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Can ICT belong in Africa, or is ICT owned by the North Atlantic region?

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ICT, as a technological innovation and a major factor in globalization, poses particular problems of ownership and identity with regard to the African continent. What is the place of ICT (Information and Communication Technology) in Africa, and what is the place of Africa in a world increasingly dominated by ICT? This chapter seeks to explode the apparent contradiction between Africa and ICT. In the first part the author confronts African thinkers like Mazrui and Gyekye who have argued the incompatibility of African culture and ICT. Having advanced an argument to the effect that ICT is just as much and as little owned by Africans as by any other collectivity in the contemporary world, the second part of the chapter sets out, with a more empirical argument, some of the ways in which the African appropriation of ICT is actually taking shape.

Introduction: Two worlds?

Until well into the 1970s when computer terminals were still scarce and the microcomputer unknown, academic computer use in the Netherlands was mainly restricted to main frames that today we would consider hopelessly antiquated. Usually we ran our jobs at night, in our absence, as the computer was slow and the queue of rival jobs was virtually endless. The supreme moment came the next morning when we grabbed our batch of output from the counter assistant who ran the printer to which we had no direct access: The output consisted of enormous quantities of A3 fanfold paper full of barely legible printed lines of 80 characters in caps. Walking away from the counter, we would hold the wide and hopefully heavy batch of output at eye height, and with pounding heart would start to skip through the output to see if the computer had brought us the outcomes we had hoped for.

Ten years later, when doing cultural anthropological research into the psychotherapeutic practices of local oracular priests in the mangrove woods of the West African country of Guinea-Bissau, I was struck time and again by the similarity between our tense and hopeful scrutiny of computer output back in the 1970s and the stance that these priests (often practising in groups of two or three at a time) adopted when administering the frequently-resorted-to ‘chicken oracle’. In local Manjak society,[1] sacrifices to spirits and ancestors were the order of the day. Each sacrifice’s acceptance or rejection by the spirits had to be ascertained by a one-bit decision device: in a swift movement the belly of a chicken was cut open, and the unexpectedly long, cream-coloured string of guts was held high in the sunlight to be scrutinized professionally so that the priestly colleagues could decide on the presence or absence of unnatural darker stains on the outside of the guts. The outcome could be *black* (unfavourable) or *white* (favourable). The priests wore no outward signs of their professional status but they stood out unmistakably as servants of the supernatural — privileged with extraordinary power and knowledge — by the combination of their tense technical attention; their fond deliberations on details absolutely invisible to lay outsiders; their relentless and triumphant final judgement that for the client held the greatest possible significance (for they were supervising sacrifices, no Manjak will sacrifice unless driven by despair, and each sacrifice involves very great costs of time, money and frustration); and the studied neglect with which the disfigured dead animal was cast away.

The choice of these two opening vignettes, one Dutch and one African, purposely conjures up the compartmentalized world image from which I want to step back in this chapter. ‘Africa’, ‘Europe’, ‘the North Atlantic region’ — these are not neutral descriptive categories and certainly not distinctions underpinned by scientific analysis but merely geopolitical programmes serving to designate the hegemonic relationships in the contemporary world:

- The North Atlantic region as characterized by material technology in which the interaction between man and machine (i.e. a conglomerate of highly heterogeneous material part objects functioning on the basis of a rationally composed and empirically underpinned coherent complexity) entails, in addition to social effects, an interference with nature that is explicitly intended as well as demonstrably effective, and that may be conducive to some social utilization of natural forces.

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[1] See Van Binsbergen (1984) and (1988).

- Africa as characterized by socio-ritual technology ('magic') in which machines in the above sense do not feature, and in which man only produces a social effect by merely the *illusion* of an interference with nature, through interaction with objects that are either naturally given (the chicken), or that may be produced with the aid of simple technology (the priest's knife slitting open the chicken's stomach).

According to such a conception of the world, ICT (Information and Communication Technology), as eminently typical of the technology of North Atlantic modernism and postmodernism, would be alien to Africa. Accordingly, it would — allegedly — merely do violence to African people if material technology were to occupy just as much of a central and taken-for-granted part of their lives as has come to be the case in the North. By such a postulated development, the most beautiful, most essential contribution of Africans to the global achievements of mankind would — still allegedly — be destroyed, given the constraints imposed by this world view. But this would be unlikely to happen anyway for, because of their own 'culture', 'Africans' would (so this conception of the world maintains) be scarcely capable of developing the various specific skills necessary for contemporary computer use. In accordance with the essentialism characteristic of geopolitical constructions, the division of labour between North and South is conceived of as perennial and immutable: to us the computer, to them the chicken oracle — as presumably it has been since the beginning of time, or certainly since the late 19th century, when British colonial expansion in Africa took place to the tune of the following late 19th-century popular couplet that in its emphasis on the Northern monopolization of the technical achievements of that time and age (including advanced weaponry) implies the essence of a not-yet-globalized world:

Whatever happens,
we have got
the Maxim gun
and they have not.

One of the principal tasks of intercultural philosophy is to explode precisely this world view, and to replace it by a model more in accordance with the contemporary global reality that is characterized by immense diversity, the international interconnectedness of cultural orientations, and the virtually unlimited global availability of state-of-the-art technologies.

The problem as seen from the perspective of intercultural philosophy

Intercultural philosophy investigates, as its central theme, *inter-culturality*.[2] It does so by means of a theoretical reflection on such concepts as culture, cultural difference, cultural diversity, cultural relativism, identity, multiculturality, power, hermeneutics and dialogue. With the use of such concepts, intercultural philosophy critically explores the conditions under which we might speak of interculturality. What are the units between which the interaction takes place that is presupposed in the concept of '*inter*'-culturality? On what grounds (and are these valid grounds) do we distinguish between such units? What nature, permanence, boundedness *vis-à-vis* each other, internal structure or internal consistence can we attribute to these units? Is it meaningful to speak of a plurality of cultures (in line with well-established contemporary language use) in such a way that we attribute to each culture out of which that plurality consists, such features as internal integration, boundedness *vis-à-vis* other such cultures, association with a specific part set of humanity, and association with a part of the earth's surface as the historical habitat of that part set? Or is such a use of 'culture' and 'cultures' too much a reflection of such self-evidences as have established themselves in the socio-political structure of contemporary society — self-evidences that the philosopher ought to critique rather than take for granted? Is it meaningful to speak of an African 'culture' or 'cultures', and to attribute distinctive features to it or to them? The world appears in our experience as a complex of contradictions, foremost among which is the contradiction between existing inequalities in terms of power and resources, on the one hand, and the appeal to a shared humanity regardless of these inequalities, on the other. What is the relationship between (a) such underlying inequalities, and (b) thinking in terms of culture and cultural differences? Is (b) simply the masked, oblique expression of (a)? Are intercultural knowledge and intercultural communication possible? Or will such knowledge always remain invalid, to the extent to which it is incapable of escaping from the distorting effects produced by the hegemonic subjugation of one subset of humanity to the language, power, productive interests, world view and values of another such subset? Is it possible for cultural mobilization initiated by the local actors themselves, and by philosophical reflection by intercultural philosophers, to rise above these limitations? Can such mobilization and reflection even be a means to redress inequalities and to enhance the validity of intercultural knowledge? These are some of the themes of intercultural philosophy.

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[2] Cf. Mall (1995), Mall & Lohmar (1993), Kimmerle (1994), Kimmerle & Wimmer (1997) and Van Binsbergen (2003: Chapter 15 and *passim*).

With specific application to ICT this yields two central questions:

(1) Is ICT to be viewed as the specific and characteristic achievement of only a subset of humanity (notably the North Atlantic part)? and
(2) Is ICT therefore not really at home in Africa?

I will answer these questions in a largely negative way. This allows us to situate Africa within a globalizing world, and to admit that in such a context Africa has unmistakably and self-evidently access to essentially metalocal elements such as ICT. Next, we can pose the more empirical question as to how such access takes shape in concrete terms. In other words, how does the enculturation of ICT in Africa manifest itself by means of a transformative localization — often a virtualization — of whatever is available worldwide in the ICT field?

ICT as North Atlantic and therefore as not really at home in Africa?

Several African philosophers have concerned themselves with the question of the retention or loss of cultural identity under conditions of contemporary information and communication technology. Does electronic ICT in Africa lead to creative and liberating cultural appropriation by Africans? Is it leading to the annihilation of the African cultural heritage? Or do both propositions apply somehow? Is the computer in Africa to be taken for granted or does it remain an alien element? Way back in the late 1970s, the prominent political philosopher Ali Mazrui (hailing from Kenya and now at the State University of New York, USA) regarded the computer as a ‘cultural transplant’ from the North, alien to the societies and cultures of Africa and only capable of having a devastating or subjugating effect in the African context (Mazrui 1978). Jules-Rosette (1990) summarizes Mazrui’s view in the following terms:

> [the] imported nature [of the computer] might badly fit the tasks and orientation of non-western workers, and as a result it may form a source of socio-cultural disruption, increasing economic dependency and introducing modes of thought which are alien to the working environment in which the computer is being used.

Mazrui was recently supported in this point of view by the Ghanaian philosopher Kwame Gyekye (1997: 37), who stated that:

> Ideally, technology, as a cultural product, should rise from the culture of a people, if it is to be directly accessible to a large section of the population and its nuances are to be fully appreciated by them.

But by contrast, Paulin Hountondji from Côte d'Ivoire maintains a relativizing distance from any attempt to claim an absolutely distinct African identity and culture, including an African philosophy. He invites his African colleagues to recognize the fact that contemporary African expressions are increasingly linked up with a global cultural, philosophical and technological mainstream. Here Africans, provided the intercontinental inequalities attending the material conditions for the production of knowledge are lifted and on the basis of the African historical background of what Hountondji calls 'endogenous knowledge production', may very well prove able to make a contribution, which then is to converge with, rather than deviate from, widely accepted formats and achievements.[3] For Hountondji, ICT is the answer to Africa's lagging behind in academic knowledge production, and the African Institute for Advanced Study, which Hountondji is now in the process of setting up in Benin (based on Princeton's model for such institutes), will rely on electronic ICT and not on such time-honoured African means of communication as the talking drum).[4]

Open debate on these questions is severely impeded by the fact that it is situated in global and national arenas where social control favours the public production of politically correct statements, or of statements that reflect the parochial collective interests of a particular group of participants in this debate. Many philosophical positions on the issue of the transcontinental reception of ICT are possible, and among them are socially privileged geopolitical points of view, entrenched by the effects of societal power distribution, ideology and media coverage. The latter points of view may have become installed in the collective representations of large sets of people in such a way that these viewpoints can hardly be explicitly discussed and confronted any more without prejudice or without inviting bitter controversy. These collective representations also tend to invade the philosophical discourse, to the extent to which philosophers, too, are children of their time and of their wider society.[5] The naïve geopolitics of everyday North Atlantic parlance, such as the evocation of a particularly negative othering of African conditions and people, is often replicated in what are otherwise sophisticated specialist philosophical arguments.

Let us seek to sketch, by means of a few rough distinctions, the fields of tension that are encountered here.

In the times of mercantilism, imperialism and colonialism, 'the African' was constructed, in North Atlantic thought, as the *other par excellence* — an other to whom the philosophical achievements of the Modern Age (insights in the human condition, and such human rights as derived from such insights), scarcely applied, even though Europeans insistently claimed these insights and rights for themselves. Subsequently, after decolonization, the second half of the 20th century witnessed two almost opposite movements seeking to redress — with the mobilization of a good deal of emotion — this racialist exclusion of Africans:

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[3] Cf. Hountondji (1996, 1988, 1990, 1994).

[4] Hountondji (personal communications, 1997-1998).

[5] Cf. Van Binsbergen (2003: Chapter 15).

(a) On the one hand, in a modernist Enlightenment-derived frame of mind, and largely in the context of development cooperation, and its underlying philosophies, there is the attempt to reclaim things African under the heading of allegedly universally applicable, and originally North Atlantic, categories (such as ‘world religion’, ‘democratic constitutional arrangements’, ‘modern health care’, ‘formal education’, ‘the formal organization’ as the dominant format for social and economic life, ‘modern technology’, ‘economic planning’, ‘literature’, ‘philosophy’, ‘art’). From this perspective, being ‘African’ would be an irrelevant category, under which more essential universal categories become manifest.

(b) On the other hand, there is the particularism projected onto fragmented African identities as an aspect of the ethnicization process in which (under postmodern conditions such as the erosion of the modernist world view of the Enlightenment, of the centralist nation state, and of the illusion of the autonomous subject) the contemporary world as a whole is involved. This process consists of the fact that politics is no longer primarily experienced as a struggle for scarce material resources but for public recognition of a particularistic group identity. Once such recognition has been extended to the group, it will successfully claim material resources as a matter of course. From this perspective, ‘being African’ is a quality in its own right, not to be relegated to any more universal category.

From the perspective of movement (a), things African dissolve as a slight ruffle amidst so many others within the great flow of world culture and world history. Movement (b) however battles against such a blurring of distinctions and stresses the construction and presentation of an identity of one’s own at the local, regional, national and continental level. The tension between these two movements produces a torsion that lends confusing double binds to much of the contemporary thinking about Africa, North Atlantic hegemony, and universality. From the ethnicizing perspective (b), African identity appears as the emphatic politicized condition for participation in intercontinental processes of communication, knowledge production, cooperation and intervention. From the development perspective (a), however, African specificity has been underplayed in favour of universalism in science, economics and social-organizational and constitutional matters. These two simultaneous movements (a) and (b) each lead to a different appreciation of such cultural programming as structures everyday life, political organization, forms of production, world views and religious practices. According to movement (a), each cultural ordering (even if recognized to be unmistakable, comprehensive and difficult to escape from) is yet a more or less ephemeral, superficial orientation under which more fundamental intercultural communalities lurk — communalties that are claimed to be universal but that in fact are conceived primarily in accordance with North Atlantic models. This view implies the possibility that culture does not produce a total experience encompassing an individual's entire life, and therefore also implies the probability that each individual is simultaneously involved in a plurality of different cultural orientations. It would not, thus, be meaningful to speak of a 'culture' or of 'cultures' in the sense of integrated, bounded, distinct human modes of being that encompass life as a whole and that are shared by large sets of people.[6] The surface fragmentation of 'cultures' would be taken to dissolve into comprehensive spatial and temporal communalities and continuities at a deeper level. By contrast, the ethnicization movement (b) invites us to let the many concrete cultural orderings coincide more unequivocally with the identities that we construct for ourselves within contemporary political arenas, and to attribute to these orderings, in this context, a permanence and a discrete distinctive nature that are commensurate with the severity of the contradictions and with the seriousness of the struggle within these arenas. The South identity or identities, from a development perspective (a), would ultimately appear to be contingent and unessential, yet from the ethnicization perspective (b) would appear to be reified and essentialized. Since the greatest, most conspicuous inequality in our time is that between North and South on a global level, from the ethnicization perspective (b) it would amount to a treacherous attack on the most important resources available for improving the conditions and enhancing the empowerment of people in the South, if as under (a) one were to take a relative view of any Southern, for instance any African, identity. Thus perspectives (a) and (b) lead to utterly contradictory positions, neither of which could be said to be more justified than the other. *Interculturality is invariably characterized by the puzzle of contradicting positions between which we cannot choose* unless we are prepared to destroy the equality of these positions and forfeit interculturality for the sake of a one-sided alternative of hegemony, subjugation, objectification or ethnocentrism.

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[6] Cf. Van Binsbergen (2003: Chapter 15).

This goes some way towards sketching the complex context in which we may explore, from an intercultural perspective, the strained relationship between, on the one hand, ‘Africa’ (i.e. African identity), and contemporary ICT, on the other.

We have to admit that ‘Africa’ is not a fixed and firm reality. When Mazrui and Gyekye see ‘Africa’ as being penetrated by the computer, then their concern is not so much with a land mass that extends between certain latitudes and longitudes, one on which hundreds of millions of people move in a gaudy interplay of cultural and social organizational varieties — partially rural and in accordance with historically specific local patterns, partially urban and increasingly in accordance with patterns that are either recent local innovations, or transformed borrowings from elsewhere in the contemporary world. In the debate surrounding ICT, ‘Africa’ is primarily an identity construct: the issue is ‘African culture’ or ‘African cultures’ that are alleged to be negatively influenced by the supposedly alien computer and the latter’s capabilities of communication and information.

To what might such a possibly negative influence be attributed? Here at least three answers would be possible:

(1) (1’) ICT is Northern culture, and hence (1’’) ICT is irreconcilably opposed to African culture;

(2) (2’) ICT is metalocal world culture, without local specificity and local validity, and hence (2’’) ICT is, in principle, devastating for any localizing cultural identity such as the African one; and

(3) (3’) ICT is inimical to culture, and hence (3’’) ICT is inimical to the African culture or cultures.

At first glance something could be said in favour of each of these three theses but none entirely passes the test of closer scrutiny. This is partially due to the dual nature of each of these theses: each starts with a global cultural appraisal of ICT, followed by a claimed effect of the global characteristic on the African situation. Even if either of the two parts were true, their combination might still be false.

ICT inimical to any culture?

Only in the case of thesis (3) is the derivation of (3’’) from (3’) evident: whatever is inimical to culture is inevitably inimical to African culture or cultures. Technological pessimism has been part of the recent continental philosophical mainstream with its principal exponent being Heidegger (1977), who has claimed that technology is by its essence perpendicular to any culture and does not constitute an integrated part of it. But even so, thesis (3) can hardly be defended. Whatever definition we offer of culture, in continuity with widespread established language usage, we are likely to prefer to describe culture as something that has a collective nature — in other words, something that is the attribute of a set of people, of a subset of total humanity. In addition, our definition is likely to include an aspect of spatial extension, since even the smallest set of people inevitably occupies a certain space. Regarding the time dimension, our concept of culture is likely to include a certain permanence, supported by interpersonal learning processes to bridge the gap between generations and to guarantee cultural continuity in the face of the individual mortality of a culture's human bearers. In other words, culture is likely to be considered as being subjected to processes of regulated transfer between people whose cultural competence is initially unequal: people belonging to different generations, classes, genders, linguistic groups, local outsiders versus local insiders, etc. And our definition of culture is also likely to include an aspect of recognizable patterned ordering that allows culture both to be specifically recognized as a transferable collective attribute and to be actually transferred to those who adopt patterned cultural specifics as their distinctive collective attribute.

Information and communication are implied in most of these aspects of our definition of culture. Information and communication are thus essential aspects of culture, and they always take place via a specific medium — a specific technology. The face-to-face communication[7] by which culture is predominantly transferred in family settings constitutes a technology of speech and rhetoric — in other words a technology of information and communication. Another such technology of information and communication has been formed — ever since the earliest imperial times of the Assyrians, Persians, Chinese and Romans — by the technologies of the mail road with its shunting points where horses and couriers were replaced, or in the last thousand years (if we go by the Chinese invention of block printing, rather than by the West European variety of detached type) the technology of printing, and in most recent times the technologies of movies, radio, television, video and the Internet. These have all amounted to technologies of information and communication constitutive of culture. Instead of being inimical to culture, ICT constitutes a central element in everything we would prefer to call culture. There seems to be little reason to exclude present-day electronic ICT from this general picture. However, we must point out the tension between:

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[7] Even here though the role of non-spoken representations – in sacred emblems, images, writing, photographs, videos, email, telephone conversations, etc. – must not be underestimated or restricted to the most recent times.

(i) the ethnicization perspective on culture (according to which culture is bounded, specific and integrated, and comprises and defines specific part sets of humanity); and
(ii) communication as a fundamental aspect of *any* culture.

The former (i) is conducive to demarcation, the latter (ii) to extension, which in principle may be unlimited and may comprise mankind's entire world. In other words, communication that is constitutive of culture may spill over beyond that one culture and thus assault its specificity. The fact that language is one of the principal means of communication for constituting culture works to the advantage of demarcation: language is highly structured and specific in terms of its lexicon, phonology and syntax. Languages are in principle not mutually intelligible and each specific language therefore effectively limits the part set of humanity and (to the presently rapidly decreasing extent to which languages are neatly distributed across the globe in the way of geographical language areas, each of which is tied to a specific section of the earth's surface) the spatial radius within which communication takes places and culture consolidates itself. Not for nothing is language the main stable indicator of ethnic identity. But regardless of how language is acquired,[8] many (probably most) people in the world are multilingual to a greater or lesser extent, and thus it is possible to step out of the limitations imposed by merely one language. Moreover, language is by no means the only method of communication, by no means the only factor constituting the communication element in culture. One example may make this clear. Anyone who makes a transcontinental trip across Africa in an old car will meet people along the way with whom they can barely converse, if at all, but who are able to repair their car should the need arise. Obviously communication about that type of technological knowledge (and many other types of knowledge) is language dependent only to a very limited extent. Through communication processes culture is both consolidated and continually spread outside the space that was initially defined as that culture's proper domain. Moreover, by communication processes, culture is continually invaded from outside within the proper domain it has initially claimed for itself. As a result, the localization of culture and the close link between culture and identity in the process of ethnicization tend to be continually threatened and destroyed. On these grounds one might argue that ICT is both constitutive of, and inimical to, culture, but one might as well maintain that the very conception of culture as localized, bounded and identitary, is inimical to culture! Exit thesis (3).

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[8] Most anthropologists would claim language mastery to derive exclusively from a learning process, but reasons have been advanced from various sides to qualify this statement, for example, from Chomsky (1968, 1986) postulating the innate nature of language ability to Sheldrake (1981, 1988) suggesting that the acquisition of an unknown language is made easier the more speakers that language has, as if an intangible supporting network – a 'morphogenetic field' – would add to individual learning achievements.

ICT as Northern culture

Thesis (1) is considered to be true by the early Mazrui and by Gyekye. Our example of African car repairs is doubly instructive, for it also shows that many forms of cultural programming (such as knowledge of transport technology, specifically of the internal combustion engine), that we would initially be inclined to situate in a particular area of the contemporary world (notably in the North Atlantic), have not confined themselves to that region, and have in fact gained worldwide distribution. Not only the silly clichés of globalization, such as jeans, Coca Cola and the McDonald hamburger, but also other globally trendy styles of clothing, of cosmetics and bodily hygiene, means of transport, organizational forms, world religions, and globally circulating forms of time reckoning, of music and its reproduction, of dance, recreation, sports and sexuality, have gained an absolutely metalocal distribution. Africa takes part in this distribution, not so much because Africans can afford actual consumption out of this global supply (most of them cannot) but vicariously: to the extent to which representations of this metalocal culture, via TV, video, radio, the printed press and people's own observations across class boundaries, have reached contemporary Africans and inform their desires. Africans today seek to partake of *Modernity on a Shoestring* (cf. Fardon *et al*. 1999). All this amounts to the cultural aspect of globalization. By globalization we mean, in general, the process through which local contexts in the world are more and more dissolving into a worldwide network of interaction under the influence of technological innovations that have reduced to virtually zero the costs (in terms of time and money) of communication and information. Globalization was, in the first instance, observed with regard to transnational movements of capital along electronic media but in the meantime turns out to have important cultural dimensions.[9]

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[9] A selection from the rapidly growing literature in this field includes Bauman (1998), Beyer (1994), Featherstone (1995), Friedman (1995), Hannerz (1992), King (1991), Meyer & Geschiere (1998), Robertson (1992), Van der Veer (1996), Warnier (1999), cf.

In this situation, appealing to 'African culture' or 'African cultures' implies the risk that we dissimulate the problematic, constructed, virtual nature of these concepts. One of the main themes of the contemporary African experience has been the revival, often even the militant reconstruction, of the 'authentically African' despite, and often with the aid of, prominently installed metalocal contemporary technologies: the printing press, music, recordings, film, radio and television, the Internet, cultural festivals with electronic sound technologies. There is no empirical support for the claim that historical African culture may still be captured, entirely intact and self-evident anywhere on the African continent today, by any means. Whatever passes for African culture today has become to a lesser or greater degree *virtual*: in name it harks back to historical cultural material (world views, norms and values, religious symbols, institutions deriving from the local past), but in fact it appears in contemporary representations as fragmented, as produced under a new globally influenced format, and as having lost its coherence with a more integrated and persistent local cultural framework. It has become redefined and hangs in the air (Van Binsbergen 1997b, 1998).

In this context, to speak of ICT as a cultural transplant is misleading to the highest degree. Such a claim denies the continuity between North Atlantic and African manifestations of globalized metalocal culture and suggests instead — in a nostalgic re-enactment of the redeeming mysticism of things African — a geopolitical separateness between continents in the cultural domain, and in general a purity and authenticity of cultural domains that in our day and age is certainly nowhere to be found. I reserve for another argument the question of whether such purity and separateness *at any moment in the past* would have been adequate terms to describe the actual situation within Africa and the relationship between Africa and the North Atlantic. The fact that Mazrui and Gyekye pursue cosmopolitan forms of knowledge production (philosophy, political science) in an originally European language (English), and that they do so effectively and with great success and appeal especially outside their African country of origin, is in itself sufficient proof of the point I wish to make here with regard to the present lack of separation and of purity.

Would it even be anachronistic to claim, in our time and age, a specific local or regional origin and identity (for example 'North Atlantic', 'American', 'European') for technologies that at present have a metalocal distribution, including electronic ICT?

It is characteristic of modern times that technological innovation has expressly become an industry, a collective, explicit and rationally organized

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Van Binsbergen (1999), the English version of which appears as Chapter 12 of Van Binsbergen (2003).

production process. Technology has loosened itself from the more comprehensive socio-cultural frameworks that produced it, and has for a long time largely ceased to be an expression of the local socio-cultural forms which such frameworks have assumed. In other words, apart from minor and immaterial embellishments, there is nothing remarkably Dutch any more about Philips (‘the inventors of the CD’, as their advertising slogan claims) CD equipment, nothing remarkably American about Macintosh computers, nothing remarkably Japanese about Fuji cameras. Patent law regulates the appropriation of forms of technology that generate so much productivity and on which products for such lucrative markets are based, that restrictions on the circulation of that type of knowledge are worth enforcing, at least in the immediate future. Of course, these restrictions on the circulation of knowledge only serve to ensure the greatest possible circulation, with the greatest possible profit, of the products made on the basis of that knowledge in line with the general trend of globalization.

The spatial imagery surrounding innovation is often deceptive. Typically, innovation tends to be imagined as coming from the outside, from a different domain from one’s own, even if in fact that origin is far more continuous with one’s own domain. For the Dutch farmer who has taken to monitoring his cattle by computer, this is a ‘town’ technology, initially alien to his own rural environment but his very appropriation of this technology, as of so many others, has already rendered relative the entire contradiction between town and country. To the Dutch academic who in the last fifteen years has totally transformed his/her style of writing, research and teaching following the arrival of the microcomputer and the Internet, the latter may have appeared as an alien ‘American’ technology, but again its very appropriation renders relative the distinction between the European home and the no-longer-faraway United States.

But is there any way of denying that the computer is originally North Atlantic? Some readers may know that the Internet was originally a specifically American military innovation in the 1960s, long before the advent of the microcomputer. The computer in general undoubtedly originated in specific accumulative cultural achievements of North Atlantic culture. The computer testifies to this state of affairs in many ways: in its internal design; in its external design and aesthetics; in the principles according to which the user interface has been conceived to readily appeal to the most likely, North Atlantic users; in the iconography and syntax informing the communication between computer and user, and between users; and in the illusion of an absolutely individual autonomy in ownership, access, financial and legal responsibility of the owner — whereas in reality that user tends to be blindly dependent on systems that are inaccessible as black boxes and that owe no accountability to anyone. The Microsoft empire and the negative stereotyping it generates among the more conscious users is a case in point. Even the built-in conflicts, ironies and humour in the computer domain may be relegated to the specific types of cultural programming attending the scientific, technological, military and entrepreneurial milieus — strongly North Atlantic and predominantly US — in which this technology has realized its rapid development. The language aspects of the computer are in the first instance American English. And without the inventive mathematics of Von Neumann, Turing and the members of their generation from the North Atlantic region, there would have been no computer.

Does this mean that the computer and ICT in general are eminently at home in the North Atlantic world? That is admittedly where they have been received for years with great rapidity in all kinds of successive phases of their innovation. But this reception in itself already shows that, even in the North Atlantic world, computers are not in the first place at home — the environment in which they originated is scarcely the standard North Atlantic environment but something far more limited and specific. The most adequate description of this process of reception may be one of globalization, for instance in the following terms.

Older formations of culture were made possible by older technologies of communication and information technology (from the footpath and the talking drum to writing, the mail coach and the sailing ship). At the same time these older cultural formations were breached by communication spilling over (by virtue of the same older technologies of communication and information) outside the localizing frames of identity. The double effect of both constituting culture and spilling over beyond the boundaries of cultural specificity has been a general feature of technologies of information and communication. Also, in the technologies of the computer (and of ICT in general), the local specificity of a cultural orientation has transcended itself by creating a medium that by its very nature is communicative and informative, and that is so even to a far greater extent than the older technologies by which older socio-cultural formations were supported. Far from being anathema to culture, contemporary ICT displays the typical dramatic relation *vis-à-vis* culture that technology has always had: facilitating and destructive at the same time.

Electronic ICT may, on the one hand, be a product of Northern culture but, on the other hand, it puts paid to this very type of localized culture. It is capable of supporting historical cultural identity constructions and is admittedly used for that purpose (see, for example, Anderson 1992), but of far greater significance is its ability to breach identitary boundaries and to render thinkable and to support new forms of identity (like communities of emailers, electronic discussion groups, etc.) that are exclusively ICT based. This new medium has turned out to be communicative and informative, and thus it claims its place among the instruments not for the destruction but for the perpetuation of culture.

Even if it were only for this metalocal nature inherent in electronic ICT, the computer in Africa cannot justifiably be called a North Atlantic cultural transplant — for its North Atlantic nature has been too much transcended to make 'North Atlantic' a fitting characterization any longer. Moreover, as we have seen, the globalizing metalocal domain extends to include contemporary Africa where the 'authentically African culture/cultures' have at best survived, if at all, in the form of carefully maintained virtual enclaves, geared to the annual production of a harvest festival, a chief's ceremony, a dancing performance, all of which have been partially reshaped in accordance with global models of media production, and thus have been virtualized.[10] Nobody who takes an overview of contemporary socio-cultural life in Africa can escape the conclusion that in most places globalized elements are present and are even taken for granted, are no longer seen as alien but have been successfully appropriated in order to end up as local and indispensable even though they may still stand out as sources of prestige. Nowhere in Africa do the jeans, the bra, the car, canned food, formal organizations in education, health services or religion give rise to surprise anymore — they demonstrate that in many respects life in Africa has ceased to be 'African' but — just like life in Western Europe — has become metalocal, not to say global. Often, but not always, African Christian churches turn out to play a major role in filtering the market supply of modern consumption items, and in selectively validating and rejecting these: for example, accepting ladies' underwear and the maxi skirt but rejecting women's trouser suits and miniskirts; accepting the video but rejecting the disco; accepting Coca Cola and Fanta but rejecting bottled beer; accepting — from the images of fast North Atlantic life seen on videos and TV — the expensive and prestigious car but rejecting the open admission of the practice of sexual promiscuity, etc.[11]

This non-authentic Africa, however inefficient and unpredictable in its details, is also for Africans a much more tangible reality than the mythical 'authentic Africa'. And in this tangible non-authentic Africa, ICT is not an alien transplant but an increasingly important aspect — taken for granted and no longer dispensable — of a socio-cultural milieu (notably that of the African elites) that, while geographically situated in Africa, has since the 19th century (if not earlier) closely followed North Atlantic technological developments and participated in these developments as a matter of course.

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[10] Cf. my 1992 Amsterdam inaugural lecture: Van Binsbergen (1992a = 1994b). On the same problematic, cf. De Jong (1994, 2001) and Van Binsbergen (1994a).

[11] On these church practices in the context of the global market, cf. the contributions by Meyer and Van Dijk, both on Ghanaian Pentecostal churches, in Fardon *et al.* (1999) and Van Binsbergen (1997b: Chapter 1).

ICT as metalocal global culture

What remains is thesis (2):

> (2) (2’) ICT is metalocal world culture, without local specificity and local validity, and hence (2’’) ICT is in principle devastating for any localizing cultural identity like the African one.

This argument contains sufficient elements to render plausible the first part (2’) of this thesis but what about the second part (2’’)? Localizing cultural identities in Africa, as elsewhere, exists in a state of tension *vis-à-vis* the globalizing elements (including electronic ICT) that have spread so abundantly all over Africa. This tension is, in principle, not necessarily destructive because, as argued above, the new technologies may also serve to support historical identities. The apparently alien transplant may yet turn out to further in unexpected ways that which is local and identitary, *pace* Mazrui and Gyekye. But to be able to serve that purpose, these technologies must in the first place be *available* and must also — as a further condition — have undergone some degree of local acclimatization. In Africa, these conditions are by now met for such communication techniques as the written press, radio, the telephone, television, cassette recorders and video, and in many places these technologies demonstrably support and inform identity constructions. However, in most places in Africa this is not yet the case with regard to the Internet: there are far too few user computers and providers, electronic network connections are unreliable, and the costs of Internet use are prohibitive for most Africans. Yet in the urban centres, around universities, and in the interplay with intercontinental migrants residing in the North Atlantic where Internet access is a matter of course, the computer is beginning to play an important role in the articulation of ethnic, cultural and religious identities. A large and ever-increasing number of African expressions are now available on the Internet, often as a result of Africans in the diaspora building websites largely for consumption at home, in Africa.

But the majority of the African population has, as yet, hardly any access to this medium so that it is not available as a direct expression of local identity. Whatever manages to present itself, and to maintain itself, under such conditions of scarcity, does so usually by virtue of non-local inputs in terms of interests, means and formats, and therefore would produce only the most misleading representations of what may yet pose as a local situation.

This state of affairs was particularly driven home to me with regard to the rural district of Kaoma in the heart of western Zambia. I have conducted anthropological and historical research there since 1972 but it was only in 1994 that I could for the first time make an international telephone call from the district; and only a year later could I, from the Netherlands, have my first e-mail contact with someone residing in the district capital.

Anyone who searches the Internet for 'Kaoma' with any of the usual search machines, does admittedly find a number of hits that unmistakably apply to this district.[12] But if one tries to construct an image of Kaoma District on the basis of these hits, one gets absolutely lost in the fog — the kind of fog that hangs over North Atlantic polders or prairies, not the kind that in the early morning hangs over Kaoma's *dambos* (wetlands) at the bottom of its shallow, wooded valleys where duiker antelopes and wild pigs (and until the 1980s even buffalo and elephants) are startled by local hunters; some of whom are in the employ of local princes, and some of whom still wield Portuguese muzzle-loading guns from the 19th century. Kaoma's representation on the Internet is a misleading travesty of the actual local situation, not a form of valid knowledge but a form of ignorance. The Kaoma District that speaks to us via the Internet is merely a reflection of the intercontinental presence in the district, including a Dutch development project parading on its website an exceptionally successful local woman farmer (but one belonging to the locally hated, non-local immigrant group of the Lozi). There is also the US-controlled evangelical parent body of the Evangelical Church of Zambia that operates a major hospital in the district and its matron shares her unmistakably Southern States spirituality with visitors to her website.

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[12] 'Kaoma' is only a very short word and is likely to exist in several other languages and contexts than that of western central Zambia, where it has been the name of a district since 1969 (previously called Mankoya District), and the name of a stream since time immemorial. It is likely that the word 'Kaoma' has also penetrated the Internet from some of these other contexts, e.g. in Bemba, a major Zambian language, which however is not a *lingua franca* anywhere near Kaoma District, 'Kaoma' is one of the names of the High God. In a government move directed at Lozi rebelliousness, President Kaunda replaced the older district capital's name Mankoya with Kaoma in 1969. 'Mankoya' was based on the Nkoya ethnonym, while 'Kaoma' is derived from the nearby Kaoma river and therefore was considered to be ethnically neutral. *Likota lya Bankoya*, a collection of Nkoya oral traditions from the first half of the 20th century, proposes an etymology for the hydronym Kaoma in terms of the destruction of a king's ceremonial drums (in Nkoya called *mawoma*) in the 19th century (Van Binsbergen 1992b: 389). However, hydronyms are notorious for their tendency to immutability over long stretches of time, which makes this recent etymology of Kaoma somewhat suspect.

ICT between the local and the global in an African context

The specific case of Kaoma suggests a situation around African ICT which I would deem eminently capable of generalization: when it comes to knowledge production concerning Africa, the Internet only renders to the outside world what that outside world has put into the Internet in the first place. In this light, there would seem to be little reason for the euphoria that generally attends discussions about ICT in African intellectual circles.[13] For the time being, we should look anywhere except on the Internet for valid and representative knowledge production on Kaoma District and its inhabitants.[14] And Kaoma District is representative of very many districts in Africa where, despite the virtualization and globalization of life, the traces of older historical socio-cultural forms can still be discerned so that people may yet entertain the illusion — although it is an illusion and nothing more — that these forms have braved the decades or even the centuries.[15]

A new field of tension arises here: that between the medium-specific format (in which inevitably the North Atlantic cultural origin of ICT shines through) and the contents, that in principle may be derived from all knowledge systems of all times and from all over the world. From the extent to which ICT is metalocal, it is valid to say that this medium — irrespective of its North Atlantic origin — may display great flexibility as far as its specific cultural context of use is concerned. Sharing the cultural orientation, the mathematical rationality, the iconographic and aesthetic principles of the makers of ICT, is by no means a condition for the effective appropriation of this medium, and for the subsequent use of this medium for purposes and from the perspective of a world view that in itself would be rejected by that very same mathematical rationality: many divination systems including African ones such as Ifa and Hakata, 'voodoo' (which has now become a globalized term without any meaningful referent to any specific ritual practice in any specific time and place but which originally referred to the West African indigenous concept of *vodun*), recently invented or re-invented traditions such as the *wicca* witch cult, and forms of oriental systems of thought such as Taoism — all of these are well represented on the Internet. But when they appear there, it is almost invariably in a format (that of short written texts in a North Atlantic language, supported by visual material largely conceived in accordance with North Atlantic modernist or postmodernist aesthetic conventions as mediated by popular graphics computer programs) that implies a subjugation, domestication, of these non-Western forms of knowledge to North Atlantic models, at least at the formal and iconographic level. What is more, they often appear in the form of irritatingly gratuitous pseudo-knowledge, without critical apparatus — as sub-intellectual instant food, as a globalized and virtualized product (usually with a strong New Age element) that has only its name and superficial appearance in common with the original knowledge system that is claimed to be thus represented.

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[13] Cf. Nkwi (1995), Nyamnjoh (1997), Ras-Work (1998). Also cf. the central role that Thabo Mbeki (1999), Nelson Mandela's successor as president of South Africa, attributes to ICT.

[14] My own texts, which often mention Kaoma District, have only been available on the Internet since March 1999, and apart from a few exceptions do not carry the catchword 'Kaoma' among their metatags. In mid 2001 an initiative arose among young Nkoya intercontinental migrants now in the United Kingdom to create a Nkoya website that would enhance the visibility of Kaoma District on the Internet. This is another example of how new technologies of globalization may help to articulate local identities.

[15] Remarkably, one may also critique the Internet, not because it offers incorrect but because it offers correct information in Africa and therefore disturbs Utopian identity constructions; cf. Okigbo (1995).

It appears as if ICT strikingly manifests the themes of unity and diversity, localization and globalization in the modern world. An analysis of ICT, as attempted here, forces us to discard the illusion of sharp distinctions between cultures and between continents; such illusions make up the widespread but distortive geopolitical, ideological mind-set concerning the structure of the modern world. Instead it advocates a view based on a plurality of fields of tension and a plurality of kaleidoscopically superimposed and counteracting contradictions, between which the intercultural philosopher has to pick his or her way, just as prudently and falteringly as does the contemporary world citizen at large.

Let us now assess how the enculturation of ICT is taking place in Africa itself as an aspect of globalization.

How is the African enculturation of ICT taking place?

The expansion of ICT in Africa

Since the 1960s the use of the computer has continuously expanded, not only in the North Atlantic region but also in Africa. The first move was the rise of in-house computing by the transition from the main frame to the microcomputer, and the transition from input by means of punched tape or punch card to input via the computer screen. In government institutions and universities, and in successful, capital-intensive sectors of commercial life, a total transformation of the administrative workplace has occurred. Previously the workplace was characterized by forms that hailed from the colonial era: authoritarian relationships, over-staffing, defective competence, and ritualization. New forms of management, cooperation (or, due to the fixation of everyone to his/her individual computer screen, the absence of cooperation!), the personal exercise of power, and career mobility have come within reach due to the microcomputer. Computer specialists have taken the place of accountants and other administrative personnel with an intermediate-level training, women have gradually gained their own place in this new set-up and professional organizations have been formed in order to guard over the new power and privileges to which computer skills have given access. Wherever the microcomputer has been introduced, it has tended to lead to a marked increase of responsibilities and competences of first-line administrative personnel. This has resulted in fundamental changes in labour relations within bureaucracies and enterprises; moreover, *vis-à-vis* the public, the individual civil servant, now armed with a computer screen, can even more convincingly than before conjure up and exploit the image of the omnipotent state answerable to none — one of the most intransigent heritages of the colonial state in post-colonial Africa. Private training institutions have begun to exploit the new market generated by such expectations of professional upward mobility, steep rises in income, consumptive opportunities and security as have been associated with computer-training certificates. Thus the collective technological Utopia that has been noticeable in the affected sectors of African urban life has been mirrored by a personal Utopia.

One of the few researchers to have carried out richly conceptualized empirical research on ICT in Africa has been the prominent African American anthropologist Benetta Jules-Rosette in her book *Terminal Signs* (1990). Although the path of her analysis is somewhat hampered by a social-contract view of national societies in Africa, and by her rather humourless unconditional loyalty *vis-à-vis* the African computer workers featuring in her research, Jules-Rosette (1990: 10f) offers nice examples of the kind of contradiction that one may encounter in the field of African ICT:

> A senior programmer at a Kenya wholesale outlet attempts to manage the transition from a labor-intensive NCR keypunch computer to a new electronic multi-user system while increasing the number of employees for whom he is responsible. If he increases the number of employees, although their individual work tasks have diminished, he will obtain the title of data processing manager and double his salary. Government administrators in Ivory Coast strive to develop a computer policy that will limit the activities of multinational computer vendors such as IBM, BULL, and UNISYS, while simultaneously encouraging these companies to invest in the country. The Kenyan government organizes the computerization of key government ministries but imposes stringent restrictions on public access to computers. These cases are not merely management conundrums. They share a common theme. Each case illustrates an effort to manipulate the narratives of public discourse in order to delimit everyday practices that constitute the adoption of new technologies. Computer policies project a specific representation of development and change.

The pattern of expanding ICT differs greatly between African counties. Government policy (as enshrined in national five-year development plans and in import tax legislation) varies between the consistent furthering of ICT as a recognized precondition for post-industrialization in Côte d'Ivoire, via a restrictive and contradictory government policy in Kenya that slowly but surely is achieving automatization, and via countries with a slow and vague take-off in ICT like Mali and Sudan, to countries that are barely ready for ICT like Niger and Angola due to their stagnant economies or civil wars. Until recently South Africa formed a case apart. This country has for 150 years boasted an advanced industrial and scientific infrastructure that became tributary to the apartheid state in the second half of the 20th century resulting in ICT imports being prohibited by an international boycott until 1990. This boycott, however, was only consistently observed by Scandinavian countries, and as a result South Africa has been, and remains, by far the most computerized African country (Slob 1990). South Africa is also the only African country that scores high (20th position) on the international list of Internet implementation and use.

Not only international enterprises but also continental African institutions, research bodies, UNESCO,[16] North Atlantic governments and development agencies are active in the field of enhancing ICT in African countries. For instance, the proceedings of the Second African Colloquium on Information Research, held in 1994 in Ouagadougou, the capital of Burkina Faso, were made into a prestigious book (Tankoano 1994) of close to a thousand pages filled with formulas, diagrams, tables and bibliographies. Publication was made possible by an eloquent combination of national and international organizations: the University of Ouagadougou, the Burkinabé Ministry of Development, the University of the United Nations, the National Institute for Research in Information and Automation of Burkina Faso, ORSTOM (the French Institute for Scientific Research in the field of Development and Development Co-operation), PII-IIP (UNESCO's intergovernmental information programme), CIMPA (the International Centre for Applied Mathematics) and the Association of African Universities. About half of the many authors contributing to the book were Europeans either in Africa or in French ICT institutions, but African researchers make up the other half. The entire world is involved in ICT in Africa, and ICT demonstrates that Africa is indeed part of the wider world — as an unmistakable aspect of the globalization process into which the countries and societies of the African continent are increasingly being drawn. Despite the abundance of ferrous dust (the African continent is one large tableland whose surface is coloured red by ferrous minerals), power failures, the permanent risk of ritualization, the constant threat of burglary and theft of hardware, and the unmistakable class formation and poverty which means that for the time being only a happy few can effectively participate in ICT in Africa, ICT is, in principle, just as much (or as little) at home in Africa as elsewhere in the modern world.

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[16] Cf. UNESCO (1980).

The tension between ICT euphoria and the negative assessment of African globalization

There is no lack of lengthy arguments that sing the praise of the potential of today's ICT, especially the Internet, for Africa. These arguments discuss technical limitations (defective infrastructure, for example the telephone network, the number of ICT connections, the low quality of the servers available), economic aspects (poverty and the fact that many Africans operate economically outside the formal sector of the government and commerce and hence have no access to the Internet), the transformation of bureaucracy as discussed above, and the possibilities of generating an innovating flow of information via the Internet in the rural areas of Africa.

The euphoric thought that ICT could mean a bright future for Africa is widespread, not only among intellectuals[17] but also among politicians. Here it is significant that Thabo Mbeki, the president of South Africa, has attributed a decisive role to the ICT revolution in his blueprint for an African Renaissance (Mbeki 1999).

The euphoria is surprising. No doubt we must situate the spread of ICT in Africa in a context of globalization but where Africa is concerned globalization is, in general, not a reason for euphoria but for profound concern. For Africa, economic globalization has been synonymous with an ever-increasing marginalization: the intercontinental proceeds from Africa's products have declined in spite of increasing productivity, and today Africa is involved in no more than one per cent of transactions in the world economy. Under post-colonial governments, the continent's national economies have been disrupted due to mismanagement and the erosion of bureaucracies. These national economies have moreover been plundered by national elites who have appropriated the state. In most African countries the citizens have long since learned not to count on essential government bodies such as the police, the judicial powers, health services, educational services and public works. Because of the hideous debt burden, more money leaves the African continent in the form of interest payments than it receives in the form of development aid, including balance-of-payments aid. Such Structural Adjustment Programmes as have been intercontinentally imposed upon African countries have brought neither political stability nor economic rationalization but have produced an increasing impoverishment of large sections of the African population. Yet, at the same time, the increased communicative aspects of the globalization process have led, in the most frustrating way, to the installation of new consumptive targets and desires among that same population. Incapable of effectively protecting (let alone actively taking care of) their citizens, many post-colonial African states have been the scene of violent struggles involving regional and ethnic groups and political adventurers during the last few decades. Under the heading ‘development cooperation’, prolonged and many-faceted interventions from the North Atlantic region have yielded incidental local successes. This has contributed to the formation of a comfortable local point of address in the form of an NGO-based, servile, loyal and affluent local sub-elite with good organizational and technical skills (including ICT). But all this has not been able to redress the overall miserable situation prevailing in Africa today.

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[17] Cf. Nkwi (1995), Nyamnjoh (1997), OAU (1995) and Ras-Work (1998).

It would appear as if the expansion of ICT in Africa has coincided with the disintegration of African societies. Does this mean that Jules-Rosette’s title *Terminal Signs* has (despite the optimistic positioning of its author) a *double entendre*: does the title not just refer to the social and semiotic interpretation, by Africans, of the signs that appear on computer terminals? Do these very signs testify to the destructive contradictions, the almost terminal illness, of Africa today? Could Mazrui (1977, 1978) be right after all and is ICT, as an unmistakable aspect of globalization in Africa, establishing the conditions for the further economic subjugation of the continent? Do we have to add to this economic subjugation, a cultural subjugation in this sense, that African ways of interacting between fellow-humans and between man and world (ways whose praises have been sung so frequently in African ethnographies and African philosophies) are — as argued by Gyekye — miles apart from those social and cosmological models that are necessary for the successful use of computers? To answer this question we must assess the cultural dynamics that surround ICT in Africa.

An empirical context of ICT enculturation: The Francistown cybercafé

If in principle, as argued above, ICT is just as much at home in Africa as elsewhere in the world, then let us go and visit it in Africa. In Southern Africa (not only in South Africa as mentioned above, but also in Botswana, Swaziland, Lesotho and Zimbabwe), ICT is expanding faster than elsewhere on the African continent. A sign of the increasing accessibility for a substantial proportion of the population is the proliferation of cybercafés in these countries in recent years. But before becoming too optimistic about conclusions based on this phenomenon, let us take a closer look at one such café as a place of ICT enculturation in Africa.

In April 1999 I spent a week working in a cybercafé in Francistown, Northeast District, Botswana. Francistown was founded a hundred years ago as a result of European capitalist interests. In the following decades, Africans came to constitute the majority of the population, and in the 1980s the town underwent rapid demographic and economic growth. Seen from the North Atlantic, Francistown (Botswana's second largest town with about 70,000 inhabitants in 1999) is an unpromising place: an ugly agglomeration of endless rows of identical small houses grouped around two veritable shopping streets with traffic lights and modern buildings of up to two floors (malls, banks) flashing the logos of world brands: Adidas, Nashua, Texaco, Toyota, IBM, British Airways, etc. Seen from the villages that still house half the population of the African continent, Francistown is a baffling world city. This is where, in the late 1980s, I made my acquaintance with the fax machine, which until then did not play a role in my Dutch academic life. I thus had high expectations of the cybercafé that was situated on the top floor of one of the newest malls.

I was disappointed. The cybercafé's hardware consisted of five customer-operated computers and one reasonably fast professional computer used as the server for a few hundred Internet subscribers in the region. The front part of the shop was equipped for the sale of current hardware and software, and computer books could be found in amazing abundance in the adjacent general news shop and bookshop that had no links with the cybercafé. Francistown is an important centre of commerce and industry, and the vast majority of Internet subscribers are to be found in these sectors of the economy — as it turns out when we search the Internet for 'Francistown' with one of the current search machines. In the week I was there, the designing of a website for a local bridal fashion shop took much of the attention of the cybercafé's staff of four: the tawny-coloured manageress who was equally fluent in Southern African English and Setswana, the black male assistant with a good basic knowledge of the Internet, the white female graphic designer, and finally the black cleaning woman, a mature slightly corpulent lady whom the manageress and the other staff treated much as though she were an elderly family member to the extent that sometimes the impression given was one of a tightly-knit family enterprise headed by the cleaner! With one or two exceptions, the Internet café's clients used only a minimal selection from the range of facilities offered: in a daily or weekly routine they hastily read and sent a few emails (they were anxious not to exceed the cybercafé's minimum fee of about €1 per 15 minutes). Some asked for help when searching for the many websites that offer free email accounts. Occasionally young black women came in for advice on how to open email accounts, manifestly at the instigation of absent white South African boyfriends, to enable them to stay in touch regularly and cheaply. Only a very few people looked on the Internet for a specific site or cautiously surfed between sites, but after visiting a few sites even these customers vacated their bar stools with an eloquent look at the clock. All bodily and verbal contact between clients was avoided as if they were catching each other in socially discouraged or taboo behaviour. Staff–client contact was limited to a minimum, and nothing of the richly textured personal relationship between the staff was shared with the clients. Interaction in a public toilet could not have been more impersonal. This lack of social exchange contrasts markedly with Francistown public culture, in whose turbulent recreational setting the word 'café' has certainly connotations of sociability, exchange, self-presentation, status-seeking through conspicuous consumption, the experience of identity by associating oneself with a fixed social and physical location in the recreational space. Most of the time, I was the only customer in the cybercafé. Even in a town as developed and dynamic as Francistown, the target group of the cybercafé was obviously only the few people who (to judge by their general appearance) could not afford a state-of-the-art computer (including the subscription to the electricity mains network, the telephone network, and the Internet) and who had no access to such hardware in their place of employment but who nonetheless were coming to explore hesitantly the new information and communication technology. Enculturation, appropriation towards a local cultural programming, was only very partially the case. On the contrary, for the customers, the Internet would appear to form a secluded domain that one might appropriate instrumentally (with considerable monetary cost, effort and frustration), but whose contents were not in line with the socio-cultural programming of one's own life as a Francistonian. The game of social relations was grinding to a halt in the intimidating nearness of the computer. However, the cybercafé's staff had already regained their natural pose and thus manage to incorporate ICT in their everyday lives in a much more natural manner. Preliminary conclusions made after a week in the Francistown Internet café were that if the Internet is to be the hope of Africa, the realization of that hope would take a while in large parts of Africa.

Backgrounds of ICT enculturation

How is ICT appropriated and localized in African environments in the sense of the emergence of practices that amount to an original creative elaboration upon this new technology and in the course of which local symbols and meanings — both old and new — are conferred upon that technology?

Above I sketched a field of tension, one of whose poles was that ICT might be primarily thought of as eminently North Atlantic. In this respect ICT fits in with an ideal of the appropriation, by Africans, of European symbols of power, prestige and success. During the colonial period (which incidentally lasted considerably less than a century in most part of Africa), this ideal spread widely over the continent. It was expressed in styles of clothing, hairstyles, housing and interior design, family life, choice of modes of transport, recreation, religion — not only among the elite but also among a much larger urban middle class and, to some extent, even right out to the remotest corners of urban slums and to the rural areas.

We should not read too much positive submission in the adoption by Africans of North Atlantic cultural models. Here, as always when it comes to the adoption of cultural elements across sizeable distances in space and/or time, a considerable 'transformative localization' occurs:[18] that which was initially alien is encapsulated by more or less altering its form, meaning, use or a combination of these aspects, according to principles that already exist locally. Nowadays, decades after African states gained their independence, the structure of African elites has changed considerably. They have become more inclusively and unabashedly cosmopolitan, global. But the elites continue to search for prestigious lifestyles and symbols of domination, this being what they have in common with socio-political elites all over the world. The exercise of power in contemporary Africa is increasingly taking place within the framework of formal organizations (such as the state, the army, the party, the enterprise, the church, trade unions, universities) but this framework tends to be much looser and less compelling than in the North Atlantic, far more subject to personal and particularistic manipulation. Often the formal organizations in Africa do not work properly, and if they do work to some extent this is due less to effective bureaucratic and legal rationality than to patronage, ethnic manipulation and informal social networks behind the façade of the formal structure. Here virtualized models of social and political power are being mediated that are not rooted in the North Atlantic heritage but instead in pre-colonial forms of leadership and initiative within kinship groups and pre-colonial states. In many parts of Africa, for several centuries before the effective European colonization of the continent, trade goods hailing from afar were both the symbols of an unrivalled power over life and death, and access to the supernatural (for example, firearms and imported liquor — like Dutch gin which came to constitute the preferred libation liquid at local African shrines), and the attributes of incomparable prestige (textiles, Chinese glazed ware, Ancient Egyptian artefacts, European clothing, etc.). The appropriation of ICT as a means of power must also be seen in this light: not as the imitation of the power and lifestyle of Europeans but as a localized means of prestige that, at the same time, constitutes a real means for the exercise of power in the African social environment. It appears to be a common trait in any system of power, no matter where it occurs in space and time, inside or outside Africa, that the effective exercise of power by means of force goes hand in hand with an ensemble of collective representations which draws this exercise of power into the domain of the numinous and the speculative, that projects it into a magic of power, and hence facilitates people's submission to that power without them openly confronting it.[19] In Africa, this magic has of old taken the form of a discourse on sorcery[20] — of evil that is perpetrated by humans in an extrasensory way and that forms one of the major indigenous explanations of misfortune. In many African societies connotations of sorcery have of old surrounded those occupying high status and specializing in the communication with a human, extra-human or supra-human outside world at the boundary of local society: the king, the headman, the diviner-priest-healer, the blacksmith, the bard, the trader. Although the roots of this complex of collective representations lie in a local kinship order that goes back at least to Neolithic agricultural communities, during the last few decades Africa has seen an intensification of sorcery as an idiom *par excellence* for the articulation of the contradictions of modernity — the tension between consumptive desires and (as a condition to fulfil those desires) the breakdown of historic forms of social organization, solidarity, morals and ethics.

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[18] The term 'transformative localization' refers to the process of local accommodation by which, in the course of diffusion, a geographically displaced item of culture is transformed so as to fit the systematics of local cultural orientations, cf. Van Binsbergen (1997c).

The individualized microcomputer fits very well in this cultural framework — in the first place as a new prestige object of elitist power, and as an instrument for the effective exercise of power in the management of social, political and commercial information, processes and contacts. But this is also and particularly so because ICT conjures up the numinous magic of power so strikingly with its flashing, uncannily real images, its high speed and instantaneous access which give the impression that space and time appear to submit to the user/owner of the microcomputer. Thus, especially in the eyes of uninitiated onlookers, old magical dreams such as bilocation, omnipresence and omnipotence appear finally to come true. For instance, in Benin today the computer is known as *grigri yovo*: 'the magico-religious object[21] of the Whites', and the Internet is explicitly equated with *voodoo* (a cult system based on ecstasy and initiation that, next to and in collusion with the post-colonial state, constitutes the major form of social organization in this African country).[22]

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[19] Cf. Taussig (1997). For an African application of similar ideas, cf. Van Binsbergen (1992b, 1993), and for a theoretical elaboration applied to Ancient Mesopotamia, cf. Van Binsbergen & Wiggermann (1999).

[20] Cf. Van Binsbergen (2001).

[21] I avoid the word 'fetish' which without further discussion would only give rise to confusion.

The microcomputer and especially the Internet have, therefore, inserted themselves not only in the recreational practices of African elite children and in the scientific data collection of African intellectuals but also in the power strategies of prominent African politicians and entrepreneurs, and of those aspiring to join their ranks. In the practices of these politicians and entrepreneurs this state-of-the-art form of ICT is often seen to occur in combination with:

- modern natural science and business economics;
- more traditional magical practices (diviner-priests are frequently consulted for political and economic success and for protection in that connection); and
- esoteric world views (theosophy, Rosicrucianism) that from an Oriental and/or pseudo-scientific periphery of North Atlantic rational thought are in the process of conquering Africa in the same way as they are spreading in the North Atlantic in the New Age context.

That the African enculturation of ICT is triggered not only by specific technological and career advantages but also by the desire to explore and appropriate a comprehensive new lifestyle, and even new idioms of social and cosmic power, is suggested by a remarkable research finding from Francistown, Botswana.

My research on the urban culture of Francistown as a window on both local rural traditions and on the process of cultural globalization in Africa brought me into close contact with the three highest-ranking local leaders of the cult of the High God Mwali. This cult is a pre-colonial organization that has now superficially reorganized itself, displaying to the state the appearance of an effective modern formal organization (a professional association of traditional healers, and an African Independent Church) that is more in accordance with Botswana civil law. The three priests combine their high office with flourishing therapeutic and herbalist practices, and in addition operate — in line with a widespread Southern African pattern — a bar, a bottle store, a butchery, a transport company and a dancing troupe. Inside their modern, detached houses, designed and appointed according to cosmopolitan standards, their lives centre around the television set crowned with plastic flowers and surrounded by a circle of heavy armchairs with embroidered head covers. Apparently Africa's consumptive modernity (whose aesthetics appear to be somewhat dated and second-rate from a North Atlantic perspective) can very well be combined with religious leadership of an originally pre-colonial type. The point is that all three of these cult leaders have young adult daughters who, around 1990, were vaguely active in their fathers' cults (for example in some sort of informal receptionist capacity, attending to callers seeking therapy and ritual advice), but who were primarily pursuing introductory computer training. These daughters were thus among the few Francistonian women who at that time could mobilize the financial means and the kinship support for their personal ventures in ICT. As specialists in an old sphere of power, these specialists, through their daughters' computer training, made sure they did not miss out on a new sphere of power.

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[22] Personal communications, Elly Reinierse and (via Elly Reinierse) Ulrike Sulikowski.

Of course, the perception of ICT as magical and as kindred to sorcery, in the eyes of political and economic leaders and of those — almost all of them devoid of computers — over whom they hold sway, is only one aspect of the localization of ICT in Africa. I have already mentioned its use in offices and by intellectuals. Here we see a combination of purposeful rational behaviour, on the one hand, characterized by universalist procedures and assumptions (bureaucratic management, information processing), and, on the other, not so much dreams of computer-underpinned power (as among the political and economic elite), but certainly Utopian pondering on personal career success and on the redress of Africa's ICT backwardness as compared to the North Atlantic region. This Utopian aspect constitutes an additional incentive to acquire computer skills, and lowers the threshold of ICT reception.

All this means that within contemporary African societies, an extensive and many-sided discourse about computers has developed which facilitates the further personal and collective appropriation of ICT. Again the situation is not fundamentally different from that in the North Atlantic: one does not need to command, or even to emulate, the mathematical and micro-electronic rationality of the designers in order to use the computer effectively as a black box — the methods of such use are learned, formally or informally, in a circle of equals (secondary school pupils and university students, friends, colleagues, system managers in training), and in a way in which ordinary everyday spoken language turns out to play a remarkably significant role — even if spiced for the occasion with intercontinental computer terms that are preferably left untranslated. Here again we see the tensions between local and global, intracultural and metacultural, which make ICT such an interesting testing ground for the investigation of interculturality.

These two factors together, namely the appropriation (in a colonial, pre-colonial and post-colonial context) of alien artefacts within more or less elitist frameworks of power, magic and Utopia, and the fact that culturally the computer is a user-friendly black box which is serviceable anywhere, globally, metalocally, furnish us with the beginnings of an answer to the obvious question as to why the incursion of ICT into Africa has met with so little resistance and has been so readily accepted — *as if cultures do not exist*.

From book to web in the African context

I suspect that in answer to this last question other factors might be adduced in addition to the two already mentioned. These additional factors refer to the structure of communicative and procedural connections in ICT such as those it has developed globally in the form of hypertext, hyperlinks and the nested and layered criss-crossing structures engendered in that context. Before the advent of computerized ICT, information management and information transmission were largely modelled on *the book*. This implied the model of a large, unique, self-contained and clearly demarcated quantity of information, highly organized and internally consistent, almost exclusively verbal (i.e. not visual, auditive, motoric, etc.), and as such linearized from beginning to end, in such a way that in principle the medium cogently prescribed one, and only one, path through this information. Such a book model has provided the unit of knowledge production for five millennia in the Ancient Near East including Egypt, Graeco-Roman Antiquity, China, India, the world of Islam, and finally Europe. The 'book model' emerged particularly in Ancient Egypt, where from the New Kingdom onwards the papyrus-leaf *Book of Coming Forth by Day* (also known as the *Book of the Dead*) was only one example of the proliferation of books as the central repositories of knowledge, cherished at the ancient temple academies called Houses of Life and further manifested by the usual burial gift of a copy of the *Book of the Dead*.[23] By contrast, the Ancient Mesopotamian books formed conceptual units held together by titles and rubrics but were physically distributed over a considerable number of clay tablets and hence did not contribute physical unity. After the book model, the idea of the human person was modelled.[24] The same model also informed the idea of the formal organization with its legal (text-based) authority; and probably its was also the book model that informed the idea of the distinct culture, each culture being a specific item in a range of a plurality of cultures, and codified by means of a certain genre of books, notably ethnographies. The world's subjugation to North Atlantic hegemony between the 18th and 20th centuries of the North Atlantic era meant the subjugation to the book (including the Bible, in so far as this subjugation took the form of the spread of Christianity) and likewise the much earlier submission of large parts of Asia, Europe and Africa to Islam, following the Prophet Muhammad's departure (*hijra*) from Mecca that marked the beginning of the Islamic era, and amounted to a submission to the Book, notably the Qur'an. Not only the colonial subjects' subjugation but also their subsequent assimilation and final emancipation (by appropriation of North Atlantic models of equal rights, socialism, trade unionism, formal education, franchise, etc.) meant an internalization of the book model. In Africa this disciplining in terms of the book model has only partially taken root even though millions of Africans today are closely comparable with the North Atlantic readers of the present book in terms of formal education and employment within formal organizations. However, African societies have never quite turned into book-style cultures in the same way as this process has advanced progressively in the North Atlantic region and especially in the latter's urban centres. In West African English, the expression 'You know book' has become a standard expression for the person who has a formal education, praising him and setting him apart as a relative exception at the same time. Over the last century, the domain of globalization and virtualization has certainly been an expanding aspect of African societies but the size of that domain in proportion to the totality of African life has remained limited. A considerable part of African life has continued to take place outside formal organizations, and whatever was created in terms of formal organization functioned mainly informally, if at all. The linearity and consistency of the book model did fit a North Atlantic modern world characterized by social and political relations that have largely taken on an instrumental nature, have lost many of their former ritual and symbolic aspects, and therefore have lost much of their meaning. The individuals involved in these relations are increasingly atomized, autonomous and competent, living their lives in political and economic security. Most Africans in colonial and post-colonial settings have always lacked such security, and this is one explanation, among several others,[25] as to why the book model — the individuality, the viable and smoothly functioning formal organization, the linear path thorough social, political and symbolic relationships, and the almost total disenchantment (Weber) of the world — has never occurred in Africa on a scale anywhere comparable to that of the North Atlantic. In modern Africa, one has always needed to compensate the insecurities of the modern, urban, state-based aspects of social life by maintaining (as far as possible) old systems of kin-based and ethnic solidarity — orientated toward the village with its centuries-old practices and systems of representation encompassing many domains of life, and with its concomitant, endlessly proliferating and branching networks of social relations. For excellent reasons, the relational *network* has proved to be a very fertile concept in the study of African towns, where informal networks turned out to form for the most part the principal format of social structuring (Mitchell 1969). In this African context it is normal to think in web-like structures, which would be dismissed as inconsistent, incompetent and insufficiently bounded from the point of view of the book model. In this connection there are many points for further research on such crucial topics as: what the consequence is of this web-like or rhizomatic,[26] typically African, social structure, for people's orientation in space and time; the local definition (as porous? as ambiguous?) of the person within such a ramifying environment; the nature of the social and physical space. How might this web-like orientation facilitate, in its turn, modern uses of computers? It is not necessary to appeal in this connection (as Afrocentrists are bound to do) to a special vitality of African cultures, to some special innate talent of Africans, or to some special type of 'savage thought' (Lévi-Strauss 1962) that allegedly might characterize informal situations inside and outside Africa. For an explanation of the continued survival in Africa of non-formal, non-booklike practices and concepts that in North Atlantic societies have been largely supplanted by the state and by other formal organizations with their enormous influence on daily life and the everyday experience, we need only refer to the extent to which colonial and post-colonial insecurities attending the formal situations have been created in Africa by North Atlantic initiative.

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[23] Cf. Budge (1989), Allen & Hauser (1974).

[24] I owe this suggestion to my colleague Jos de Mul.

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[25] Other such factors, having to do with ideological and political processes of the *longue durée*, are discussed at the end of Chapter 8 of Van Binsbergen (2003).

For as long as the book remained the norm, and for as long as the forms of communication associated with the book predominated, Africa with its un-booklike response self-evidently lagged behind in ways that it would never be able to make up. It is not the computer in itself which constitutes an assault on the formal and the linear in information, and puts an end to the book as the gold standard. Rather, such a revolution is being prompted by the ramifying, rhizomatic forms in which information is being presented and may be managed on the Internet and in the hypertextual structures within microcomputers. 'The stone which the builders rejected, the same is become the head of the corner' (Mt 21: 42). Not of course because they are Africans but because they are in a privileged position to bring out the problem and potentials of the South, of the Third World, in our times (*grosso modo*, to Asia and Latin America the same perspective applies), modern Africans have as a matter of course mastered the skills needed to survive with their families in a social context characterized by the tension between, on the one hand, the insecure, urban, formal environment and, on the other, the manifestations — which also to Africans are often ambivalent — of a persisting but eroded system of kin-based and ethnic solidarity with ultimately a rural and historical referent. In such a context one seldom puts all one's eggs in one basket but instead tends to cultivate and operate simultaneously many contacts, many strategies, many obligations, many kin relations along a multitude of alternative genealogical paths, with many compromises, many contradictions between these commitments — with a logic that is inclusive rather than exclusive, and that prefers not to abide by the principle (which has governed the entire Western philosophical tradition) of the excluded third, in the hope that one may be allowed to have one's cake and eat it too. This structural feature permeates all aspects of African life especially in the increasingly insecure post-colonial situation. It is highly manifest in situations where public life is constantly on the verge of total collapse, such as depicted in recent ethnographic studies by René Devisch (1995, 1996) and Filip de Boeck (1996a, 1996b) on Congo (-Kinshasa). Freely translated towards computer practice, the art of living needed for such situations reminds one of practices for hypertext-based Internet use on the modern computer. This would mean that the modern African is someone who is at least as well equipped, if not better, for the mental requirements of state-of-the-art computer use as the North Atlantic adult, whose main handicap in this computer era may very well prove to be his attachment to the gold standard of the book.

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[26] Cf. the concept of 'rhizome' with Deleuze & Guattari (1972, 1980, 1991), with which they seek to contrastively pinpoint for contemporary North Atlantic society, the transformation from the book model to a freer form of subjectivity, one which makes 'it possible to let the individual and/or collective instances come to the fore as self-referential existential Territories, adjacent to, or functioning as boundary conditions for, an alterity which in itself is subjective' (Guattari 1992; my translation).

But we have not yet reached the stage where Africa can cash in on this apparent advantage in the handling of web-like structures. Inhabitants of the North Atlantic region and of East and South Asia are strongly represented in the world of ICT, and Africans are mere newcomers there. In this connection, Northerners may continue to boast their skills in the handling and improvement of formal systems. For after all, the rhizomatic structure of the actual application of ICT, however far it tends towards the chaotic, requires us to begin with a strictly formal, logical point of departure in the algorithms and technologies used. But also with regard to formal systems, Africans have their own local traditions. It is not impossible that Africans training in ICT may derive some unexpected advantage from their being acquainted with indigenously African formal systems such as mathematical board games[27] and divination methods[28] that are encountered all over the African continent. Hountondji, the African philosopher who has so strongly criticized the construction (in the hands of his African colleagues and their North Atlantic supporters) of an African mystique under the pretext of philosophy,[29] considers the exploration of such historic local forms of science, mathematics and technology an important field of research (Hountondji 1996, 1994). The purpose of such research is not so much to help explode racial stereotypes and to gather points in favour of Afrocentrism but to further among Africans a proud and empirically underpinned vision of their own competence and their own birthright to engage with modern technology.

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[27] See Zaslavsky (1990), Seidenberg (1960), Schmidl (1915) and Van Binsbergen (1997a).

[28] See Maupoil (1943a, 1943b), Bascom (1980), Abimbola (1975), Akiwowo (1983), Mákanjúolá (1991), Kassibo (1992), Traoré (1979), Aromolaran (1992) and Van Binsbergen (2003: Chapters 5, 6 and especially 7).

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[29] Incidentally, Hountondji's position has been contested, not only by particularizing and essentializing Africanist philosophers but also by a cosmopolitan African philosopher like Appiah (1992); cf. Abiola Irele (1996).

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