

DEBATES

African Knowledge and Ideas and the African Information Society

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Introduction

Every region of the world has begun conceptualisation of its Information Age, as it would best fit into a globalising world. The goals are the same for each region – to carve new niches, as well as, empower its human communities, find more efficient production systems, and renew the natural resource pool simultaneously. If there is a current of doubt about the potential benefits of convergent information and communication technologies (IT) to Africa, that school has not imagined deep enough or been shown models of sustainable rural development, based on institutional networks, knowledge flow and human actualisation.

While some may point to the 'Digital Divide' regarding teledensity comparisons, the optimists have been contemplating the 'Digital Bridge'. The concept of a Digital Bridge indicates challenges and opportunities while that of the 'digital divide' quite often emphasises statistics without contemplating solutions. The input into the bridge must be scientifically sound, since non-structural bridges, such as knowledge bridges, would not manifest their design flaws for prolonged periods. For example, it took almost four decades after Africa's political independence to realise that the previous development axiom, which attempted to supplant the environment and knowledge of the African with that which did not have any philosophical or structural grounding, needed replacement. On the other hand, flawed structural engineering, such as the Tacoma Narrows Bridge in Washington State, USA, soon exhibit their failures and collapse not long after construction.

This note provides some of the author's concepts of the Digital Bridge, which would enable Africa to successfully deploy information societies among its peoples. Such a knowledge bridge would actualise the African – enable people to learn, solve problems, produce more efficiently and preserve and enrich

natural systems, fostering peace, etc. At the core of Africa's crises is lack of modern knowledge and capital flows, which reach the majority of the populations. As Richard Rosecrance indicated, the tenets of the Virtual State are knowledge and capital flows.¹

The place for indigenous African knowledge and ideas in knowledge processing and management, facilitated by IT, in sustainable livelihoods programming for Africa has previously been established.² Therefore, it is central that whatever tender would be accepted by those who provide the financial component for the construction of the digital bridge to link rural Africa with national, regional, and global knowledge centres, should contain mechanisms to determine significant hubs in the networks which facilitate the flow of knowledge into the heart of the majority's knowledge domain – indigenous knowledge. Tenders and propositions to act on behalf of the African Information Society should contemplate the breadth of information needs, and the potential for the global development and financial institutions to make constructive contributions to building digital bridges among knowledge domains for development.

In designing the future Africa where knowledge enhances the actualisation of the majority, Africa should place its children central. If children of the advanced economies have the tools that will determine the wealth of nations in the present century while African children are deprived of them, what a future it would continue to be. Therefore the Digital Bridge should aim to begin the process of narrowing the gap in human development and environmental security by providing the full power of the tools for all children, regardless of space.

Information Brokerages

Clearly, there is a wide range of information needs: the need for better access to infrastructure, knowledge, networks, communities of practice, expertise, tools, and opportunities to build one's own knowledge, etc. Therefore, tele-centres or personal computers in Africa should be not about the conglomeration of gadgets but serve as information brokerages, related to knowledge processing, packaging and marketing (content development).

African intellectuals abroad have experienced the power of connectivity and some are among those who are designing the platform for the advanced world. There are also champions of connectivity within Africa itself. There are many African-initiated efforts, and African allies in many programs, who share the view that they could begin to contribute their expertise to problem-solving in Africa, through digital networks, which would include their own indigenous institutions and families in rural Africa. These and other locally based efforts focus on urgent problems in Africa: how to develop productive tools for Africa's drought-prone environment and marginal agricultural lands, minimise the rapid rate of population growth, prevent scourges such as HIV/AIDS, provide career opportunities for the large number of its youth, etc. What these and

other existing programs need to be successful is access to state-of-the-art tools and to 'information markets'.

It could be concluded that much is now known about Africa's 'information needs'. Furthermore, there is no shortage of connectivity ideas and programs to address these needs, many of those solutions coming from within Africa. Some groups have spent months, even years, identifying knowledge needs, major themes and participating networks – private technologists, development experts, donors, and poor countries with their rural communities and local.

Thus, there already exists a wide range of worthwhile programs to close the information gap. We may analyse such programs in the context of a Knowledge Bank, as the World Bank contemplates – for example, an African Knowledge Bank. What would be required is to ensure that (a) communications content serve the needs of society, and (b) such programs are not bereft of funds, as is currently the experience, where 'funding' is such a magical feeling.

African Knowledge Component of the African Knowledge Bank

Regarding content development, the concept of information brokerages was established earlier in this article. The question has often been posed 'how do we know what the information needs of rural communities are?' The opinion of this author is that honest and well-informed information and knowledge brokers would realise that most rural communities are not that removed from modern civilisation. Most are aware of the lives of the people of the city except they cannot access such conditions. Modern or formal education has been available in many rural communities. Families and communities have seen their children through such schools, so they could be their gateway into modernity.

The major problem, however, has been disjunction between the knowledge bases offered by modern institutions (such as schools, clinics, research, industry, etc.) and that which actually serves the majority (indigenous knowledge, IK). Most modern institutions in Africa today continue to reflect the period of colonial knowledge domination over that of the indigenous communities. Consequently, both modern and indigenous knowledge institutions have suffered. The consequences have been reliance on unimproved knowledge by dependents of IK in occupational roles while modern institutions have suffered from very poor capacities. However, the progeny of rural communities who have had modern education and who constitute the human resources of modern institutions within their countries – as well as some residing in advanced economies and who constitute the labour force of some reputable institutions – could serve as natural guides, linking modern and indigenous knowledge.

Thus, the critical test for any information brokers regarding rural Africa development and communications would be their understanding and appreciation of both indigenous and modern knowledge. Having been born in a rural African community alone would not entitle an individual to the role of knowledge broker on behalf of rural Africa, neither would presence in an advanced

economy confer such honours. Suitability of the brokerage to the goals of communications for rural development in Africa – whether an individual or institution understands both types of knowledge – could be determined by reviewing track records, assessment of the person/institution by their verifiable actions and thoughts, e.g., projects, papers, networks, etc. A demonstrated ability to develop themes and networks in the subject area would also be key. Moreover, with indigenous knowledge, holism is required. Therefore, the demonstrated ability to consider the multiple factors determining development outcomes is essential. Furthermore, since one person cannot understand all of the many factors which influence ‘development outcomes’ to sufficient depth, it is necessary that the information broker demonstrate ability to create networks which reflect the multiple factors and reach into the depth of indigenous knowledge institutions.

Most important should be the realisation that inclusion of IK institutions in global knowledge flows is primarily to enhance the quality of knowledge employed in occupational roles. Efforts should be made so as to mitigate the negative cultural impacts of the introduction of new media into rural Africa. This exercise should also not lead to another form of exploitation of poor people.

Capitalising the African Knowledge Bank

On the issue of concepts, programs, and projects related to rural African connectivity that are bereft of start-up money, it could be suggested that the key ‘knowledge gap’ is actually a ‘funding gap.’ Multi-lateral development groups often may be too remotely conversant of the micro-environments that constitute the communities of interest, to develop the fine points for the grounding, an issue of local comparative advantage. Moreover, the Digital Bridge has to be grounded, and grounding should occur within the knowledge domain closest to the community to be reached (empowerment). Hence, instead of such institutions spreading into remote communities – an exercise they would not be effective in undertaking without the cooperation of local institutions – they could provide their fiscal power and knowledge networks through local information brokerages. That way, the Information Society in Africa would begin to realise one of the expectations of the IT revolution – to create new jobs.

The major multi-lateral institutions could facilitate the construction of the digital bridge by redeploying their vast human resources and financial backbones to help meet the following ‘knowledge needs’:

- (1) the need for financial support by worthwhile programs which have already identified information/knowledge needs and developed approaches to serving them;
- (2) the need for development of local ‘global knowledge partnerships’, to address local information needs;

- (3) provide information/knowledge needs that cannot be met by nations, NGOs, and businesses. These institutions could mobilise funds, assemble the technology community regarding satellite availability and other tools, act as guarantors for venture capitalists, develop new tools to assess connectivity programs, set policy guidelines on how the crushing Third World Debt could be transformed into knowledge credit, develop guidelines to draw investment capital into poor regions without disturbing fragile economies, suggest how transnational corporations could reinvest profit within the region of operation instead of siphoning profits out;
- (4) help set numerical targets for activities in poor countries that can close the 'information gap', and develop new methods to monitor or evaluate programs and facilitate the realisation of such goals;
- (5) negotiate on behalf of the poor, for access to software, and encourage development of local manufacturing bases in developing countries;
- (6) help identify what should NOT be done. For example, there is a mad rush to replicate e-commerce projects in poor countries where a few are setting new trends in copious consumerism, consuming more than they can generate locally, leading to crushing local currencies and deprivation felt most severely by the poor majority while depravity runs amok in high places. Such programs do not take into account domestic market connectivity. Other areas in which these institutions could be effective are ensuring that communications content includes indigenous knowledge and application to modern challenges; providing information, which would change attitudes so that the ancestral knowledge, the basis of livelihoods of the majority, is not looked upon scornfully by others, including Africans who now have been educated 'out' of it. Staff of major development and funding agencies need to be educated to fully comprehend IK and its impact.

Notes

1. Rosecrance, Richard. 1999. *The Rise of the Virtual State: Wealth and Power in the Coming Century* (Basic Books, New York, N.Y., 1999). In *The Rise of the Virtual State*, Richard Rosecrance described the evolution of 'Head Nations' and 'Body Nations'. The former produce intellectual outputs or knowledge products, invest in research and development and engage others (the Body Nations) in the translation into tangible products (manufacturing).
2. See, for example, (a) Afele, John Senyo C. 1999. 'Information and Communications Technologies, Rural Agriculture, and Twenty-first Century Africa'. In: Loeper, A., Helbig, R., Rickert, U., and Schiefer, G. (eds.) *Role and Potential of IT Systems and Communication Networks for International Development*. pp 67-83. The Second European Conference of the European Federation for Information Technology in Agriculture, Food and the Environment (EFITA) Proceedings. September 27-30, 1999. University of Bonn, Germany. (Possibly readable from <http://www.dainet.de/efita99/> or <http://www.dainet.de/FIZ-AGRAR/efita99/>).

(b) Afele, John C. 1999. 'Telehealth in Twenty-First Century Africa: African Knowledge and Ideas as Integral. Emerging Global Electronic Distance Learning' (EGEDL '99) International Workshop/Conference at the University of Tampere, Finland, August 9 to 13, 1999. <http://www.uta.fi/EGEDL/outline/telehealthafrica.html>.

(c) Afele, John C. April 2000. 'Towards an African Knowledge Bank'. Teaching in the Community College 2000 On-line Conference: A Virtual Odyssey, What's Ahead of New Technologies in Learning March 2000. http://www.kcc.hawaii.edu/org/tcon2k/homepg_aloha.html.