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Transformation and Change in Knowledge Generation Paradigms in the African and Global Contexts: Implications for Education Research in the 21st Century

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Abstract

There are many things that education and development in Africa was supposed to be about, but which it is still not. To many critical readers, education has stood by, “eyeless in Gaza” (Milton, 1667–1671, l. 41), unable to find the words and strategies deep enough to deal with epistemological disenfranchisement and cognitive justice with untold consequences for the development of the “whole person” in Africa. When it has engaged with “development,” education either encourages blind assimilation into it, or it proposes ameliorative responses to the effects of development such as over consumption and environmental pollution—or selectively focuses on particular aspects of development such as economic development whilst underplaying or totally ignoring cultural and intercultural education. For its part, development has been rescued from time to time from itself by such humanising prefixes as *sustainable*, *human-centred*, and *ecological*, and so forth. But at its core, its pungent inheritance has yet to be unpacked. Indigenous knowledge systems impel and compel profound rethinking of the actual templates upon which both education and development are premised, and challenge both conceptually, methodologically, and ontologically a new level of action in response to the rebirth of Africa.

Keywords: knowledge, development, transformation, African perspectives, rethinking thinking

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The Developmental Challenge for Africa

The developmental challenges for Africa in the 21st century are many and multifaceted. At the end of the 20th century, the continent stood at crossroads, with bitter memories of its colonial past, and a future it was destined to determine. It is a future in which knowledge has become a key transactional currency. In the circuits of never-ending bandwagons, we find one set, the “knowledge economy” and “information society,” quite central to the present and the future.

But while in general parlance the product of skilled professionals is the information or knowledge they provide, the point of departure in this paper is that the information revolution that has greater significance for Africa is not a revolution in technology, machinery, techniques, software, or speed. It is a revolution in concepts and thus, the way we think about issues.

We need to ask in a candid and strategic manner: What is the meaning of information, and what is its purpose? In what way or ways does the existing flood of information actually assist Africa find its bearings in a globally competitive, but also globally predatory world system? Which concepts have outlived their usefulness and have to be reframed?

Through the four to five development decades, it has been difficult to crystallise a vision of Africa that has progressive and generative points of departure from the well-worn platform of denial of the continent’s heritage and knowledges (Odora Hoppers, 2002). Africa wanted to modernise, but was never sure about on whose terms this should occur.

We wanted our people to learn to read and write, but instead of looking at literacy as a continuum in different modes of communication from the oral to the written, we equated being ignorant of especially the Western alphabet, with absolute ignorance. We had no qualms in pitting what is not written as thoughtless, as a weakness, and at its limit, as primitivism (Hountondji, 1997).

Instead of putting education at the service of a complex range of African knowledges—in botany, crop and animal husbandry, climatology, medicine and midwifery, philosophy and pedagogy, architecture and metallurgy—knowledges that we know have been subjugated by the processes of colonialism and modernity, we promoted a default drive in education that arraigned education tailored on Western cosmology as the only way to progress.

Instead of letting education serve an organic function to enable our societies to engage in the critical but active reappropriation and authentication of our cultures and knowledge (i.e., to strengthen what we have), and to put this shared resource alongside that of the rest of humanity, it was our absolute conviction that education was some neutral business, and was not a cultural matter at all.

In the combined cleansing and purgatory, even the bits that had not yet been touched by colonialism—for example, the deep philosophies, the ethos of solidarity, of extended family support systems, and so forth—nearly ended in the rubbish pile (Odora Hoppers, 2002).

We did not link our acts in educational institutions with the vestiges of social Darwinism embedded deep in the groins of development practice that had, in the first place, turned us into an inverted mirror of Western identity, a mirror that belittled us, and sent us to the back of the queue (Esteva, 1992).

But What Is the African Perspective?

To me, an African perspective implies more than acknowledging that a particular person is African by descent, which may be a starting point, but on its own it is not enough. Rather, an African perspective should entail delineating a distinctive conceptual and analytical lens, and demarcating a mental

position or plane of projection from which a wide variety of issues are viewed, reviewed, judged, or propositions for new visions or directions are made.

Thus when one talks of looking at the world through a woman's, or a prisoner's, or a king's perspective, it is expected that a distinctive lens emerges through which the same set of facts, once revisited through this new lens, produces new dimensions or propositions for action that was not possible from the old plane of view.

In order to do this, I take a step back and share Ashis Nandy's statement in his contribution to the fascinating collection of reflections entitled "What Does it Mean to be Human?" (Franck, Roze, & Connolly, 2000). In that seminal piece, Nandy (2000) said that every age has a prototypical violence. Every age also has a cutoff point when the self-awareness of the age catches up with the organising principle of the age, when for the first time the shared public consciousness begins to own up or rediscover itself.

Once we begin from this standpoint, we begin to recognise the importance of acknowledging that knowledge primarily rests in people rather than in ICTs, databases, or services, and thus that for Africa the challenge has to be how to build on local knowledge that exists in its people as a concomitant to working with global knowledge and information. We also begin to contemplate what a knowledge society with equity would look like. As we survey the wreckage and note the unprecedented evacuation of billions of people from the arena of substantive innovation essential to their existence, we need to turn with force to the task of redefining key concepts such as *innovation*, its link with the goals of building sustainable societies and cognitive justice as key to the attainment of long-term, and sustainable, development (Odora Hoppers, 2002; 2009).

Once we begin to see innovations differently, innovation would then go beyond the formal systems of innovation done in universities and industrial research and development laboratories, to innovations from below—by which is meant, taking into account the full participation of all producers of knowledge including those in informal settings of rural areas.

Democracy and Dialogue Revisited

Perhaps to begin, let's recreate this scenario in any African country. The elections have taken place. It was a great moment. Modalities for democracy have been put in place. The constitution is ready. The parliament is doing OK. The policies for transformation are basically in place. All very good things. But the stomach still pangs. The muscles still ache . . . an uncomfortable restlessness tells you of something still not being quite right. For the African academic, the freedom to sing out loud is still a bridge kind of far away.

One examines the processes of discourse formation and the differential authority with which groupings participate in them, the way in which meanings are crafted onto processes, and the discourses that are permanently excommunicated from those realms in which real power is played out. One goes back, sifting through the notions of education. Education for all, based on the growth of democracies; and liberal education, a justification based on the economic argument of industrial property. None of these come close enough.

As one seeks further, one hears of education for liberation, an education that seeks self-realisation and empowerment. It is an education that is placed in the midst of a struggle to create a just social order. It is one that enables one, even the "wretched of the earth" to also participate in naming the world. At last this begins to sound like home. But no sooner has this happened than one recognises that this was yet home away from home, as Freire's words on the right to participate in "naming the world" begin to ring loud:

Dialogue is an existential necessity. And since dialogue is the encounter in which the united reflection of the dialoguers are addressed to the world which is to be transformed and humanized, this dialogue cannot be reduced to the act of one person's "depositing" ideas into another. . . . Dialogue cannot exist . . . in the absence of profound love of the world, and for people. The naming of the world, which is an act of creation and recreation, is not possible if it is not infused with love. Love is at the same time foundation of dialogue and the dialogue itself. (1970/1996, pp. 61–62)

But how is it possible to love, to dialogue and at the same time to have faith in humankind when one feels a suppression and subjugation as the order of one's day? Conversely, how much should one love, before one can finally begin to participate in naming the world? What is dialogue in this sense actually?

To this, Freire had a response:

Dialogue cannot occur between those who want to name the world and those who do not want this naming—between those who deny other people the right to speak their word, and those whose right to speak has been denied to them. Those who have been denied their primordial right to speak must first reclaim this right and prevent the continuation of this dehumanizing aggression. (Freire, 1970/1996, p. 62)

Of dehumanising aggression, Africans, more than any other race, have certainly had their share.

The problem is how to participate, as an African, in a dialogue on terms and norms established by conquest and subjugation; especially when all of this is purposefully obscured, and made to appear quite benign by scientific discourses which permeate through all tertiary institutions? How can one participate in naming the world within frameworks that have difficulty with dealing with the idea of equality itself? The problem then becomes, not just one of harping on the problem, whining about it, or indulging in hapless polemics about it, but to work strategically to usurp the very tools that have been inculcated in us, and to collectively transform it with the goal of seeking self and collective empowerment (Odora Hoppers, 2007).

But more than that, the challenge becomes that of humanising the very perspectives, methods, processes, and thereby knowledge content: in short, the epistemological machinery that feeds the broader academic field across its spectrum, and the practices that follow from it. It is within this broader agenda for humanisation of the knowledge generating field that is the basis of this paper.

Creating Regeneration in Higher Education: A Dose of Ethical and Moral Sensitivity to Local Conditions

The development paradigm had been dominated for at least half a century by the idea that the role of the state or civil society is only to provide what "poor people lack": that is, material resources, opportunities for gains in skill or resources, or employment. The strategies fail to build upon a resource in which poor people are rich: their own knowledge—so much so that the development lexicon in the last decade adopted a term with great alacrity: *resource-poor people*—as if knowledge is not a resource, or as if poor people have no knowledge.

The knowledge systems that enable economically poor people to survive, particularly in high risk environments, have involved blending secular with sacred, reductionism with holism, short-term options with long-term ones, specialised with diversified strategies in individual or collective material pursuits. The environmental ethics of these communities has also reflected these.

The higher the physical, technological, market, or socioeconomic stress, the greater the probability that disadvantaged communities and individuals generate innovative and creative alternatives for

resource use (Gupta, 1988; 1991). These innovations, whether originating in tradition or using modern awareness, are evolved by communities—as by individuals. In fact, an overemphasis on communities as opposed to the individual may well contribute to the widespread indifference towards entrepreneurial potential of the knowledge rich, but economically poor, people. Innovations in technological, cultural, or institutional subsets often remain isolated and unconnected despite an otherwise reasonably robust informal knowledge network in existence.

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

Trapped within the framework of modernity, accepting the Rostowian scale—ranking societies from premodern to takeoff, maturity and mass consumption—as the only legitimate yardstick for measuring the development trajectory of nations and peoples, it was very difficult for universities modelled on these Western precepts to break their paradigmatic umbilicus. The limitations that arose from this situation spilled over into the policy domain in a circular flow that slowly began to resemble a vicious cycle.

In order for substance and content to be added to the political economy analyses that dominated postcolonial scholarly work, it was important that renewed scrutiny should be accorded to the labyrinth of myths, metaphors, methods, models, and techniques that science and modernity have created: the lattice-turned-paradigm that determines what is relevant and irrelevant, what one can see and not see, what one can say and not say, or dare not be heard to say. This paradigm that is cruel, blind, and has no place for defeated knowledges or alternative theories of knowledge needs to be exposed for what it has done, and continues to contribute to the violation of human rights (Visvanathan, 2001a).

The role of universities is once again being rethought, this time in the light of the contradictory objectives of globalisation, the information society, and economic growth on the one hand and the clearly intensifying poverty, widening inequalities, and the demand for social justice on the other. At this time, new imperatives for the definition of quality, relevance, accountability, and responsiveness begin to be asked afresh of these knowledge-generation, knowledge-accreditation and knowledge-legitimizing institutions. Fresh stock, for example, needs to be taken of the full implication of these romances and silences for higher education itself, and especially for the reproduction of vicarious paternalism and blindness in the institutional cognition of local development and renewal issues (Visvanathan, 2001a; 2001b).

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

- Following Gupta (1999), the continent can be affirmed as knowledge rich, but economically poor.

- In biodiversity, it can be factually noted that while the North may be awash with the information explosion, they have less and less biological and genetic information (Visvanathan, 2001b).
- Becoming cognisant of the fact that species extinction at a rate of one thousand species a year, coupled with the genetic truncation of major crops and the loss of cultural information due to the depopulation of rural areas—all in the name of development—threatens humanity’s survival in this century and in our very lifetime may, of itself, heighten our moral sensibilities and push us towards more ethical debates around responsibility and commitment to more ecologically coded behaviour.
- Acknowledging that African models of farming and systems of healing might embody different notions of community and science, and that within such a framework African agriculture and systems of healing might be alternative paradigms, elusive and elliptical to current modes of science (Visvanathan, 2001b)—turning Africa around from a “void,” a “black box,” to an alternative list of possibilities and epistemologies—would take us some way on the path to a genuine African rebirth and renaissance. (Hountondji, 1997; Odora Hoppers, 2002)

Such regeneration efforts in higher education and in universities in particular, of course require concerted and courageous intellectual work. But more importantly, it would enable us to decipher that it is precisely the holders of this indigenous knowledge, this “informal” community of expertise located in rural areas of Africa, Asia, and other parts of the world that the official application of science and development has destroyed.

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

Therefore, when textbooks and formal institutions designated to produce and legitimise knowledge become cognitive regimes that acknowledge only the victor, and defeated knowledges are erased or condemned as unscientific, then we witness a system of complicity in withholding freedom from those who need it the most—those on the receiving end of knowledge apartheid. Research must lead the way and the university, out in the field, engage in mutual learning, a give and take, a reciprocal valorisation of indigenous knowledge systems (IKS).

The University and the New Cultural Commons

A general consensus is forming that universities are failing in the tasks for which they were first created. To begin with, meetings of minds no longer take place in the context of universities. Universities, originally the transmitters of culture, learning and independent thought, are changing. In the past, scholars acted as arbiters who accredited knowledge. But today's universities are producing knowledge in a hothouse atmosphere characterised more by the corporation than the campus. Profoundly influenced by financial and institutional pressures, respect for the bottom line and an emphasis on short term results that satisfy corporate sponsors and government support, the University is turning into a factory that prepares students for jobs. Its business has, over time, become that of transacting mainly in data and information, but not knowledge, insights, or wisdom; “increasingly its

traditional role of fostering scholarship, original research, and critical thinking is losing ground” (Peat, 2000, para. 1.1).

Secondly, in the traditional disciplines around which faculties and colleges are organised such as physics and chemistry, in the humanities and social sciences, in the professional areas of medicine and law, as well as within the newer fields of biotechnology and bioengineering and the range of genetic endeavours, there are a number ethical issues that need to be discussed, if not resolved. Where will this be done? In whose interest is it to convene these discussions? Moreover, there is less and less room for truly fundamental reflections on knowledge, methodology, and in particular, for speculations that lie outside mainstream areas (Peat, 2000).

Thirdly, a tension exists between the role of the university as, on the one hand providing a platform for engaging and critiquing elite global economic interests, but on the other hand, it is steeped in the elite culture, and is a product of elite interests than community ones. It is also a major credentialing institution for a certain social class rather than an intellectual community bound by social contract to less formally recognised intellectual ones (Odora Hoppers, 2009).

Furthermore, the “culture of expertise” characteristic of most university settings, a culture that is necessary to finding a place in the international knowledge economy is of uncertain or even dubious merit to communities wrestling with more essential and practical if not “lower status” problems. What emerges from all of this is recognition that the culture of the university does have tenuous, if not frayed connections to the rest of society (Odora Hoppers, 2009).

What then, are the conditions for a new social contract between universities and society? At issue here is the African university—that is, what does it mean to have universities in Africa? What are the cultural and epistemic identities of universities in Africa? What constitutes the ecology of a university in Africa, and how can this be reworked to respond to the human question in Africa? What is the “moment of crisis” in Africa? How can African universities give academic and scientific dignity to third-world problems? What are the conceptions of education that should underpin these explorations? When we talk about supporting community outreach, the question arises: How to determine the methods for reaching that goal? What should this new social contract consist of in Africa? Are universities becoming more closely linked to societal needs?

The linkage between commons and the reclamation of citizenship in the knowledge production and ownership arena, including the right to different forms of time, of living, and of dreaming becomes very important. In doing this, the university itself becomes a kind of cultural commons (Madison, Frischmann, & Strandburg, 2008), that is, a place for realising this citizenship in knowledge production.

As a constituent part of this cultural commons, in collaboration with various individuals, groups, or colleges, embark on a critical examination of a broad variety of institutional and disciplinary contexts and associated practices from the point of view of human development and the commons—and make propositions as to how those fields and practices may need to reform or transform. The research and community engagement specialists should think about

what the commons means for them. My view is that the position of the university in Africa is that it needs a “commons of community, lived time” with its people.

But we need to go further—by pushing for new philosophies of practice, clearer and more coherent methodological strategies in inclusive partnership building, and the recognition of place in the African context.

Raising the Bar: New Imperatives in the Ethics of Practice

Research should not shy away from issues that affect society closely. Rather, it should begin to open channels through which people can discover themselves, clarify their own experiences, and find vantage points from which to put new content, meaning, and strategy to whatever developmental visions and provisions in legal frameworks have been made available to the citizen (Odora Hoppers, 2009).

The absence of bicultural experts at the epistemological level has made it next to impossible to break the cycle of hierarchisation of knowledge endemic in the structures of the university. IKS cannot be done by the academy alone. The bringing of IKS into the formal institutions is what will enable this contesting of scientific methods of producing knowledge and interrogating the knowledge production paradigms as a whole (Odora Hoppers, 2002).

Therefore we have to take research out of the university and place it where knowledges are produced—where modernity axed some people out of the knowledge production system. Secondly, we have to make universities aware of lifelong learning, which takes on what people know: knowledge rich but economically poor.

In summary, the following can be made clear:

- If we are to develop knowledge and skills and values for the development of the African continent, we have to provide a forum for contemporary social science research that examines its own origins in order to review current practice and work to promote a new social contract between African higher education and African society.
- All universities have to develop research and training areas with a view to building transdisciplinary leadership.
- We have to critically examine through research, the legacy of Africa’s relation with international systems. Introduce interdisciplinary focal areas for theoretical, applied, and strategic research explorations, for example, education policy studies, peace studies including peace education, lifelong learning and citizenship education, indigenous knowledge and the integration of knowledge systems, science and society—with focus on the link between culture and science education in Africa, and gender from an African perspective.
- We have to engage critically with issues of democracy, values, human rights, and human wrongs and the place of responsibility of different cultures, including peace building from an African perspective. By drawing on, and exposing the researchers to concrete cases in Africa, the global South, and internationally, develops in the graduates the capability to traverse theoretically and methodologically these diverse fields of human endeavour.

In the field of science:

- Constant attention must be drawn to the dual nature of the scientific enterprise. On the one hand, science is the generic development of human knowledge over the millennia. And on the other, it is the increasingly commodified specific product of a capitalist knowledge economy. When we so routinely refer to the popular parlance—for example, information society, knowledge economy—we are referring to the commodified leg of the scientific enterprise.
- We have to be aware that what results from this is a peculiarly exclusionary and uneven development with increasing sophistication at the level of the laboratory and the research project, alongside a growing irrationality of and intolerance within the scientific enterprise as a whole—especially when it comes to tackling the less “sexy” issues facing society. This gives us a pattern of insight and blindness that leaves us helpless when it comes to the big problems facing our societies: the gap between the academy and society in Africa, managing diversity, tackling root causes of poverty, practising inclusiveness and coexistence in the field of knowledge production (Lewontin & Levins, 2007).
- This dual nature also gives us a science that is impelled both by its internal development, as well as by the very mixed outcomes of its applications. This is further complicated by the degree to which science is held back by the philosophical traditions of reductionism, the institutional fragmentation of research, and the political economy of knowledge as a commodity. One should therefore explicitly work towards opening up science to those who have been excluded, and insist on a goal of science that is aimed at the creation of a just society compatible with a rich and diverse nature. Rather than espouse bland neutrality, a working hypothesis could be that all theories are wrong that promote, justify, or tolerate injustice (Lewontin & Levins 2007).
- By emphasising wholeness, connectedness, integration, and reciprocal codetermination—and encouraging students to step outside the specific scientific problems from time to time, examine the nature and use of science more generally—it is hoped that over time one can reintroduce dialectics into discourse on development, education, science, and society; and generate a critical mass of enthusiastic and energised producers and adroit interlocutors of knowledge who can own, and own up to the knowledge they produce (Odora Hoppers, 2009)

In the field of methodology in knowledge production:

- All research undertaken must critically examine existing knowledge with the aim of updating knowledge in the field. A critical perspective is not intended only to generate critique but to foster, simultaneously, a culture of deep reflexivity and a practice of moral salience in the students.
- Potential relevance for policy and practice as well as public education on all research undertaken, that is, the importance of research beyond the confines of the academy to practical application and dialogue around those applications will create the necessary momentum for change.
- Exploratory research and collaboration across disciplines must be undertaken in order to extend the boundaries of inquiry. Throughout this process, the key task is to make the students own and own up to their analysis.

Among practitioners and policymakers:

- Researchers need to involve nonpractitioners and broaden that catchment area of expertise of potential researchers, a majority of whom have a permanent stake in the development of the research expertise of the country.
- We need to join Datta (1990) in debunking the meaning of empiricism, by which is meant blind empiricism without any theoretical frame to hold the pieces together, and which encourages the nibbling at the surface of the reality rather than confronting the deep structures of it.
- We need to desist from the collection of facts, facts, unconnected facts . . . that cannot be compared or added together . . . that does not highlight the manner in which global forces assume the form of microlevel reality. (Datta, 1990, p. 66)
- But we must also recognise that the absence of a theory is also a theoretical position, and African researchers and academicians would do well to reexamine their intentions and their choice of frameworks, and particularly the limitations of the dominant paradigms in research for capturing most aspects of reality in Africa. In other words, researchers need to make manifest what is latent in the concepts, the psychologism inherent in the assumptions and postulates surrounding research and the researcher.
- The asociological tendency classic to survey methods needs to be pointed out not only for its aversion to reality as lived and its insistence on extolling the obsolete virtues of separating subject from object of research, but also for its parochial emphasis on post facto analysis to the neglect of predictive studies. In this connection, the almost nonexistent scope for experimental, exploratory, and experiential research demonstrates the scandalous inertia that has paralysed, if not completely fossilised the process of knowledge generation, freezing with it, both quality and quantity of the knowledge in circulation in Africa.

Conclusion

The search for multiple perspectives and multiple coalitions in confronting the issues outlined above implies becoming part of a bigger struggle to create a more sustainable future for humanity.

It is in seeking these multiple coalitions for the humanisation of practice that there arises the need to strengthen the alliances between transformative scholars and perspectives, and other social movements; and between those working on a cultural critique of modernisation and those involved in the debate on power and knowledge in the new global context.

This is the beginning of a long road that will traverse bushes, thickets, and even swamps. Through this paper, I ask you, whenever you can, to walk with me and savour the unexpected, the anomalous, and the joyful discontent on the road to putting the scientific enterprise centrally at the service of humanity.

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