finally found a place to play football, he decided to rush home to change and to join them. But he was not allowed to play and was instead given the address of their club to apply for membership.

Through the initiative of the Norwegian University of Sport and Physical Education, Norwegian sport aid has been responsible for the establishment of the Department of Physical Education, Sport and Culture (PESC) at the Faculty of Education, University of Dar es Salaam. Just like the Sport for All project, the initial idea for this project came from NUSPE and the University of Dar es Salaam was not enthusiastic about the idea of a degree course in sport. As the head of the Department of Educational Psychology, I was present at the faculty meeting when the initiative from the Norwegian University of Sports was discussed, and remember well the initial lack of enthusiasm for that particular department. It was mentioned that a department of special education might be more needed. Tenga mentions the fact that the degree course offered by the new PESC department emphasises the teaching of modern sports, and gives minimal attention to traditional sports and games. He also

mentions the struggle in meetings and the exchange of letters between NUSPE and UDSM for the inclusion of the word 'culture' in the name of the new department. NUSPE wanted the department to be called Physical Education and Sports, but the UDSM insisted on the inclusion of the word 'culture' in order to give the department, and thus its degree, a broader perspective, in line with sport in Tanzania. It took more than three months to resolve this dispute, after which the word 'culture' was reluctantly accepted by NUSPE. I remember reading through the first newsletters of this 'link', all published in Norway and sent back to Tanzania. Most of the articles were written by Norwegians who used the term 'Department of Physical Education and Sports'. When Tanzanians wrote, they would always name the department the 'Department of Physical Education, Sports and Culture'.

It would be interesting to examine the curriculum taught at the Department of Physical Education, Sports and Culture now – to what extent it is a copy and translation of the curriculum taught at the Norwegian University of Sports and how much has been done to restore Tanzanian culture through the incorporation of cultural practices like games, dancing and *ngomas*.

Getting indigenous knowledge into the faculties of forestry and agriculture at African universities

In a project review of the Faculty of Forestry at the University of Agriculture, Morogoro, Tanzania, the review mission states that it realises that 'women are the main managers of natural resources on land in Tanzania' (Brock-Utne et al. 1990: i). The review mission therefore expresses concern that very few women have graduated from the Faculty of Forestry and that there are no women among the academic staff. It also expresses concern about the curriculum at the faculty that pays too little attention to farm and community forestry, including natural tree vegetation for domestic use. Too little emphasis is placed on agro-forestry and rural problems. The review mission notes: 'For women, trees and forests are multifunctional, whereas men tend to concentrate on their commercial potential for timber and other goods' (Brock-Utne et al. 1990: 3). There are women-trees, the multi-purpose trees used for food, fodder and fuel, and men-trees, used for timber.

The Tanzanian biologist, Adelaida Semesi (1991) has experienced that village women are great science teachers in the fields of agriculture, medicine and food technology, and that they pass their knowledge to their children, friends and neighbours through practical training. A mother will show the children how to plant seeds, to weed, to select seeds and to identify pests, and she will even explain the different soils suitable for the different crops. She will also talk about food processing and food preservation – for instance, the drying or smoking of meat. Many women have accumulated knowledge about some of the causes and effects of crop failures and food spoiling, and have devised ways to overcome such problems. Some solutions work

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very well. The indigenous scientific knowledge is passed orally from generation to generation. Since the main bulk of this knowledge is not documented, it is not easily developed or challenged. As a consequence, the accumulated knowledge is seldom consulted to develop a better understanding of the environment. This, according to Semesi, can be illustrated by the Kongwa Groundnut scheme that failed because local people were not consulted on the suitability of the soils and the reliability of the climate to cultivate groundnuts.

Lancy (1996) points to sensitive and open-minded research by ecological anthropologists in recent years that has shown that the kind of subsistence practices followed by slash-and-burn horticulturalists, such as the Kpelle people in Liberia, far from being inefficient, are wonderfully adapted to the local ecology. He sees Western aid, whether in the area of agriculture or schooling, as something that destroys the original culture and sets the Kpelle society on the *Kwii* way. *Kwii* in the Kpelle language is a general term that refers to Westerners and Liberians who dress and talk like Westerners, live in towns, participate in the cash economy, and so on.

In order to avoid African societies going further on the *Kwii* way, a strengthening of research based on local experience, with the people of Africa, has to become the main task of the African universities. I have shown that, in the fields of African languages, culture and dances, physical education, and in the fields of philosophy, law and the study of the natural environment, Africa has a lot to offer. What is most needed now is for African researchers to be able to develop academic fields from African roots. The West can help by showing interest in the endeavour, by giving economic support and by stopping sending so-called 'experts' who come to teach and not to learn, who have the audacity to impose Western culture on a defenceless continent that is lost and needs to return to a familiar point – its own roots – before rushing on.

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The Place of Indigenous Knowledge Systems in the Post-Postmodern Integrative Paradigm Shift

Scott Fatnowna and Harry Pickett

Modern integrative paradigm shift

Writing of Africa, Menkiti (1979) claims that 'there is at bottom a fundamental disagreement as to what reality is all about' relative to Western society. 'The reality of the communal world takes precedence over the reality of individual life histories . . . man is defined by reference to the envioning community', achieving personhood involving 'processes of incorporation' and 'discharge of the various obligations defined by one's stations' (Menkiti 1979: 157–165). Unlike Western society, African society is not 'an additive "we"' of individuals 'but a thoroughly fused collective "we"'; individuals being socially constructed, compared to society being constructed of individuals. Aboriginal and other indigenous societies traditionally follow the same pattern. Western society has moved to 'a minimal definition of the person . . . the African view . . . a maximal definition' (Menkiti 1979: 159).

Of indigenous Australia, Yavu-Kama (1988) writes, for example, of 'the acquiring of knowledge for the whole group's learning', where there is not only interdependence of the learning experience, but 'such communal and collective learning clearly empowered each member's role expectations, within a system of reciprocal relationships . . . our social cohesion depended on the "us" feelings, the "we" feelings, the "together" feelings' (Yavu-Kama 1988: 91).

As these societies have come into contact and are living with Western culture, there is a tension, conflict and some accommodation with its very different orientation in contemporary indigenous society. Communal responsibilities have translated into individual rights, as custodianship has translated into ownership. This is one of the fundamental tensions

in dealing with the accommodation and co-development of the different knowledge systems and it necessitates concerns for protection.

Tarnas (1991) describes the history of Western thought since the Greeks as characterised by differentiation rather than synthesis, a Promethian effort of the human will to separate itself from an embeddedness in nature, and to gain control over nature as a determining agency in his or her own individual right. Attwood (1992: iii) cites Foucault's (1980: 17–30) similar observation in his archaeology of (Western) knowledge that pre-enlightenment 'self' was known from similarities, and since the appearance of analytical science, from differences. In this process, indigenous knowledge systems, including those of antiquity in Western culture, were excluded, marginalised and denegated. The Western world-view became objectified, empirical, material and rational. For the first time . . . people became the 'object' of knowledge, of science, in particular of the newly emergent 'human sciences' in the modern epistemological domain, both as 'man' of the universalist elitist and exclusivist pretension of the dominant culture, and as 'Other' (Foucault 1980: 345–387). For both, man as subject, and as embedded in the world, became separate and 'alienable', just as social capital became materialised, and, along with the environment, all became subject to control, ownership, commodification and exploitation.

Having achieved this degree of differentiation, the trend of this new psyche is now to re-integrate with all from which it has temporarily separated itself in reaching this degree of functional autonomy. For such a synthesis to be possible, the closed defences of rationality and objectivity are opening to establish a new partnership with all that has been held beyond the pale for so long – with spirituality and the numinous, the soul and emotions, intuition and imagination. This is a partnership that relinquishes dominance and control, and moves to collaboration and negotiation.

The wisdom of Riley's (1997) inaugural indigenous keynote address to the annual conference of the Australian Psychological Society, 'From Exclusion to Negotiation', describes the way in which this wider historical cultural change is taking effect in the local, Australian context – from indigenous people being classified as 'goods and chattels', to recognition and reconciliation toward political co-determination.

This is a time of *rapprochement*, an integrative coming together of world-views in a way that is not just pluralistic tolerance, respect and co-existence, but goes beyond that to effect transformation in the sense of the emergence of a new synthesis that incorporates the existing diversity of world-views. There is also a new consciousness associated with this. We are making progress – towards a world in which the human species has taken possession of the symbolic skills that made it human, and in which people are no longer enslaved by their abstractions. Ernest Becker described it as 'one of the great liberating breakthroughs of all time' (Anderson 1994: 243). However, tension exists in 'the pluralism of our time', because people are at all different places in this time – 'pre-modernity, modernity and post-modernity coexist' (1994: 239).

The Aboriginal Australian 'outstation movement' (*Return to country*, Senate Report 1987) is a metaphor for and a practical example of this broader change – a liberating moving away from a dominating context to establish self-identity, empowerment and self-determination, and then a re-engagement from a position of security of one's existence in one's own right, to establish partnership that is mutually life-enhancing. The ontological process of autonomy in individual lives also has certain periods of disengagement, self-reflective strengthening and then re-engagement in partnerships of contracted interdependencies that need, incorporate and make room for the recently developed independence.

Although I have some difficulty with the parallelism to Grof's perinatal processes about which Tarnas (1991) is enthusiastic, after his Esalen experiences, his example of the liberation of women from domination through the struggles of the feminist movement is convincing. His description of the environmental movement and the resurgence of non-religious spirituality from its early roots is also interesting. In each case there has been the usual early period when, as in a lot of social change, there is a polarisation or over-reaction to establish recognition and strength prerequisite to an effective presence in dialogue and discourse (defining oneself as 'different from' being important in the process of claiming space to define oneself through internal referencing).

The force it takes to create this space in the face of established and resistant hegemony often produces an exaggerated and confrontational antithesis (such as radical feminism, the anti-development lobby of the green movement, and in our context, the anti-white elements of the black power movement – each spawning an equally distorted backlash). However, within the space that is opened up there is inevitably a growing maturity of dialogue, while the ramparts are held by the militant. An important issue arising from this is that all of these interconnected trends, on the same wavelength, are not only a result of this overall paradigm shift, but also form the shift itself, together and mutually reinforcing. It then is an example of the emergence and re-emergence of causality and its conceptualisations that complement the linear model that has been the focus of the Western world-view of prediction and control – to the exclusion of other ways of perceiving interconnectedness.

All great cultural paradigm shifts, according to Kuhn, involve interconnected processes across the diverse facets of life. They move together and play out this broader change in ways that find particular forms of expression in different local circumstances, and find theoretical and practical parallels in particular movements in different areas of knowledge and understanding. From the ignorance and depreciating ideology and social theory that claimed *terra nullius* as a convenient rationalisation for colonisation and ill-treatment, there is a need for honest recognition of the existence of indigenous knowledge systems. In fact, there is a need for those knowledges themselves (Knutson and Suzuki 1992), not just for the recognition

that they exist. The knowledge paradigms of the future are beginning to develop by reaching out to those excluded, to move together toward a new synthesis.

Empowerment is rarely a process of voluntary relinquishment of control, authority, resources and privilege; it is usually more a matter of resuming power (Gilbert 1973), as Mandela found. Where there is power and privilege, there is never a clean shift of paradigms of understanding (witness the Inquisition) that supports, justifies and rationalises that hegemony, but rather a continued exclusion of other knowledge systems. Under pressure, there may be co-option, as inclusion without a shift in ultimate authority, power and control.

Similarly, Fanon (1967), writing of the Algerian liberation struggle, identifies the first stages of any non-revolutionary transfer of power as usually a change of actors, without a change in the structures of privilege, power and oppression, and as an internalisation of attitudes and 'knowledge' that have sustained those systems against the culture of the new incumbents – even where the incumbents are of a majority culture. In the early stages, or where there is a majority colonial culture, this can amount to co-option within the dominant paradigm.

Ultimately, it is necessary to develop a culture-based infrastructure, and systems, processes and practices that derive from and facilitate the right to practice one's own cultural ways within a multicultural society, without this causing any disadvantage. Rather than (only) being trained into dominant culture jobs, or reclaiming those jobs without changing practices, the jobs themselves and the systems they support require complementation, replacement or overhaul from a culture-based perspective. Tension can arise between the new incumbents, 'behaving as the masters did', and the members of their own culture who hold expectations of change and socio-cultural justice. This is seen as one of the main tensions in the transition from apartheid in South Africa (Ventner 1997), in Algeria – as described earlier by Fanon (1967), in Tunisia (Memmi 1974) and in Montenegro (Djilas 1957), with Nyerere warning that in Africa 'privileged Europeans and Asians might soon be replaced by a "permanently privileged class of educated Africans"' (Caute 1994: 93–4). Dore (in Huntington 1998) describes this as a not uncommon 'first generation indigenisation phenomenon' internationally. It is common in many places where a direct 'second generation indigenisation process' is implemented, where modernisation proceeds without following Western values and practices, but instead with a re-strengthening of the core values of the indigenous culture.

Until the culture-based policy, programmes and practices take effect alongside the policies of access and equity, and replace the effects of earlier policies of assimilation and integration, this is also one of the intra-cultural concerns in Australia as mainstream educated indigenous people come to occupy positions of influence in all fields. With the first graduates in Aboriginal teacher education, in health, and in other areas, this was experienced as an issue. Tracing the history of 'self-determination' in the more political arena, Weaver (1993: 55) describes that, in general, 'the

first generation of national organisations was found wanting by both the Fourth world peoples and the nation-states', with reform measures necessary to give 'birth to a new generation of national political bodies'. In this context she examines the National Aboriginal Conference (1983–85), and the advocacy of Riley in particular, against this initial conservatism, and his call for 'credibility' and 'grassroots representation'. Even in the longer term, and with the best intentions, there is a tension because of the danger that the realities (knowledges) and identities of the totality can tend to be defined by the articulate few in the 'ebony tower' (Oxenham et al. 1999). This can be felt as an intra-cultural version of relative exclusion by a 'speaking for' and a created 'otherness' by those whose Aboriginal life experience and circumstances may not be seen as the same as those for whom are spoken. It is also problematic that, in an inter-cultural perspective, their own people, who are less publicly articulate, may regard their legitimation to reside partially or even predominantly in qualifications, positioning, identification and interests within the dominant colonial cultural paradigm. This concern can be a mixture of perception and reality, and a source of conflict in the negotiation for legitimacy of voice, authenticity of representation, and ultimately of what is taken to be knowledge.

However, within this scenario, indigenous and non-indigenous people with the necessary critical awareness have increasingly been transcending these problems and have become part of the culture-liberation/partnership solution, rather than perpetuating the culture-dominance problem (Dudgeon, Pickett and Grogan 1992).

For this reason, complementary to the call for 'empowerment', the Draft Universal Declaration on the Rights of Indigenous Peoples (1991) claims 'self-determination' (*First Report* 1993) as a necessary right in international law to 'freely determine their relationship with the states in which they live, in a spirit of co-existence with other citizens, and freely pursue their economic, social, cultural and spiritual development in conditions of freedom and dignity' (Dodson 1994). This is not a separatist agenda, the declaration continues, to describe necessary support and resourcing (including compensation and restitution) of indigenous ways, and, equal access as citizens to mainstream society. The emphasis is on equality ('right to participate on an equal footing') in a negotiating partnership, where, on matters affecting the lives of Aboriginal people, they are to provide the direction, exercise the authority and preserve the right to a degree of autonomy – without relinquishing any rights to freely and fully participate in the main society. This includes identifying and de-constructing the mechanisms of 'any form of assimilation or integration' and the 'imposition of other cultures or ways of life'.

In addition to liberation from domination, there is, in our case, also the danger of neo-colonial exploitation and appropriation of indigenous knowledge systems from the active and re-construed remnants of the dominance systems before partnership and negotiation are effected in appropriate ways. (Similarly dangerous is the appropriation of women's knowledge without a substantial shift in male-dominance

hierarchies in academia, government and commerce.) This is part of the struggle at the moment, and it is the essence of the call for empowerment and self-determination, the insistence on the negotiation of these matters where indigenous peoples reclaim the custodianship of their own knowledge systems and the right to speak and represent them, and to be determining agents of co-operative contemporary change, and creative sharing of these knowledge systems. The draft declaration specifically cites 'the right to special measures for protection, as intellectual property, of traditional cultur(e)', although not addressing cultural development in a contemporary context. Culture protection is a necessary part of the negotiations in partnerships that will determine the diversity of futures for humankind and will ensure an authentic (and not spoken for) presence of indigenous along with all other peoples.

Modernisation and 'progress'

From the emergence of a linear concept of history and the subsequent 'Great Chain of Being' paradigm, suggesting the progression of knowledge and the perfectability of species in mankind from 'primitive' society culminating with Western 'civilisation', there has been a tension with traditionalist societies. 'The notion of unilinear cultural and social evolution was developed mainly by Tylor 1865, Spencer 1876 and Morgan 1877', following Darwin 1859, and which 'suited the colonial imperialism of the time' (Segall, Dasen, Berry and Poortinga 1990: 96). Of special concern has been the assumption of superiority and of associated 'responsibility' to facilitate entry of traditional societies into the 'developed' world. However, the exploitation of labour and natural resources that this entails on a massive, unsustainable and seemingly unstoppable scale, has increasingly been exposed and the 'progress' of increasingly few within and between nations at the expense of others held to question.

Similarly, much of the evidence developed in support of the social evolutionary perspective (e.g. Hallpike 1979) has been re-interpreted more recently in terms of differences related to an 'ecocultural conceptual framework', where cultural variation occurs in relation to particular contexts, obviating the value judgement implicit in the earlier notion (Segall, Dasen, Berry and Poortinga 1990: 150). As a significant amount of this early information was gathered from investigations conducted with Australian Aboriginal people, there is understandably a hostility to research that served explicitly or implicitly to classify them in this way as 'less than' on a developmental dimension (Hallpike 1979, from Dasen's 1974 Piagetian testing with Australian Aboriginal groups of various degrees of culture-contact) or modernisation (Dawson 1969, from his West African 'traditional/modern' attitude studies extended in Australia). More recently, Western modernisation, progress, culture and thought are increasingly seen as a temporary epoch in human history, with both advantages and disadvantages. This must and is seeking to re-engage with the more holistic,

integrated conceptualisation of sustainable life held by cultures that have not been down the path of 'westernisation'. Huntington (1998) refers to modernisation without westernisation.

All considered, this is providing a point of *rapprochement* of 'modern' and 'older' cultures (including modern cultures' older roots), where each complementing the other opens the possibility of a viable future for humankind. However, the reality within this hopeful vision is hedged by realities of increased rapaciousness to reap what remains – a battle of (re)constructive vision against rearguard entrenchment of hegemony, exploitation and 'mutually assured destruction'.

Levels of integration

Indigenous knowledge systems require protocols of recognition and protection, acknowledgement of ways of self-determining development, and negotiated processes of relationship with other knowledge systems.

Australia and New Zealand have, in the last decade and before, been active in participating in the promotion of the recognition of these requirements of indigenous cultures internationally, by the United Nations (UN) and, thereby, the various nation states. Networking with other indigenous populations, the Draft Declaration on the Rights of Indigenous Peoples was prepared by a United Nations Working Group on Indigenous Populations (Knudtson and Suzuki 1992; *First Report* 1993). In the B'okob' Declaration (Chimaltenango), the first World Summit of Indigenous Peoples held in Guatemala in 1993, a satellite meeting for the World Conference on Human Rights, Vienna, sought approval of the Draft Declaration by the UN and its ratification and implementation by the member states.

At a national level, in Australia, this responsibility was vested in the newly established Aboriginal and Torres Strait Islander Social Justice Commission of the Human Rights and Equal Opportunity Commission. Previously, following the international civil rights movement of the 1960s, the federal government of Australia assumed powers from the states to legislate on matters to do with Aboriginal people through a referendum in 1967. The House of Representatives Standing Committee on Aboriginal Affairs brought their realities as they saw them and their recommendations into policy discourse through the first national consultations with the indigenous population (*Aboriginal Health* 1979 and *Aboriginal Education* 1985). These reports recommended recognition of Aboriginal and Torres Strait Islander knowledge and practices, and sought ways to bring these into partnership with the mainstream culture. The history of this process has been embattled, but has been persistent in reclaiming space, voice, presence and power by the indigenous community at a national level over its own affairs, across all areas, from economics and law to health and education.

At state, regional and local levels, there have also been recovery, development and application of indigenous knowledge and practices through the development of Aboriginal community-controlled organisations and through Aboriginal participation in the mainstream infrastructure. However, as at national level, there is a constant tension between the resistance by and pressures from non-Aboriginal authorities and the knowledge and practice systems from which they derive on the one hand, and the frustration, demands and expectations of the Aboriginal community wishing space and resourcing for its often very different ways on the other. Aboriginal management, in particular, is in the difficult negotiating place in between: protecting indigenous knowledge, values and practices on the one hand and meeting non-indigenous (usually government) criteria and processes on the other, and developing understandings and finding accommodations between the two (Collard 1997).

In tertiary education programmes, for example, the persistence and success of indigenous students in mainstream courses relate to macro-level issues as much as to individual capability and motivation (Walker 2000). Problems arise in accessing mainstream knowledge systems for indigenous students where the course content is experienced as 'culturally inappropriate and insensitive' (Sonn, Bishop and Humphries 1997: 1), as well as where there are 'culturally incompatible learning and teaching styles' and 'racism and discrimination' by both staff and students. Most of these students were also having difficulty with relocation from rural and remote area communities, with being adults with dependants experiencing social problems at universities set up largely for single students out of high school, with unfamiliarity and disorientation, and with separation from family and community support. In the integration of knowledge systems, there are practical issues of access and process in the venues where this is already happening.

There is also a resistance to 'making space' for alternate knowledges. We have shared these issues at the Centre for Aboriginal Studies with Graham and Linda Smith (Mead 1996: 327–342), from their experiences in New Zealand, and with Gilmore, Smith and Kairaiuak (1997), from their similar struggles in Alaska. Sonn, Bishop and Humphries (1997: 8) cite similar experiences from our own tertiary students, that 'only certain epistemologies and ways of knowing were advanced', Western ones, and at the same time the educational system 'devalued Aboriginal ways of knowing'. Accordingly, 'Aboriginalising the curriculum' has been a policy and strategic plan at Curtin University for several years, with participation by senior university executive, devised and driven by the indigenous academic staff at the Centre for Aboriginal Studies (Collard 1998; Walker and Humphries 1999; Dudgeon, Abdullah, Humphries and Walker 1998). This not only involves training in 'cultural awareness' for university academic, administrative and support staff, but also training in 'ways of working' with Aboriginal people for staff and students of the various professions and 'indigenising the curriculum' through the introduction of

Aboriginal cultural content, and ways of knowing and practice by Aboriginal staff (in psychology, for example, Smith 1997; Collard and Pickett 1997; Sonn, Bishop and Garvey 1999).

Indigenous cultures are also part of the 'globalisation of culture', whereby co-existent processes of 'cultural integration and cultural disintegration' create shared understandings, values and co-operative actions on a 'trans-national' and 'trans-societal' level. This is not alternate to but complementary to the preservation of cultural identities. It is not an absorption by and disappearance into the cultural homogeneity of a larger entity reminiscent at another level of the earlier assimilation policies within states – such as the fear of a 'cultural imperialism' of 'Americanisation and mass consumer culture as a proto-universal culture riding on the back of Western economic and political domination'. Rather, it is a movement that recognises and protects the 'diversity, variety and richness of popular and local discourses, codes and practices' (Featherstone 1990: 1–2), while at the same time developing viewpoints and understandings that facilitate co-operation and co-ordination at a totally inclusive global level.

The increasing dialogue between indigenous societies, and between them and others around the world, has created a level of discourse and common concern that has 'global' perspective. This, on the one hand, inevitably involves competing at that level with ideologies that seek hegemony and have established mechanisms for the perpetration of their own particular values, purposes and privilege, such as the subjugation of indigenous and Third World people that is necessary for the continuation of global capitalist economic imperialism (like the International Monetary Fund, the World Bank, and, many believe, the United Nations). On the other hand, others see an emerging change that privileges for the future the past wisdoms of indigenous cultures and pre-westernisation perspectives and values (Capra 1983; Knudtson and Suzuki 1992). Berry sees the alternative to incorporation within a dominant hegemony, which he names an 'imposed etic', as being a 'derived etic' (in Segall et al. 1990: 54–5), where (to extend his concept) emic meets emic and the features that the cultures have in common and that they develop together are articulated and comprise a new working level of knowledge, understanding and action.

Integration within different domains of knowledge – tensions in the integrated implementation of indigenous knowledge

Integrated indigenous knowledge systems and the much more *differentiated* domains of knowledge of the non-indigenous majority of the population, intersect in many different areas. Harris (1988) regards Aboriginal and mainstream knowledge and practices as essentially distinct domains that require 'domain separation', as there are not only differences but also essential incompatibilities. Christie (1988) argues for the recognition and central priority of education being to maintain unity and

integration within the indigenous knowledge domain as it is conceptualised and actually learned and lived. Differentiation of knowledge and expertise within the non-indigenous domain has become separately bureaucratised to the extent that this is a threat to the integrity of indigenous lifestyle. It also significantly limits the relevance and effectiveness of the separate services that are associated with this – to the extent that the National Aboriginal Health Strategy prioritised ‘intersectoral co-ordination’ as a key requirement of government in dealing with Aboriginal people and communities.

The competitive dynamics of power and exclusion, and access to and control of resources, are played out within each of these knowledge domains. Each is seeking dominance, legitimacy and hegemony, just as in the overall picture – in somewhat similar ways to the struggles of alternate or complementary paradigms within Western culture to gain recognition, legitimation and influence (Weber in Freund 1968; Habermas 1972). That this is also played out within the interface with Aboriginal communities and with respect to their resourcing, poses a tension with the holistic priorities of those cultures, including their integrated knowledge systems.

Knowledge systems operate within structures that reflect the ways in which knowledge is created, learned, maintained and re-shaped. Structurally speaking, these current systems need to be re-visited to see where there is room for change. In this, there is the need to identify and clearly articulate learning and knowledge creation in which practice, action and language are integral to the system.

Since the mid 1970s, there have been a number of significant national inquiries regarding Indigenous Australians that have sought Aboriginal perspectives on key issues, with a view to planning and implementing change in informed and co-operative ways. While there have been some successes, by and large the transition from recommendations to policy, strategic planning and implementation has resulted in a disappointing level of outcomes ‘on the ground’, especially ones that make effective difference. It seems that the development and operation of monitoring and compliance mechanisms are under constant threat of emasculation through withdrawal of funding, as in the case of new initiatives themselves. Notable examples are the Royal Commission into Aboriginal Deaths in Custody (*Justice under scrutiny* 1994), the National Aboriginal Health Strategy, mentioned above, and the National Inquiry into the Removal of Aboriginal and Torres Strait Islander Children from their Families (*Bringing Them Home* 1997). In addition, there are real dangers not only of resistance by, but also of co-option by the existing power structures and knowledge systems.

Health

In health, for example, the ‘complementary’ (alternative) therapies have had an historical struggle with the dominant medical paradigm since it established legiti-

macy and monopoly for its knowledge and practices by alliance and development with the growth of Western science (Salmon 1984; Joske 1987). The same happened, more peripherally but nevertheless successfully, in the profession of psychology (Siddle 1996), but the 'scientist-practitioner model' is subject to current debate.

Aboriginal people have a model of health care that is personal rather than impersonal, and involves family and community, social practices and spirituality (Swan and Raphael 1995). The traditional 'general Aboriginal belief system . . . viewed health as being associated with social and spiritual well-being, rather than the physical world'. Currently, in the remoter areas, the understanding of causality is still more spiritual in agency and the reason given as related to disturbances in social relationships (Cawte 1996). In the contemporary situation 'the widespread continuity of traditional Aboriginal understandings of health and disease is clearly (still) of great importance'. There appears to be a degree of amalgam of Western and Aboriginal beliefs, more so in the more urban areas than in the remote areas, yet even in more remote areas there is a significant amount of complementary use of both traditional and Western treatment practices. Health services in both areas require 'a clear understanding of socio-economic aspects and of general and specific cultural correlates' (Thomson 1989: 194–200).

Franz Fanon, a Martiniquan psychiatrist involved in the Algerian liberation struggle against French colonialism, believed that 'the first condition of mental health is social health' and he 'attacked the misuse of psychiatric techniques to adapt alienated men to an alienating environment' (Cauter 1994: 38–9). In remote Australia, Gray emphasised 'the continuing importance of the *mabarn* man'. . . who holds 'detailed knowledge of his patients' emotional state and the social factors which he believes (often correctly) contribute to this . . . The continuing significance of traditional medicine reinforces social identity and tends to support current social norms' (1979: 182).

Here and now, the Aboriginal Social Justice Commissioner (Dodson, *Second Report* 1995) of the Human Rights and Equal Opportunity Commission in Australia stresses that 'the perspective of health held by Aboriginal people at community level is usually fundamentally different to that held by those who design and administer health programmes . . . the local reality of the circumstances in which our people live is the general starting-point of the indigenous approach . . . a perspective shaped by intimate knowledge of particular communities'. It is 'a holistic inclusive definition of health . . .' The report emphasises that 'this clash of perspectives reveals profoundly different understandings, and has immediate implications as to the practical action which needs to be taken if genuine shifts in Aboriginal and Torres Strait Islander health are to be achieved'. There is a 'split in perspectives which fractures the avowed concept of a holistic health approach to indigenous health' (1995: 17). Cawte, from some decades of pioneering ethnopsychiatry in Australia with the Aboriginal population, concludes that the 'holistic is a convenient term for the

broad bio-psycho-social-cultural stance of the modern doctor, who looks at factors in each of these domains in each case of illness' (1987: 79).

The *Second Report* (1995) documents that the National Aboriginal Health Strategy (1989) has largely not been implemented and that funding has been less than 10% of that required. What funding there is, is being split between numerous governments and departments, which, despite the recommendations for 'inter-sectoral co-ordination' and some recent activities at governmental committee level in this regard, is not translating into the integrated casework and service delivery necessary to effect a holistic approach to health. Overall the system 'denies a locally-based indigenous perspective on health matters' (1995: 18–19). Anderson and Brady (1999) consider the continuation of these issues in some detail in terms of the constraints on even the most directly involved agencies, the Aboriginal community-based health services. Despite the fact that they, like other such Aboriginal corporations, are based on the principles of community control and community accountability, this accountability, and hence control, is at best conflictual (Collard 1997). This has a direct relationship to the continuing dominance of the colonial knowledge system in the determining of evaluative performance criteria for funding provisions, and a secondary relationship to service design and training curricula and staffing. Anderson and Brady contextualise this within the process of the 'ongoing transformation of Australia's internal colonial relations' (1999: 190).

Cotton writes that 'the medico-pharmaceutical apparatus has proved enormously proficient in maintaining hegemony over our health system, and adept at assimilating reform initiatives . . . The currently dominant service delivery mode is (still) the BIOPsychosocial model' (1998: 32).

'The scientific method of the biomedical model by and large excludes reference to non-Anglo-Australian beliefs about health care, and differences in belief within the Anglo-Australian population' (Petersen 1994: 94–96). 'Science profoundly influences what it counts as knowledge' (Willis 1989: 269). The actual system or structure defines and determines what is appropriate. The structure is built on the assumption that it is right and all knowledge can only be verified by its own assessments. This process is experienced as a closed system. 'The traditional basis of opposition from the medical profession to the complementary modalities is their unscientific basis', yet there is increasing practice of such by medical practitioners, and acknowledgement as long as the medical profession remains in control and the arbiters of inclusion and exclusion (Willis 1989: 269).

In the daily life of Aboriginal people, there continues to be complementary practices of indigenous and Western health and mental health care to various degrees in different parts of Australia (Berndt 1982; Biernoff 1982; German 1987; Cawte 1996; Reid 1983; Gray 1979; Nathan and Japanangka 1993) with the legitimacy, from the client's point of view, residing in the two different cultures. However, control at all levels of policy, registration, health economics and research is firmly held by the

medical profession. From some decades of investigation with Aboriginal communities, Tonkinson (1982) describes the dominance of knowledge systems and practice: a 'lack of understanding of basic ideas and values, especially on the part of doctors and nurses, who do not question the imposition of their Western views of health and healing on Aborigines' (1982: 240). The arenas of dominance and control in health knowledge and 'practice are then political/professional, as well as poverty/class (Lupton and Najman 1989: 14–16). Participation by Aboriginal people and practices occur only within, and only with and as approved by the medical profession – for example, the role and practices of Aboriginal health workers (Saggers and Gray 1991; Reid and Trompf 1991). There is overall control of policy and funding, and therefore control of training, professional recognition and legitimation, services, and research and development. This amounts largely to 'white bosses, white ways; black faces, white ways', ameliorated by Aboriginal participation at several levels, and concessions to 'cultural appropriateness' (Garvey 1995).

However, 'clinical legitimacy has become increasingly important as the basis of politico-legal legitimation, and has come to assume greater importance than scientific legitimacy' (Willis 1989: 269). There has been some convergence due to some shift from legitimation in terms of congruence and commensurability with the medical scientific paradigm, to legitimation through effectiveness. This has opened the way to some extent for Aboriginal health practices. However, the funding, staffing and practices of community-controlled Aboriginal health organisations are still ultimately approved and controlled by the medical profession in government, although there are increased consultation, service management and professional staffing by indigenous professionals receiving a greater degree of culture-based training (Foley 1982). Additionally, this training, allowed and determined appropriately, also tends to be only that which those structures themselves deem acceptable, successful and meaningful in their terms. Any thoughts of the training process actually producing professionals who are critical of the structures and their appropriateness are met with firm denial of access to qualifications or employment. In this way, the control and power within the structure are maintained.

Greater involvement of indigenous perspectives in health planning at all levels also opens possibilities of moderating change in some areas to prioritise change in others. The National Aboriginal Health Strategy (1989) coincides with the general trend nationally toward the diversion and re-balancing of funding – for example, technological tertiary health care interventions prioritise the 'quality of life' perspective of primary, preventative and positive health care, with a focus on health promotion involving self-responsibility, care and whole life quality. 'In what may now be called the post-market era, health policy is being shaped by a new configuration of ideas . . . as policy makers face the absurdity of spending more and more on curing illness, while doing little to prevent it . . . The balance of power between the primary

and acute sectors has shifted, probably irreversibly towards the former' . . . including 'commissioning health services at a local level' (Coote in Hancock 1999: vii).

After the first Aboriginal medical service was established in Redfern, Sydney, other community-based ones were progressively established to provide 'an independent, alternative system of health care' for the Aboriginal community, to adopt both a preventative and curative approach, and to employ Aboriginal ways in conjunction with those of Western health care. The core issue is to enable *control* beyond the 'participation' and 'involvement' conceded by government (Nathan and Japanangka 1993: 39, 201, 206).

Since then, there has been an ongoing struggle to drive the determination and accountability of health policies and practices from the diversity of locally defined needs and resources of Aboriginal communities. This has run a variable and shifting course in Australia. Overall, there has been progress, and self-determination in Aboriginal health is finding its expression beyond the assimilatory and power-retaining tendencies of mainstream bureaucracies, and the domination of tertiary technologies, institutions and non-indigenous conceptions of health (Anderson 1994; Anderson and Brady 1999).

The engagement of indigenous knowledge and practices with those of the mainstream should also be facilitated by the proposed move to 'a rights-based framework', not only for 'adequate and affordable health care', but also culturally appropriate health care (Hancock 1999). This was the redistributive international agenda set in the early 1980s by the WHO in its *Health For All by the Year 2000*. Yet, since the late 1990s, within national economies such as Australia's and elsewhere, this is in conflict with a still increasing privatisation and neo-liberal 'marketisation' of health as an expanding business sector, with a decreasing accommodation of 'the structural effects of poverty, unemployment and disadvantage' (Hancock 1999: 1-10; Anderson and Brady 1999: 188-189) – relative to which 'Aboriginal people suffer the poorest level of health of any identifiable group of Australians' (Moodie 1987: 13 in Anderson and Brady 1999: 187).

Higher education and professional training and practice

Some of the issues at the level of schooling have been discussed above. Here we will look at some of the substantial successes in higher education. These have not come about without consistent and persistent struggle, and are constantly at risk in the context of changing priorities of mainstream society.

At Curtin University, the difficult issue we have mentioned in the broader national context regarding Aboriginal issues – that of moving beyond the formation of an 'enabling' policy and 'translating these attitudes of mutual recognition, respect and support into practical and tangible forms' . . . where they are 'made real in practical, down to earth processes' (Dudgeon, Abdullah, Humphries and Walker 1998:

15) is being recognised. As those authors describe, there has been considerable success in the local and national higher education programmes of the Centre for Aboriginal Studies at Curtin University, and in the other tertiary institutions in the state (Walker 2000) and elsewhere.

Developing progressively from modest beginnings over two decades, much of this achievement happened owing to the recognition of the importance of the development of appropriate policy, planning and support at all levels within the university. This gradual process involved claiming participatory space, developing vertical involvement and commitment through to the highest levels, and a strategic plan for Aboriginal involvement in the university (Curtin Aboriginal Education Plan). The Centre achieved consistent national government recognition for excellence (Department of Education, Employment and Training Quality Reports). A later development was to sustain and continue the progress of these achievements through the formation of an active implementation body (Aboriginal Education Policy Implementation Committee). Key factors in this ongoing success have been that the multifaceted programme has been developed and driven by the Centre for Aboriginal Studies, the Centre has been managed by senior Aboriginal professionals, supported by an Australia-wide Aboriginal Advisory Committee, and strong links have been maintained with the Aboriginal community at all levels and with Aboriginal programmes in higher education nationally. Secondly, the crucial factor has been the centring of all programmes in contemporary Aboriginal life, its realities and its diversity. The core of the Centre is its culture-based degree programmes in community management and development, health, science and technology, and art, which attract a national participation by mature-age Aboriginal and Torres Strait Islander people and staff. Complementing this, the Centre and its programmes have strong active relationships and a co-operative partnership within the university itself, and with other universities, professional bodies and employers (Walker and Humphries 1999).

The central concern of the Centre is to work with Aboriginal knowledge systems in selective partnership with non-indigenous knowledges, and to design and deliver culture-based university degree courses as a participatory developmental context for Aboriginal and Torres Strait Islander professionals, to gain the knowledge and skills to be able to work in those ways in their communities and in government, commerce and industry. They are programmes for and by Aboriginal people, with some complementary participation by non-indigenous professionals. The curriculum is determined by contemporary community needs of Aboriginal and Torres Strait Islander people, and the main body of knowledge, theory and practice that forms the 'text' is developed together from their shared experiences. This comprises the knowledge and skills sustaining and developing Aboriginal and Torres Strait Islander life, and secondary knowledge and skills that enable professional and community engagement with mainstream society. Re-visited largely anew each time, with new participants from various communities and roles, the pedagogy is essentially a dynamically

organic process wherein the knowledge, theory and practice are enriched and taken a little further in each encounter. It is re-grounded each time in the immediate realities, culture, experience, knowledge, concerns and aspirations of the participants and their communities. With mainly block-release programmes, there is immediate application and feedback of all learning. This also occurs as an ongoing full-time developmental process in and with the participants' own community and employment, and supported by staff visits. A recent review of these culture-based programmes (Walker 2000) attests to their considerable effectiveness.

To this have been added an indigenous postgraduate programme (Abdulrah and Stringer 1997) and a key nationally funded indigenous research centre (Roberts and Pickett 1997). These draw from the above undergraduate areas and communities, and focus on indigenous knowledge production, development and issues of application.

The Centre is active in involving Aboriginal and Torres Strait Islander professionals from the various communities to participate in developing and delivering the teaching programmes. Many of the blocks of intensive training are held in various regional centres around Australia. The Centre further is continually active in in-service training and the development of consultancies with Aboriginal professionals and Aboriginal agencies around the country.

There are other issues concerning indigenous knowledge in higher education beyond the central focus on its participation and development in culture-based programmes. University enclaves such as the Centre also provide preparatory alternative entry courses and then ongoing support to students entering mainstream degree and postgraduate programmes. The central issue in doing so is the strengthening of an indigenous cultural identity and a culture-based sense of belonging, purpose and challenge to sustain students as they follow their mainstream courses and graduate into employment. From the above flow several important aspects, including dealing with differences in knowledge, values and ways of learning, dealing with what is often experienced as insensitive, discriminatory and racist attitudes, behaviour and expectations, and negotiating the interface between indigenous knowledge, values and practices and those of the mainstream society – especially in terms of the diversity of life-styles of the student and his or her family, community and occupation – and issues of knowledge and culture protection, recognition and respect. Tertiary skills preparation, development and support, including literacy, are at the core of these activities (Sonn, Bishop and Humphries 1997).

After completing one summer school orientation programme, for example, students felt that they 'were able to identify and consolidate many of their own strengths – cultural and personal – and more able to maintain cultural centred-ness with subsequent mainstream study and as a professional' (Watts et al. 1999: 45).

External to this, in all the programmes, is the ongoing commitment to the training of cultural awareness, promoting sensitivity, understanding, respect and

competence towards cultural aspects of professional activities of non-indigenous professionals and agencies with indigenous professionals, clients and communities. This both extends the promotion of appropriate ways of working and assists ongoing knowledge development in contemporary application.

In all aspects of this 'multifaceted strategy of positioning, accrediting and strengthening indigenous knowledges, values and practices in partnership with that of the mainstream society, there is much more of concern than a simply material conceptualisation of knowledge. In a keynote address to the Australian Federation of University Women's National Conference, Dudgeon, Abdullah, Humphries and Walker (1998) emphasise the importance of 'increasing the social capital within and between the university and the indigenous and wider community' in indigenous higher education. The agenda is that 'indigenous people have an equal right to be central rather than peripheral in discussions to achieve a resolution to all issues that impact on their lives and well-being, just as equally as the wider Australian society' (1998: 14). Relationships are central to Aboriginal cultural ways, therefore the achievement of these outcomes entails the development of partnerships within the diversity of indigenous culture and with the wider non-indigenous community that recognise and respect this and participate within that understanding.

However, these relationships are not necessarily benign. The accessing of mainstream knowledge, infrastructure and practices holds a tension for Aboriginal people – 'we are conscious that there is a fine line between providing indigenous people with opportunities in education and training, and assimilating them into mainstream society'. This can involve loss of identity and cultural learning in a university context. The issue is not just the direct contact with mainstream knowledge content, but also 'that by measuring and judging their contributions within society only in terms of mainstream goals and standards, there is a risk of negating the strength of indigenous cultural knowledge and ways' (Dudgeon et al. 1998: 4).

The above also apply to many other aspects – for example, access to mainstream funding by community organisations, where many graduates gain employment, with evaluation criteria being determined by mainstream bureaucracy; the selection and staff evaluation against non-indigenous criteria in the many government agencies where graduates are employed; and criteria for the supervised experience requirements for professional registration. These everyday tensions are of serious concern for Aboriginal students, graduates, experienced professionals and managers, and indicate that there are implications for the integration of knowledge systems that do not cease when students complete their university careers.

Accordingly, 'we need to ask whether, by encouraging indigenous participation in mainstream courses under the banner of equal opportunity, we are inscribed in a new form of neo-colonialism or opening up greater pathways to freedom from oppression . . . we are conscious that by using or co-opting the language [such as equal opportunity or social capital, even if our purpose is to critique or challenge and

not just gain inclusion and equal status within it] . . . we risk becoming inscribed in it' (Dudgeon et al. 1998: 2).

The solutions in which the Centre is engaged involve the privileging of indigenous knowledge, values and practices in the personal and professional areas, and privileging indigenous critique of secondary involvement with non-indigenous knowledge systems and ways in indigenous ways. This paper has described how this has been operationalised in university culture-based degree programmes, in preparation and support programmes for those accessing mainstream courses, and in the development of the research and knowledge production and critique capabilities of all indigenous staff. We have described the ways in which we have prepared the way for this in the professions, the government and the community, through including Aboriginal content and people in cultural awareness training, in-service programmes and professional forums such as conferences and publications. We have also described the importance of establishing policy, strategic planning, monitoring and implementation within programmes, and their importance as frameworks for the commitment of negotiated partnership at all levels between these programmes and the university, government, professions and wider indigenous and non-indigenous communities.

The next important step is to consolidate the above as an explicit vigilant and critically aware and open model or system of integrated management, planning and development practice that appropriately and effectively operationalises the strengthening of indigenous knowledge, values and practices within a partnered mainstream context. It has promise as a consciously managed holistic approach that can effect indigenous empowerment and self-determination in all areas of knowledge and their application. To date, there have been some beginnings to strengthen the co-ordination of these multiple initiatives and developments as an internally reinforcing process, to centre it around its core concepts of indigenous knowledge and directed partnership, to establish it as a platform for management and development training and research, and to utilise it as a guiding model for all areas of education and training.

An aspect of this endeavour that also needs to be conscious, critical, planned and strategic is the issue of *managing change*. In moving from being subjected to change determined by others, indigenous Australians are becoming a determining part of the change process. Further, as world societies move into this new millennium, the cutting edge of opportunity is creativity, innovation and its realisation in entrepreneurial enterprise. It is essential to be fully aware of, participating in and managing this type of change. This is already happening in different areas. What will be increasingly important is an overall approach – one that benefits from strategic co-ordination and directive facilitatory positioning out in front of the game.

Incorporating something of a 'core values approach to managing change' – a recent aspect to the culture-based programmes of the Centre (Whiteley 1995) – this

then allows pro-active rather than re-active attention to the issue of the protection and development of indigenous knowledge systems in both inwardly and outwardly looking ways:

Law

Since 1977, the Law Reform Commission of the Federal Government, established in 1973, investigated and made recommendations concerning the treatment of Aboriginal people under Australian law and particularly the question of the continuing role of Aboriginal customary law (Discussion Papers 1980, 1982, 1984, and Aboriginal Customary Laws (Recognition) Bill 1986 – *The recognition of Aboriginal customary laws*, 1986). The knowledge systems, values and practices of Aboriginal people are quite different from those informing Australian law. Up to that date, the summary and recommendations concluded that recognition ‘has on the whole, been exceptional, uncoordinated and spasmodic’ (1986: 207). The report acknowledges that in ‘balancing considerations . . . undeniably the questions . . . are not ones on which there is likely to be a consensus’ as there are ‘widely divergent views . . . principles and requirements to be reconciled’ (1986: 244). Referring to the experience in Canada, the report concludes by recommending that recognition of Aboriginal customary laws be part of wider negotiations for autonomy conducted between Aboriginal people and the government (1986: 245). The reality today is that the Aboriginal population continues to have one of the highest rates in the world of incarceration, recidivism and deaths in custody.

Currently, the dominant negotiations concern Native Title to land, where attitudes of responsibility and custodianship contrast with Western concepts of the alienability of land in the sense of private ownership of property and rights to exploit resources which can substantially alter and intrude upon the nature and integrity of that land.

Other areas in which there are similar histories, issues and developments in the interface of indigenous knowledge systems and those of Western culture in Australia and the region, include economics, politics, religion, science and the arts. For Memmi (1965), considering the phenomenon as generic to many colonised countries, ‘the idea of privilege is at the heart of the colonial relationship – and that privilege is undoubtedly economic’, where ‘the deprivations of the colonised are the almost direct result of the advantages secured to the coloniser (1965: xii). The earlier colonial involvement of Aboriginal people as a labour force in Australia had many aspects of exploitation. This moved toward the more just relations with full citizenship, providing the same access to basic wages, unemployment benefits and industrial conditions and support, and, more recently, employment support, training and experience on development projects in their own communities, through to indigenous enterprise development. Aboriginal lifestyle is now able to begin to become

more self-determined, to drive more strongly from local and shared indigenous knowledge and values, and to co-operatively interface with and be less subjected to the non-indigenous economy (Centre for Aboriginal Economic Policy Research publications).

Following the 1967 Referendum that accorded full citizenship, including the right to vote, to all Aboriginal people, national consultative arrangements were established, and finally an Aboriginal and Torres Strait Islander Commission mechanism, through which locally elected Indigenous Commissioners can represent, advocate and negotiate with government at all levels on issues on behalf of their indigenous constituents. However, the mainstream political process is also open to Aboriginal people, and although there are no reserved places in parliament, there are several elected Aboriginal members. There is also some involvement in political processes at other levels. The politics in contemporary Aboriginal society are complex, pervasive and highly relational, deriving from originally highly prescribed local and regional traditional ways, accommodated into a dynamic flux as the population was displaced. This generates another level of complexity, understanding and practices in indigenous relations with the political processes of colonial and contemporary mainstream culture. A knowledge of and feel for all of this are essential for the survival of most initiatives beyond the personal and family level, but nevertheless impact strongly at those levels.

Arts

There has been increasing exposure of Aboriginal arts as these have both gained substantial audiences and markets nationally and particularly overseas (and with overseas tourists, students and visitors here). The level of financial reward from overseas marketing has developed to the extent that it provides a significant proportion of income to many communities. Within the domestic arena, this has encouraged rather exponential growth in Aboriginal artistic production in painting, music, film and literature. As the performing arts and narrative are much closer to indigenous ways of carrying and transmitting knowledge than academic production, these developments are playing a major role in cultural reclamation and development. The arts provide an avenue for indigenous voice that is having a major effect on increasing awareness, knowledge, contact and positive relations with Aboriginal people, on the rehabilitation of the non-indigenous population's constructions of the nature and identity of Aboriginal life, on the place of Aboriginal people in Australian history, and on claiming a place together in developing the future of an Australian culture that has acknowledged and proud indigenous roots, that achieves some integrity of reconciliation with the past treatment of the Aboriginal people, and an integrity of appraisal and action of the contemporary situation.

Art has been the area that has raised most issues regarding the authenticity of Aboriginal cultural knowledge associated with these 'products' and the products themselves, and problems of appropriation. These are issues both within Aboriginal local and regional groups, and between Aboriginal and non-Aboriginal people.

Of similar concern is the 'mining' of Aboriginal knowledge for scientific, industrial and commercial purposes, particularly in the areas of mineral exploration and botanical research, for the development of new pharmaceuticals. Ecological management and ecocultural tourism also draw on Aboriginal environmental and cultural knowledge, but are more readily able to be retained in Aboriginal hands. With effective negotiation and management of the use of and developments from this knowledge, each of these areas has the potential for contributing to Aboriginal economy and participation.

Other knowledge systems that are subject to an increasing degree of discourse and inter-related belief and practice include the area of religion (organised knowledge associated with spirituality). Since the early contact with the missions, there have been both resistance to and accommodation regarding spiritual belief and practice and what is taken by those concerned to be religious knowledge. This is an area of very interesting variations of how knowledge systems do and do not integrate, and how mutually transformative understandings can be generated.

Spirituality

Spirituality is an arena of tension where the struggles of protection and development have been particularly traumatic and the outcomes diverse. These struggles are ongoing and it is hoped that there will be increasing openness, compassion, respect and understanding in the process. However, it is still the area where the best intentions can be problematic if processes are not vigilant about appropriation, co-option and ways of defining the 'Other'. Habel (1999), Tacey (1995) and Stockton (1995) have current publications bridging indigenous and non-indigenous religion and spirituality. This is an aspect of much professional and personal activity that is quite naturally and at times intentionally informed and influenced by one's particular complex of spiritual belief and religious knowledge, values and practice. It is also the area where issues of internal conflict and consistency at individual, family and community levels are the most pronounced, and they illustrate examples of the dynamic character of knowledge systems, especially in situations of contact and change. The diversity of positions is considerable owing to the following reasons: they arise from a diversity of religious knowledge associated with particular local cultural backgrounds; they arise from the diversity of the religious affiliations of the non-indigenous peoples contact over the generations with Aboriginal people; and they arise from the variation in people's attitudes and behaviours toward indigenous religious knowledge and practice – from the punitive, denying and intolerant to the

respectful, engaging and accommodating. The dimension of depth to reconciliation and the future of the indigenous and non-indigenous partnership in Australia will require continued progress with the relationship of religious knowledge systems, a dialogue that reaches beyond the historically contingent denominational factions of the mainstream to a co-operative and constructive appreciation of religious diversity and a celebration of spiritual commonality.

The healing aspects of cultural reconciliation

It is not sufficient to just bring two knowledge systems together where there has been a history of oppression, disparagement, denegration and marginalisation of one of them. There can be no reconciliation without healing. Unlike the South African experience of the expected sufficiency of the processes of truth telling and justice, where a workable togetherness is expected from the high moral context and powerful personal example set by Nelson Mandela, the experience in Australia is one in which healing processes are necessary. The importance of a healing ceremony at national level was recognised and effected powerfully by the previous Labour Prime Minister, Paul Keating, in his famous Redfern Speech (at a community centre in Sydney in an area with a high urban Aboriginal population) (*First Report* 1993). A national Sorry Day (grief being widely known as 'sorry business') was instituted by the Aboriginal community. However, the new Liberal Prime Minister, John Howard, is showing a reluctance to say a collective 'sorry' for past injustices to Aboriginal Australians. This has so far been resisted, on behalf of many who feel likewise, while Native Title legislation and processes are still being settled and issues of compensation following the Removal Inquiry are avoided (*Social Justice Report* 1998).

This healing requires a lifting of the denial surrounding Australia's 'black' history, so that the actual treatment of Aboriginal people is recognised. Secondly, recognition is required of the effects (Swan and Raphael 1995) of those practices, devastating frontier violence, abuse and exploitation resulting from unchecked and even encouraged practices at the local level to subsequent widespread implementation of damaging government 'protection' and assimilation policies (Rowley 1972). Thirdly, an expression of remorse and regret without forgiveness is difficult if not inappropriate. This finally leads to a moral shift from rationalised and ideological sanctioning of oppression to positive measures, to facilitate both the rehabilitation and development together of futures based on social justice (*Second Report* 1995, Aboriginal and Torres Strait Islander Social Justice Commission of the Human Rights and Equal Opportunity Commission; *Going Forward: Social justice for the first Australians*, 1995, Council for Aboriginal Reconciliation).

There is a need for the healing of the oppressors as well as of the oppressed. Current research shows a continuation of significant levels of both 'old fashioned', blatant and more subtle forms of 'modern' racism (Augoustinos et al. 1994; Pederson

et al. 2000). Research on the functions of these attitudes is in progress, to assist in determining how this might be changed (Collard, Pickett and Griffiths 2000). Research is also being done to demonstrate how successful programmes are in fact at achieving change (Collard, Pickett and Walker 2000). It is probable, however, that already formed attitudes will be sustained until there is significant further improvement in the social justice and human rights situation regarding Aboriginal people.

Similarly, for Aboriginal people, healing and recovery are closely related to achieving an appropriate and respected place in Australian culture, politics and economy. Alongside developments in these areas, alternative models of counselling, therapy and healing are being developed progressively, integrating personal, family and community levels to assist with the recovery of Aboriginal people from the generations of damage to personal, family, community and cultural life (Collard and Pickett 1997; Koolmatrie 1997; Roe et al. in Dudgeon, Garvey and Pickett 2000).

In a broader sense, there is a level of knowledge beyond science implicating a level of healing beyond therapy, involving the regaining of the deep process dimension to living. Healing is necessary at all other levels, from the political to the cultural, the social and the personal, to also provide a return to a sense of foundational guidance from holistic living ways of knowing. Healing is also necessary from the level of the re-integration of knowledge systems with our numinous realities from beyond the empirical, however we conceive them to be from our various cultural viewpoints and however we protect and bring these together from the diversities of our living together.

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