

# Indigenous Knowledge Systems and the Transformation of the Academy in Africa: The CULPIP Model

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The meaning and use of the term “transformation” varies so widely with differing audiences and stake holders (see Ratz 1982; Khosa 1999; Mwamwenda 1999; Vera 1999) that a clarification of its meaning is considered an essential starting point for this paper.

Transformation is here differentiated from general change. It goes beyond reorganization and restructuring; it is more than reformation. While an alternation or modification of any component of a phenomenon inaugurates a change, “transformation entails creating something new or different through the configuration or remolding of the constituent elements of the old” (Obikeze 2003:1). In contrast to change, transformation is generally more revolutionary, more expeditious, and more prone to jolting and convulsive experiences. As Smart (1992:170) has put it, transformation is “rapid and at times cataclysmic forms of change.”

In the context of this paper, the term “academy” refers to the system of higher education in general and specifically to the university education system. Consequently, “the transformation of the academy” refers to a revolutionary change in the system of university education that will bring about a radical change in the syllabus, a change in the curriculum, a change in the mode of knowledge production and transmission; and a radical “change in the criterion for excellence in research” (Jeevanantham 1999:65).

## Calls for Transformation of the Academy

In recent times, calls for a transformation of the academy, especially the university system, in Africa have grown so loud and persistent that they can no longer be dismissed or simply ignored. For instance, referring specifically to the situation in South Africa, Le Grange (2002:68) emphatically stated:

*A more important concern I wish to raise here is the failure of higher education policies after apartheid to provide alternative frameworks for knowledge production to those provided by dominant Western knowledge system. In my view, merely espousing the rhetoric of redressing past inequities and uncritically embracing what Waghid (2001:1) terms the “logic of globalization” is unlikely to bring about meaningful transformation of higher education in South Africa.*

Earlier on, Sifuna (1990:15) had insisted that the philosophy, methodology, and schooling in Africa needed to be reshaped and remolded to reflect some of the traditional ideas and perspectives of the African. Lamenting the past centuries of suppression and neglect of African identity and values, Nevhutanda (2002:2) said:

*For too long we have held up the margins of the Europeans world and have been victimized by the illusion that we are working in our own best interests when, in fact, we have become the chief apologists for Europe. It is time for African Universities to define their role in the context of Afro centricity philosophy.*

In a recent article, Douglas Morgan (2003) reviewed the changing phases in the interaction between Western science and knowledge systems on the one hand and the indigenous “wisdom” and knowledge systems on the other, and concluded that despite the increasing appreciation and accommodation of indigenous knowledge systems in Western institutions, higher education today remains dominated by the Western epistemologies and worldview that readily appropriates ideas from other cultures. He believes that, to remedy this situation, higher education institutions must genuinely pursue a philosophical transformation that makes the structure and content of academia more culturally sensitive and flexible.

The above citations represent but a few of the escalating demands for a transformation of the academy in Africa. A number of factors, both from within and without the continent, are accountable for the bolder articulation and intensity of the calls for academic transformation at this time.

### **Factors Accentuating the Calls for Transformation**

***The African predicament:*** One of the key factors that has moved the question of the transformation of higher education in Africa to the center of discourse is the abysmal state of poverty, retardation, and technological backwardness of the continent at the beginning of the new millennium.

After a comparative review of the six regions of the world on basis of fourteen selected indicators of social and economic development, Obikeze (2003) found that the African Region ranked the lowest in virtually all indicators of human development and progress, while ranking the highest in socio-political insecurity, ignorance, and disease. Lamenting this situation, he said, “ the most agonizing thing about the African situation portrayed in these data is not her overall poor performance, but the invariant consistency in becoming the global worst performer in every indicator of progress and development as the world enters the 21st Century” (2003: 12).

Thoughts on how this African situation could be redressed have raised the question of the proper role of the University in development and the suitability of the African University system, as presently constituted and organized, to effectively carry out such roles. Contributing to the discourse on the proper role of the University, Sanyal (1995:218) argued that one reason for making research a university function is the “need for universities to contribute to national or regional development through technological innovations and solving problems in the social sphere.” Applying this viewpoint directly to the African situation, Ernest Ngara (1995:26) said that African Universities “must not be contented to wear the garb of ivory towerism or to perch on the periphery of continental problems. On the contrary, the African University must be at the centre of the search for solutions to the problem of development.”

There is thus a general realization among African educators, scholars, administrators and social analysts that, in their present state, African Universities are ill-equipped and unprepared to assume and perform the expected roles. This realization has lent weight to and accentuated the calls for radical transformation of the academy.

***The demise of colonialism and political imperialism:*** A second factor that has encouraged and promoted recent calls for transformation of the African academy is the abandonment of

colonialism and political imperialism as the Western state policy. Decolonization removed the iron mask that had hitherto shielded and protected the Western knowledge systems from impartial scrutiny and evaluation. For, as Gough (1998:508) has said, “European imperialism has given Western Sciences the appearance of universal truth and rationality....” And Harding (1993:8) has noted that the hegemony and supremacy it has enjoyed have been as a consequence of “the military, economic and political power of European cultures; not because of the purported greater rationality of Westerners or the purported commitment of their sciences to the pursuit of disinterested truths.”

This means, according to Le Grange (2002:69) that “Western science (and knowledge system) has not been objectively situated in World history, nor have non-Western sciences been assessed in objective ways.” The demise of colonialism and imperialism has thus offered both non-Western and Western intellectuals and critical thinkers the opportunity to scrutinize and question some of the basic assumptions and epistemologies on which the Western knowledge systems are constructed, as well as their utility and applicability in solving African social problems. “The heart of the problem,” according to Douglas Morgan (2003:39), “lies in the inability of Western science to describe all that occurs in people’s experience of the world and the uncertainty deriving from the fact that findings of western science are constantly under review.” It became increasingly clear that Western science was not absolute; that there are issues and problems for which it has no answers, and that for some other issues, answers provided by other traditions are more encompassing and satisfactory (Morgan 2003). The general disappointment and disillusionment with the claims and “unfulfillable” promises of Western sciences, which resulted from such critical inquiries, further accentuated the calls for a transformation of the academia in Africa.

***Emergence of poststructuralism/postmodernism theories:*** By the 1960s it had become clear that the world was entering a new epoch in human history generally labeled the postmodern era—a type of “economically advanced social order in which the centrally important resource is knowledge” (Watson 1995:180). Postmodernism has “altered the game rules of science, literature and the arts” (Loytard 1986, Watson 1995:185) and generated a new worldview and social theory. As a theoretical perspective, postmodernism rejects all “fundamentalism”; the idea of a grand narrative or a metanarrative and associated universalistic explanations of reality. In fact, one of the foremost proponents of postmodernism perspective, Lyotard (1984:xxv) simply defines postmodernism as incredulity to metanarratives: “Postmodern knowledge is not simply a tool of authorities; it refines our sensitivity to difference and reinforces our ability to tolerate the incommensurable.”

In the field of education and learning, postmodernism advocates relativism and rejects idealizing principles and foundations, arguing that “they tend to privilege some groups and downgrade the significance of others; give some groups power and render other groups powerless” (Ritzer 2000:604). Postmodernism is characterized by a questioning of disciplinary boundaries and the “emergence of new analytic spaces and territories, and a collapse of the speculative hierarchy of learning” (Smart 1992:172).

Thus the emergence of postmodern and post-structuralist theorizing created a conducive and “empowering” intellectual environment for open expression of dissatisfaction with and opposition to the enthronement of Western knowledge system as the sole acceptable

mode of knowledge production and utilization in African higher institutions.

### **Approaches to Transformation of the Academy**

As much as all the scholars and writers cited above generally agree on the need for the transformation of the academy in Africa, one major bone of contention remains to be resolved; namely, how the transformation is to be effected. What is the best approach or model to be followed in the transformation process?

Below is a brief review of the major approaches to academic transformation proposed and advocated by some of the leading writers on the issue. It needs to be noted that while exhibiting certain distinctive features, the various approaches are not mutually exclusive operationally. Communalities and areas of overlap are *discernible* among them, but each is sufficiently unique to be termed a separate approach.

**Adaptation Approach:** This perspective holds that the best way to achieve transformation is through the “process of selection and adaptation, in order to match important (foreign) techniques to African conditions” (Adedeji 1981:31). In the same vein, Makgoba (1999:8) suggested that “the university systems, while maintaining the universal concept of a university, adapt to the values and needs of their respective environments and societies.” According to this viewpoint, adaptation is not “contradictory to knowledge production, excellence or standards,” as appropriate adaptation links the university system of each country with national identity and national integration (Mokgoba 1999:9).

However, one major criticism of the adaptation approach is that it has “a tendency to deepen the dependence of underdeveloped countries on the industrialized (Western) countries in tangible and intangible ways” (Adedeji 1981:31).

**African Philosophy Approach:** This viewpoint holds that transformation of the academy will best be achieved through the development and adoption of a new and distinctively African philosophy of education. In the words of Viljoen and Mashau (n.d.), “for educational thinkers like Njoroge and Bennars (1990), what is needed is an obvious African philosophy of education” designed and molded to reflect some of the traditional ideas and perspectives. For, as Luthuli (1982:36) has stressed, “there is a burning need for a clear articulation of a philosophy that lies dormant in the hearts of the entire Black community.” Notable among the new philosophies proposed are “Afrocentricity,” “ubuntu,” “Africism,” “Africanism,” and “African humanism.”

However, the African philosophy approach has been criticized as working “predominantly on a psychological level to connect individual blacks to their ancestors and their historical traditions. As such, it is politically impotent (Viljoen and Mashau nd.:7; Palermo 1997).

**Curriculum ‘Engineering’ Approach:** The term “curriculum” is used in this context to refer to the “entire spectrum that constitutes the materials used in the education process...” (Jeevanatham 1999:64). By curriculum “engineering” is meant a process of redesigning and restructuring of each university subject curriculum so as to infuse it with African content. Examples of such African indigenous knowledge system include the role of mathematics in classical African civilizations; the importance of numbers in African theory and music, and in

African mathematical games; the central role of African mathematics in the development of modern-day mathematics (Mokgoba 1999:13).

Advocates of the curriculum engineering approach always draw attention to the crucial role of curriculum as a vehicle for change. According to Makgoba (1999:14), “the curriculum systematically guides the transmission of information and knowledge, reinforces the desire to learn and know, and encourages the internalization of behaviour and/or attitudes consistent with knowledge learnt.”

***Separatist Development Approach:*** Faced with a real danger that the “indigenous ways of knowing might become assimilated into an imperialist archive in the light of complex globalization processes currently prevalent” (Le Grange 2002: 69), a number of writers have called for a separate, “protected” space to enable a distinctively African university system free from the undue influences of Western Knowledge Systems. In the words of Morgan (2003:47):

*Given the uncertainty underpinning the academic investigation of Indigenous peoples, there appears to be a clear imperative for institutions of higher education to develop an environment where indigenous scholars and researchers can develop the tools to research and evaluate their own cultures free of the difficulties imposed by Western methodologies.*

The considerable merits of the separatist approach notwithstanding, it has been criticized as being rather unrealistic and non-pragmatic at a time when the global trend is towards greater inter-cultural contact and communication. For one thing, as Le Grange puts it (2002:71), “we cannot relive pre-colonial times.”

***Performance Partnership and Co-existence Approach:*** As proposed by Turnbull (1970) and elaborated by Le Grange (2002), this perspective holds that the best way to achieve the needed transformation of the academy is by the creation of a new knowledge space “an interstitial space in which local knowledge traditions can be refined, and decentred” by de-emphasizing representivity of knowledge while emphasizing the performativity of knowledge (Turnbull 1997:560). This, according to Le Grange (2002:71), would make it possible for “both Western epistemologies and African indigenous knowledge to coexist” and to function together without the danger of the latter being assimilated by the former.

He further recommended that one way of creating the new knowledge spaces should be through partnership or bilateral research in which both “non-indigenous and indigenous researchers participate in an equitable manner to formulate, design, and carry out the research project together” (2002: 71–72). The essential feature of such partnership research is negotiating the research needs of the partners; assessing their relative inputs and operational relationships; and the organization of trust for the research outcomes in the form of new knowledge products.

In conclusion, the five approaches reviewed above do not, by any means, exhaust all the alternatives to the transformation of the African academy that have been put forward. However, they do provide an essential knowledge base on which my own proposal is going to rest.

## **The Culture Product Indigenization Process (Culpip) Model**

Central to the Culpip model is the concept of “culture product.” It is therefore necessary to expatiate a little on this crucial concept. Culture products may be defined simply as any form of human devices, formulations and techniques (whether tangible or symbolic) that fulfill some need or provide some service for humankind in a given environment. They include such material objects as knives, fishing nets, machines, bombs, and electronic devices as well as intangible things such as songs, jokes, ideas, skills, methodologies and organizations. Put differently, culture products are human configurations of elements of a given culture to provide the essential vehicles of interaction among its participating members as well as meet their practical needs.

Culture products are so numerous that we must find a way of classifying and ordering them to be able to take a holistic view of them. To this end, I have divided all culture products into two broad categories namely, technologies and goods/services.

**Technologies:** Technologies are any human-made or culture-generated devices, formulations, or organizations utilizable for the purpose of producing or creating needed goods and services.

Technologies are sub-divided into three categories; namely, material (physical) technology, social technology, and communication technology.

- Material (physical) Technology — This encompasses artifacts; that is to say, human-made tangible devices and implements utilizable for the production of goods and provision of services. These include bows and arrows, ploughs, typewriters, looms, laboratories, machines, and computers.
- Social Technology — This comprises non-material, “theoretical” formulations, procedures, “know-hows” and ways of doing things that are utilizable for producing and delivering goods and services. Examples of this include methodologies, techniques, organizational and management skills, bookkeeping and accounting procedures, negotiating and counseling techniques, social institutions like patriarchy, and the United Nations.
- Communication Technology — This is made up of purely symbolic devices that serve as vehicles for communication and thus facilitate social interaction. One general example of this is language, whether verbal, code or body language. Other examples include signs and symbols, drumming, and the Internet.

These are non-tangible, non-material outcomes of social processes, social interactions, and social interrelationships. They are referred to as technology in the sense that they are devices for meeting human needs and solving societal problems.

**Goods and Services:** Goods and services, on the other hand, are any products of human activity that are usable to satisfy human needs or meet societal ends. They are sub-divided into three categories; namely, material goods, social goods/services, and intellectual goods.

- Material Goods — Material goods are defined as physical finished products and consumables for the satisfaction of individual and group needs of humankind and the society. Examples of these include soap, food items such as maize, houses, ornaments, aeroplanes, and television sets.

- Intellectual Goods — Intellectual goods consist of non-tangible culture objects in the realm of ideas and abstract concepts. Other examples of these are names and terminologies, cognitive knowledge, and idioms.
- Social Goods and Services — These are non-material, non-tangible end products of human social activities, interaction processes, and role-relationships essential for life in society. They include values, norms, customs, motherhood, priesthood, and friendship. They also encompass a wide variety of social services like concerts and plays, football games, health and healing systems, belief systems, etc. In general, the application of social technology to intellectual goods produces social services.

### **Culture Products Interaction Dynamics**

Whenever two or more culture products of the same type but of different origins (one foreign, the other indigenous; for example, two types of cooking pots, or two different methods of predicting weather storms) are brought together in one social space, a dynamic system of interaction ensues between them resulting in a situation of domination, marginalization, or co-existence.

*Domination* occurs where one of the culture products gains ascendancy over the other, thus becoming the dominant culture product while the other (now the marginal culture product) is relegated to varying degrees of *marginalization* and disuse, culminating in total extinction or assimilation into the dominant culture product. On the other hand, where the two different culture products in a given social space, achieve equal ascendancy and acceptance, a situation of mutual *co-existence* or independence results. In other words, they live side-by-side, neither dominating or marginalizing the other.

The interaction dynamics of foreign and indigenous culture products also may affect the structure and internal composition of either or both of them in very considerable ways resulting in situations of adaptation, hybridization, or purity.

*Adaptation* results when the dominant culture product does not continue to remain in its original (pure) state but becomes modified or adapted by taking on some elements of the relegated (marginal) culture product (or by yielding some aspects of its original form) so as to enhance its suitability and acceptability in the social space. Thus a new adapted culture product is created.

*Hybridization* occurs when elements of the interacting culture products fuse and blend together to form a distinctively new culture product. The hybrid culture product created by this process, while indigenous to the locale, is neither pure nor genuine.

*Purity* or a genuine culture product is obtained when the dominant or co-existent culture product (which may be indigenous or foreign) remains and continues to operate in its original form or pure state, unmodified by the interaction with rival culture products.

In summary, as a result of interaction dynamics among rival culture products, the following four forms of culture products may be found in a given social space: (1) pure indigenous culture products, (2) hybrid culture products, (3) adapted culture products, and (4) pure foreign culture products.

### **Culture Products and the Transformation of the Academy**

From the above discussion on the typology and interaction dynamics of culture

products, it is possible to deduce a number of points that shed important light on the issue of transformation of the academy in Africa.

First, it is observed that the concept “knowledge,” as it is currently used in social science literature, refers to either “a system of know-how” (i.e., social technology), or to cognitive knowledge ( intellectual good), or to combination of both.

Second, it draws attention to the issue of the core function of the university (the academy) in society, stressing that the central and most fundamental function of the university is the production and dissemination of culture products and not just knowledge.

Third, it implies that, hitherto, African universities have been in the business of reproduction and dissemination of foreign culture products to the neglect of indigenous culture products.

Finally, it serves to clarify the challenge and primary objective of the envisaged transformation of the academy; namely, a radical shift from the reproduction of foreign culture products to the production, preservation and dissemination of pure indigenous and hybrid culture products. The Culpip model outlines the essential steps of this transformation process.

### **The Transformation Process**

The Culpip model proposes a series of closely interrelated, largely dialectical and interactive activities, which in the end result in the transformation of the academy in Africa. For purposes of analysis, these activities are grouped into six essential steps of the process.

***Establishment of Culture Products Transformation Centre or Institute:*** While every discipline in the university is normally engaged in the production and reproduction of culture products in its own knowledge domain, it is essential that a separate, “protected” institutional space be created within each university to coordinate, oversee and facilitate the shift from reproduction of foreign culture products to the production and reproduction of both pure, hybrid, and adapted indigenous culture products.

Part of the function of this Centre is to disseminate, popularize, and market indigenous culture products. To this end, it will have the authority to collaborate, deal, and negotiate with other institutions, and local and foreign governmental agencies for the sponsorship and utilization of indigenous culture products of the university. In addition, the Centre must be equipped to undertake independent research into any aspect of the national culture and culture products.

***Self-Examination and Evaluation of Traditional Culture Products:*** Academic and intellectual leadership in Africa “will have to be willing to come into conflict with those aspects of the prevailing value systems which uphold the existing structure of society” characterized by retardation and backwardness (Schuftan 1998:56). To this end, one of the initial activities of the Culture Products Transformation Centre should be to organize an in-depth self-examination and evaluation of local African traditional values, belief systems, and customary practices to identify those that tend to hinder social and economic advancement and competitiveness and, as such, need to be modified, discouraged, or eradicated; as well as those that portray the positive African humanity and progress, and as such need to be retained,

empowered, promoted, and exported. For the belief that everything “African” is perfect and good is as bigoted and harmful as the belief that everything “African” is bad. As Claudio Schuftan (1998:55) has said, “The society to be attained is not something that will merely happen independently of our efforts. It is something we can and must shape....”

**‘Constructive Engagement’: Fracturization of Foreign and Indigenous Culture Products:** At this stage of the transformation process, systematic effort is made to subject all significant local foreign culture products—whether physical (wood/machine) technology, social technology, communication technology, material goods, social goods, or intellectual goods—to a structural breakdown or fracturization and analysis to identify and isolate their respective constituent elements or parts. This activity goes on at both the micro (individual researcher/lecturer) level and the macro (institutional or national) level. At the macro levels, it may require the establishment of analytical laboratories and workshops as well as the engagement of services of a variety of experts to carry out the analysis and detailed documentation. Significant indigenous culture products are also subjected to the same treatment.

**Generation of New Forms of Culture Products (Inventions and Discoveries):** At this crucial stage of the transformation process, various forms of new culture products are created by combination, recombination, modification, integration blending, and fusion of the earlier isolated elements of foreign and indigenous culture products. The outcome of the wide variety of activities at this stage may be summarized as follows:

- Production and reproduction of pure indigenous culture products, achieved through the refining, remodeling, and repackaging of traditional, existing culture products that remain uncontaminated and substantially unaltered by foreign culture products.
- Creation and reproduction of new hybrid culture products through the fusion and blending of elements of foreign and indigenous culture products.
- Creation and reproduction of adapted culture products through the modification of certain aspects or elements of either the imported foreign culture products or pre-existing indigenous culture products so as to render them more suitable for local conditions.

**Integrating the New Culture Products into the University Curriculum:** Activities at this stage entail systematic efforts to incorporate the new culture products into courses of instruction at the University level so as to ensure that the knowledge base, as well as the social and intellectual skills implicated in the new culture products, are disseminated and imparted to the population. This is achieved through the process of “curriculum engineering” (Jeevanatham1999; Makgoba 1999).

Curriculum engineering also serves two other functions in the transformation process. It may be used to target or focus on certain traditional value orientations and customary practices for promotion, for modification or for eradication as may be considered desirable. It can also be used to introduce and encourage the use of African languages and idioms to render modern technological and scientific ideas, concepts and inventions or culture products.

***Protection, Empowerment and Popularization of Indigenous Culture Products:*** In the African context, it is not enough for the academy to create and produce new indigenous culture products. It is equally important to protect them; to ensure their survival by empowering them legally, socially, and psychologically to withstand competition from more refined, mass-produced culture products from the West and the East. This entails, among other things, systematic effort to counteract and reverse the negative image that the colonial machine had stamped on anything not Western. It involves getting Africans to take special interest and pride in indigenous culture products; it requires a marketing strategy to popularize the indigenous products, especially with the country elite. These activities, much of which will be initiated and coordinated by the culture products transformation centres, will ensure that the new culture products created by the academy are disseminated, accepted, owned, and utilized by the people.

### **Conclusions**

This paper is essentially a response to well-meaning, persistent and increasingly loud calls for a transformation of the academy so as to adapt it more to the needs and cultural environment of Africa. As its point of departure, the paper canvasses a change in orientation regarding the primary function or “core concern” of the academy; from the production and impartation of knowledge, to the production and dissemination of culture products. A major advantage of this shift in orientation is that it liberates the academy from the confines of the “ivory tower,” allowing it to become actually involved in the everyday mundane, as well as the inspired, activities of the people. This is more in line with the needs of African communities.

As a process of the needed transformation, the paper further advocates that the academy abandon the colonial and neo-colonial heritage of reproduction and transmission of foreign (Western) culture products. In its place, it should engage in the production of three forms of culture products; namely, pure indigenous culture products, hybrid culture products, and adapted culture products following the Culpip model. This approach to transformation of the academy is considered both pragmatic and realistic as no culture or people can expect to progress in exclusion from others. In fact, the vibrancy of any culture or civilization is related to its ability to borrow from and incorporate vital elements of others.

Finally, the transformation process has to be guided by a well-designed national higher education policy and legal instruments, which protect the indigenous culture products from foreign invasion and domination.

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