AIDS FROM AFRICA: WESTERN SCIENCE OR RACIST MYTHOLOGY?

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There is little argument that science has contributed greatly to our understanding of the external world, so great that knowledge acquired by scientific means is considered more likely to be true than other forms of knowledge. This holds for medicine as for other branches of science, and the practical application of medical science has given rise to therapies of unquestioned benefit. One of the great achievements of medical science was the discovery of micro-organisms and the recognition of their role in a large number of different infectious diseases. The provision of clean water and sanitation, disinfection and sterilisation during surgery, immunisation and antibiotics- all are based on an understanding of the behaviour of micro-organisms. Yet from the successes of last century we come, at the end of this century, to a challenge that has so far defeated the best that medical science has to offer. The U.S. Government alone is spending about a billion dollars a year researching the Acquired Immune Deficiency Syndrome(1), but there is still no cure, not even an effective treatment, no vaccine, nor

even agreement as to how the Human Immunodeficiency Virus destroys the immune system. Is this because AIDS is just a more difficult problem than medical science has dealt with before, but with persistence it will be conquered, or could there be something fundamentally wrong with the scientific investigation of this illness? In this chapter I will endeavour to examine the AIDS science that claims that AIDS originated in Africa and the possible racist underpinnings of this science. I will discuss the alternative possibility of a laboratory origin of HIV. And finally I will look at the political and economic aspects of AIDS research in particular and science in general that may have encouraged or promoted the belief that AIDS originated in Africa.

The first step in the construction of AIDS science was the recognition of a new phenomenon: the epidemic of fatal, wasting disease in previously healthy homosexual American men, first reported in 1981.(2) Unexplained wasting diseases had occurred in the past and had been reported in the medical literature, but were sporadic, not epidemic.(3,4,5) The next stage of the scientific response was the elaboration of a hypothesis that could be subjected to investigation and challenge. The initial hypothesis proposed that AIDS was due to toxins, particularly nitrites that were popular with homosexual men as a sexual stimulant. The toxin hypothesis soon fell into disfavour when similar illnesses were described in intravenous drug users and haemophiliacs. Infectious agents such as the hepatitis B virus transmitted via blood to blood and sexual contact disproportionately affected these groups of patients, and a second hypothesis, that AIDS was caused by an unknown infectious agent, was proposed and widely accepted. The search for the infectious agent was intense and the result was the Human Immunodeficiency Virus, HIV (initially called HTLV III). Inductivism, naive or otherwise, certainly had no place in AIDS science, as the hypothesis long preceded the evidence. That HIV is the sole cause of AIDS was quickly accepted as theory if not fact by the great majority of scientists engaged in research on AIDS. Dissenting views and alternative hypotheses have remained on the heretical fringes of AIDS science and have been given little attention in mainstream scientific conferences and publications.(6)

The phenomenon of a new infectious disease inevitably raised the question of its source. The possibility that this could lie within the United States where the epidemic began was never entertained by scientists or general public. But when, in 1982, Haitians were diagnosed with AIDS, the as yet unidentified infectious agent was immediately assumed to come from that country.(7,8) A Haitian origin soon fell into disfavour, at least in part because no evidence could be found that AIDS existed in Haiti prior to its appearance in the United States,(9) and was soon superseded by the African hypothesis, with or without the rider that the virus had stopped over in Haiti on route to the US. The African origin of AIDS was immediately accepted in the West with minimal critical assessment, and there was significant debate only on the issues of whether the reservoir of HIV was in a remote tribe of Africans or in African monkeys, and at what point it spread from Africa to the West.

Although Western scientists accepted the African origin without difficulty, many Africans were unconvinced and argued that the fundamental concepts of the AIDS from Africa hypothesis resided in racial theory and not in science. For example, Yinka Adeyemi, the science and health correspondent for the Nigerian Weekly, *Concord,* wrote in July 1985:

To the average European researcher in virus cancers, the notion that the Acquired Immune Deficiency Syndrome (AIDS) had its origin in Africa is now a scientific fact... Yet, arguments by such scientists whose minds are made up about the African connection are replete with fundamental loopholes and illogicalities that render them not plausible...

A common notion which cuts through the reasoning of most Western scientists is that a visit should be made to Africa before any researcher concludes whether a disease is new. For instance, De Cock wrote that Ebola virus, Marburg virus and Lassa fever were all initially thought to be new diseases when they first surfaced "but all of them turned out to have been endemic in Africa."

There are even more offensive notions... Gallo, who first identified the AIDS-causing virus in man, said at the Dakar conference: "Viruses closely related to HTLV, but distinct from it, have been

isolated from Old World monkeys. This and other facts led us to propose that the ancestral origin of HTLV is in Africa."

Comments such as this immediately raise problems because of the socio-historical implications. To the ordinary man, Gallo will be understood as saying that: "We (European scientists) conclude that AIDS originated from Africa because we found AIDS virus in monkeys, and Africans are closer to monkeys."(10)

Later the same year, at a symposium on AIDS and Africa held in Brussels, there were heated arguments between Western medical scientists claiming an African monkey origin for HIV, and African scientists and government officials who rejected such a hypothesis as unproved.(11) They questioned why such a rare evolutionary event should have been confined so long to Zaire, and Dr David Desire Benoni of Gabon asked "why do they not look for a monkey in the US? AIDS started there and could equally well have been brought to Zaire by wealthy homosexuals".(12) African doctors at this meeting also said that HIV tests were unreliable in their patients and gave a high rate of false positivity.

Unsurprisingly the charge of racism was rejected by Western scientists and the following quotation, from three leading British AIDS researchers, was a typical response:

In the case of some early studies in Africa, techniques were used that had not been sufficiently well validated for African sera, given the prevalent hypergammaglobulinaemia and a notorious tendency to "stickiness" and false positive reactions in antiglobulin assays. The observations derived from these studies have led to some confusion and have also tended to damage the credibility of foreign scientists working in Africa - especially among local leaders. Additional problems have been created when investigators have spent a short time collecting sera and basic data in a developing country, often with little guidance from local investigators, and then published the data without reference to the original context. This has tended to produce scientific data that has not been adequately placed in an anthropological perspective. Even worse, it has led to denial and resentment, jeopardising essential and potentially fruitful collaboration between investigators in the developed and developing

world in a study of an issue of mutual concern. This has been particularly damaging when the pursuit has apparently been the origin of AIDS and HIV, an essentially academic question, however interesting. Such investigations have often been taken to imply blame on the region that appears to be the source. Although they were certainly never intended to impugn any community in this way, it is not difficult to see how such perceptions arose.(13)

It is difficult to untangle the confusion of ideas here- what on earth is data placed in an anthropological perspective, but whilst there is acknowledgement that the behaviour and practices of AIDS researchers may have left something to be desired, there is no acknowledgement that Africans have questioned the scientific basis of the AIDS from Africa hypothesis. Although the views of the western scientists have prevailed over the last decade, the "fundamental loopholes and illogicalities" have not been removed by force of argument or scientific evidence. I will, therefore, attempt to delineate the essentials of AIDS science and racial ideology pertinent to this debate.

If HIV or indeed some other as yet unidentified micro-organism is the cause of AIDS, there are a limited number of possibilities as to its origin: a human population that has harboured the virus for many years and from whom the virus has spread in recent years; an animal reservoir of the virus; or a mutation of an existing human or animal virus. The first possibility, a human reservoir for HIV, the "isolated tribe" or "village disease", was presented in detailed form in 1984:

This report proposes that the infectious agent causing AIDS... is endemic and unrecognised in parts of sub-Saharan Africa, from where it recently disseminated into external populations...

In rural Africa diagnosis is often inexact. Fever is readily attributed to malaria without confirmation, and pneumonia is often assumed to be pneumococcal or tuberculous... In such a situation immunodeficiency would go unrecognised.

Useful analogies can be drawn between the sudden appearance of AIDS and the recent recognition of some African viral haemorrhagic fevers... [Marburg, Ebola and Lassa]

As Kaposi's sarcoma was a feature in about one third of reported cases of AIDS, it would seem mandatory to look for AIDS where Kaposi's sarcoma has its highest incidence in the world, equatorial Africa...

The incubation period of AIDS is thought to be one or more years. The first American cases are likely to have become infected in the early to mid-1970's, a time when tourism from the United States to Africa was developing as a result of heightened cultural interest...(9)

There are serious weaknesses in the medical aspects of this hypothesis, for example it is quite inappropriate to draw parallels between the haemorrhagic fevers and AIDS as the former have no carrier state in humans and can only be transmitted from human to human during the acute illness. Outbreaks therefore occur in limited geographical locations and the infected person either dies or recovers completely. It is the historical inaccuracies, though, that are more spectacular. For many centuries before the Portuguese sailed around the Cape powerful west African kingdoms conducted trade across the Sahara to the Mediterranean,(14) and every year many thousands of west Africans made the pilgrimage to Mecca.(15) On the east African seaboard there were city states that flourished on trade between the central and southern African kingdoms such as Monamatapa in Zimbabwe, and Asia as far as Ming dynasty China.(16) With the advent of the Portuguese began four hundred years of the African slave trade, during which many millions of Africans were transported to the New World and Europe, and when African women were regularly raped from the time of capture.(17) Following the demise of the slave trade came the scramble for Africa, when almost the entire continent was colonised by the European powers. If AIDS was the cause of a tumour as common as Kaposi's sarcoma in equatorial Africa, the disease would have spread to the rest of the world hundreds if not thousands of years earlier. Tourists from the United States in the mid 1970's as the means by which AIDS reached America was breathtakingly naive. Nonetheless attempts were made to find an "isolated tribe" harbouring HIV without success, and the quest for an African origin was increasingly focused on African monkeys.(18,19)

Reading the scientific literature about a simian (monkey) origin for

the human immunodeficiency virus can be a confusing business. It is easy to gain the impression that simian retroviruses can readily infect humans, but evidence for this is minimal. The Simian Immunodeficiency Viruses that have been isolated from monkeys are, like all other retroviruses, species specific i.e. in nature no monkey retrovirus normally infects a human or indeed a different species of monkey, and there is no monkey reservoir for the Human Immunodeficiency Virus.(20) Only chimpanzees have been reported to be successfully infected with HIV, but they do not become ill.(21) Thus a simian origin for HIV requires two chance events, a mutation of a monkey virus into a virus that could infect a human, and blood to blood contact between the monkey with the mutant virus and a human. Even between humans AIDS is not very efficiently transmitted via limited blood to blood contact, much less so than Hepatitis B, as evidenced by the minimal risk of becoming seropositive from needle stick injuries between medical personnel and patients.(22,23) AIDS researchers have claimed that Africans inject themselves with monkey blood or give their children dead monkeys as toys, claims that Africans have rejected as preposterous, and even for the minority of Africans who hunt and eat monkeys, the prospects for human infection with even a mutant strain of SIV would be very remote.(24, 25,26) A far more efficient potential route for transmission of Simian viruses to humans occurred not in Africa but in Europe during the 1920's. Thousands of European men underwent an operation that was believed to slow the ageing process and bring about "rejuvenation".(27) The technique was pioneered by Dr Serge Voronoff, a Russian working in Paris, and involved transplantation of testicles from living chimpanzees, monkeys and other Simian species directly onto the testicle of the human recipient. The procedure was so popular that the detective writer Dorothy Sayers included it in the plot of *The Unpleasantness at the Belona Club*. However spurious the benefits of the operation, there were no reported ill effects, and no subsequent epidemic of AIDS.

The improbability of transmission of a mutant retrovirus from monkeys to humans has not stopped AIDS scientists from making wild speculations. Claims that a Simian Immunodeficiency Virus (SIV) isolated from laboratory Macaque monkeys had been isolated from wild African green monkeys and was similar to a virus isolated

from west African prostitutes were disproved when the virus was found to be a laboratory contaminant.(28,29,30,31) Undeterred, scientists have estimated that SIV mutated into HIV in the last few decades, their conclusions based on estimates of the rate of mutation of these viruses and their degree of genetic dissimilarity. (32) Even if such an improbable event did occur, given the existing colonial ties and trading links between Africa and Europe, the virus would have caused an epidemic in Europe at the same time as or before the epidemic in the United States. Yet all the documented evidence points to an epidemic beginning in America and from there spreading to Europe.(33,34) Arguments that Haitians acquired the infection in Zaire and took it back to Haiti where it was acquired by American tourists are also quite implausible, as the European presence in Zaire was large and the Haitian presence minimal. Whatever the logic, western fascination with African "isolated tribes" and their sexual practices continued unabated, and drew the following response from a Ghanaian scientist:

Some people have decided that the origin of AIDS will be forever associated with Africa, hence such unscientific statements as "there is now little doubt human AIDS began in Africa". Their evidence is that "not only is the disease widespread on Central Africa but only in Africa are there monkey species naturally infected with lentiviruses related to human immunodeficiency virus". An African might have written similarly of syphilis in Europe in the Middle Ages: "There is little doubt that syphilis began in Europe. Not only is the disease widely spread there, but only in Europe it seems are people naturally susceptible to the disease." At that time there was not a single case of syphilis reported from black Africa, even thought there were sailors going to and returning from Africa to Europe, thanks to acquired immunity against syphilis because of widespread Yaws. We all know now that syphilis did not begin in Europe.

If members of the Idjwi tribe had practices that would constitute an efficient means of trans-species transmission and could be responsible for the emergence of simian immunodeficiency virus (SIV) infections of man and thus AIDS, why have they only now developed AIDS? Perhaps A. Karpas (*Nature* 348, 578:1990) would have us believe that they had acquired an immunity to AIDS until

they suddenly lost if in 1959. Sexual practices in East Zaire, in a small circumscribed tribe, led to a suggestion that SIV could have given rise to HIV-2 infection of man in West Africa thousands of miles away. How elastic is Karpas's imagination?(35)

Other arguments have been presented in support of an African hypothesis that are peripheral to the origin of HIV. These arguments can be considered in three categories, and I will deal with each in turn. Firstly there have been a number of cases of AIDS-like illnesses reported in Africans or people who have been to Africa that predated the AIDS epidemic in America; Secondly are the reports of positivity to AIDS test in African blood taken decades before the AIDS epidemic in America and Europe; and thirdly there is the sheer scale of the AIDS epidemic in Africa- AIDS must have been in Africa longer than elsewhere for it to have effected so many people.

With regard to the early AIDS-like cases, these can only be considered evidence for an African origin for AIDS if they were genuine cases of AIDS, and if such cases only occurred in Africa. In reality sporadic AIDS-like cases have been reported in the medical literature for many years but, with few exceptions, only those with an African connection have been highlighted.(36) Two of these cases were investigated further and were found to be spurious. The Danish surgeon who worked in Zaire and died in 1977 has been given a great deal of attention in medical and popular literature, but a sample of her blood that had been preserved was found to be HIV negative, although this has only been mentioned in private correspondence and not in the medical literature.(37,38) The other, a Manchester seaman who sailed to many continents including Africa and died in 1959 has been regarded as the first documented case of HIV infection. Samples of his tissue were preserved and were reported as containing HIV, but when further tests were carried out in a different laboratory the original findings were disputed.(39,40)

The next issue, that of positive tests from stored African serum, has been alluded to in the quotations from the British scientists above. No blood test can be considered perfectly reliable, and all tests will have a greater or lesser percentage of false positive and negative results. In the case of patients who have more than average amounts of circulating antibodies in response to other infections, the chances

of them giving a false positive reaction are higher. This is undoubtedly the case for people continually exposed to malarial infection and other parasitic and infectious diseases- the notorious tendency to "stickiness".(41) Evidence that false positivity was a major problem in both stored serum samples and samples taken for population studies for HIV in Africa was available from the mid 1980's, but has been largely ignored.(42,43) Claims that early tests were unreliable but those used now can be trusted are also untenable. Research published in 1994 found that antibodies to Mycobacterium antigens, i.e. antibodies produced by patients with tuberculosis and leprosy, give a positive test for HIV.(44) Long before this research was published African physicians appreciated the difficulty in attributing meaning to a positive HIV test in a patient with tuberculosis. Dr Konotey-Ahulu, a Ghanaian physician, wrote in 1987:

I asked what advice the doctors [in Congo-Brazzaville, a predominantly Roman Catholic country] gave to a married man with tuberculosis who was found to be seropositive and they said: "Nothing". The patient was not even told he might have AIDS because the doctors, quite rightly, said that they had nothing else to go on but seropositivity for human immunodeficiency virus as assessed by ELISA and pulmonary tuberculosis... and in any case "the man has improved on anti-tuberculous therapy and the wife is still seronegative."(45)

Yet despite all the evidence that tests for HIV are unreliable, a single positive blood test taken from an unknown African and stored in a freezer for a quarter of a century is frequently quoted as evidence that AIDS originated in Zaire.(46)

On the grounds that the health services of most African countries cannot afford the diagnostic tests for AIDS, the World Health Organisation has different criteria for defining AIDS in Africa, based on signs and symptoms only, from AIDS in the rest of the world.(47) This case definition includes patients who have prolonged cough, fever and weight loss, the classic presenting symptoms and signs of tuberculosis. If the tuberculosis is confirmed but, resources permitting, the patient is found to be HIV positive, it is assumed that tuberculosis has developed because the patient is infected with HIV.

It is then quite conceivable, when resources are limited, that treatment will be withheld on the grounds that the patient will die in any case. It is fortunate that at least some African physicians have relied on their clinical judgement rather than the conclusions of Western AIDS researchers. The implications of both clinical criteria and diagnostic tests that fail to distinguish between HIV and treatable diseases common in Africa extend beyond personal and family tragedy. Both are used, separately or together, to estimate the extent of the HIV epidemic in Africa and will lead to exaggeration.

There are other reasons to dispute the scale of the African AIDS epidemic. In the West there has been reported a progression from HIV infection to AIDS of around 5 to 7% per annum.(48) This ratio is a function of the rate of progression from infection to manifest disease. If the huge number of reported seropositive Africans are seropositive for the same reasons as their counterparts in the West then they should be developing AIDS and dying at a comparable rate and the continent should be witnessing a death rate far in excess of that which is occurring. Seropositive Africans do have a higher death rate than non-seropositive Africans,(49) but this would be the case even if the majority of the seropositives were false positives but suffering from chronic malaria, tuberculosis or other diseases that could give rise to a false positive response. A further difficulty with the African epidemic is the equal or near equal sex incidence of seropositivity found in population studies which, it is claimed, is due to the heterosexual transmission of HIV in Africa.(50,51) Studies in the West have shown repeatedly that HIV positivity is far more likely to be transmitted from semen donor to semen recipient (whether the latter is male or female) than the reverse, and there is no reason why this should be different in Africa.(52,53) If heterosexual intercourse is the major means of transmission of HIV in Africa, HIV seropositivity and AIDS would disproportionately affect women. An equal sex ratio implies not sexual transmission but the converse, non-sexual transmission, and one obvious explanation would be that the large majority of seropositives in Africa are false positives due to malaria, tuberculosis and other infections that affect men and women equally.

If the evidence for an African origin is contradictory or insubstantial,

are there any more credible alternatives? One possibility that has been given scant attention in the vast scientific literature about HIV and AIDS is an artificial origin of a mutant virus. This would seem rather surprising, as the risks of mutant viruses emerging from laboratories has been widely debated for many years. For example, in 1966, Professor and nobelist Sir MacFarlane Burnet, a leading microbiologist wrote:

I remember vividly the beginnings of molecular biology. For me it began when Schlesinger showed in 1934 that a bacterial virus contained thymonucleic acid - we call it D.N.A. now... For thirty years I have watched this structure develop around the central bacterium-phage theme, bringing in as needed contributions from the chemistry of nucleic acids and proteins, from the genetics of higher organisms, and the pharmacology of antibiotics. It has been a magnificent achievement, to be ranked with the elucidation of subatomic structure as one of the two major triumphs of twentieth-century experimental science. It seems almost indecent to hint that, so far as the advance of medicine is concerned, molecular biology may be an evil thing...

The human implications of what is going on in this sophisticated universe of tissue-cultured cells, bacteria, and the viruses which can be grown at the expense of one or other are at best dubious, at worst frankly terrifying... Amongst many billions of essentially independent units, mutations will range widely, particularly under the impact of chosen mutagenic agents. Almost always, cultural conditions can be so manipulated that any mutant of interest, whether of a mammalian cell line, a bacterium, or a virus can be caused to outgrow the other forms and can be isolated in pure culture or its equivalent. Theoretically, anything within the physical possibility of mutation can be obtained by current techniques from cell line, bacterium or virus, and can be isolated in unlimited quantity. It is interesting to contemplate the possibilities for human good or evil in the mutations thus obtained...

There is a disconcerting analogy between the progress of atomic physics and of molecular biology. The natural milieu where intra-atomic reactions are of significance is in the centre of stars or at the birth of galaxies. We have been able to construct a model of what

happens in the stars and find no use for it except self destruction. The evolution of the nucleic-acid/protein mechanism as the basis of biological reproduction and mutation may have taken a thousand million years, and from this development of the earth's present biosphere has taken twice as long again. The time scale and the complexity of process is such that only the simplest of existent organisms, the viruses, can provide models for us to manipulate. For the foreseeable future the only function of viruses is to destroy higher forms of life...

The latest development has been the recognition that, in some way, a portion of the genetic material of a virus can be incorporated into the genome of the infected cell and induce changes in the behaviour of the cell... Potentially, viruses could be evolved in biological laboratories to insert episomes into a variety of cells to produce a variety of effects. There would always be the reservation, however, that to provide the appropriate conditions for selective survival the effect of the episome must be easily recognisable under laboratory conditions. At present the only two readily observable effects are death or malignant transformation. Practical applications of molecular biology to cancer research might also be sinister - they are not likely to be helpful.

...Medicine must make use of all the sciences, but it must also recognise the limitations that the process of evolution and the nature of man place on their utilisation.(54)

Professor Burnet was not an isolated voice. In the early 1970's several molecular biologists also expressed concern at the risks of molecular biology, and published a book *Biohazards in Biological Research.*(55) In February 1975, at Asilomar in California, an international conference of one hundred and fifty molecular biologists agreed a policy of self-regulation that included "appropriate safeguards, principally biological and physical barriers adequate to contain the newly created organisms, [should be] employed", and "certain experiments... ought not to be done with presently available containment facilities." In the following years the debate entered the body politic, and by 1976 the National Institutes of Health released guidelines for research on recombinant DNA molecules, and the following year the Federal Interagency

Committee on Recombinant DNA Research issued an interim report on Suggested Elements for Legislation that was subsequently enacted by the US government.(56)

Whether or not HIV is a mutant laboratory virus, there is at least one documented cross species transmission of a virus that has been attributed to development of mutant forms of the virus in the laboratory. Between 1978 and 1980 a new disease appeared in dogs in widely separated geographical locations which was found to be due to a parvovirus related to a parvoviruses infecting cats and minks. During the first half of this century feline panleukopenia virus (FPV) had repeatedly given rise to huge epidemics in various parts of the world, but this parvovirus had never infected dogs, and all attempts to infect dogs experimentally had failed. It has been proposed that strains of FPV and the mink enteritis virus (MEV) were deliberately or accidentally adapted to growth in canine cells in the laboratory. Passage of the feline virus in canine cells may have been undertaken to attenuate the virus to make it suitable for a feline vaccine, or the virus may have accidentally contaminated canine cell cultures. Attenuated FPV given to cats as a vaccine may then have infected the canine population.(57)

It is virtually impossible for any molecular biologist researching AIDS in the early 1980's to be unaware of the debate about the risks of molecular biology and the subsequent legislation regulating their activities. Even before the AIDS epidemic, retroviruses were the subject of intense research activity because of their ability to turn RNA into DNA, and their possible role in causing cancer. Hundreds of thousands of African green monkeys and other species have been exported from Africa to research laboratories in Europe and America, where they have been subjected to experimental infections and their tissues used in cell culture. If HIV is a mutant monkey virus, it is surely more probable that it came from a laboratory than from monkey with naturally mutated virus biting man somewhere in darkest Africa. That the latter hypothesis and not the former has been pursued suggests that factors other than science have been guiding the activities of AIDS researchers. If one factor was fear of being accused of causing the AIDS epidemic, the other was a conscious or unconscious acceptance of racial ideology.

If there are parallels between racist ideology as it applies to Africa and Africans, and the tenets of the AIDS from Africa hypothesis, what are the essential racist beliefs, and how might they have influenced AIDS researchers? It can be generally agreed, I trust, that the world view of any individual is acquired from the society in which she or he is raised, and that these perceptions and values are often unconscious, at least until challenged. It can also be agreed, I hope, that racist beliefs are a result of a historical process and are not innate to the human condition. This, certainly, was the view of Morgan Godwyn, one of the first Europeans to analyse racism as a class ideology. He was the grandson of a bishop and son of a canon, who went to Virginia, then to Barbados, as a minister of religion. In 1680 he published a book *The Negro's & Indians Advocate*, the essential thesis of which is contained in the following passage:

A disingenuous and unmanly *Position* hath been formed: and privately *(and as it were in the dark)* handed to and again [i.e. to and fro], which is this, That the *Negro's,* though in their Figure they carry some resemblances to Manhood, yet are indeed *no Men*... If *Atheism and Irreligion* were the true Parents who gave it Life, surely *Sloth and Avarice* have been no unhandy Instruments and Assistants to midwife it into the World, and to Foster and Nurse it up. Under whose Protection getting abroad, it hath acquired sufficient strength and reputation to support itself; being now able not only to maintain its ground, but to bid defiance to all its *Opposers;* who in truth are found to be but very *few,* and those scarcely *considerable.* The issue whereof is, That as in the *Negroe's all pretence to Religion* is cut off, so there *Owners* are hereby set at Liberty and freed from those importunate Scruples, which Conscience and better Advice might at any time happen to inject their unsteadie Minds.(58)

Godwyn is arguing very clearly that racism, at least as applied to Africans, was a product of the greed of the planters and slave-merchants, which they used to justify their actions in their own eyes as well as in the eyes of the rest of society. Initially they spread their views in a furtive manner, but later gained sufficient confidence to speak openly and ultimately their views gained general acceptance.

There is ample historical evidence for Godwyn's arguments. One of the earliest historical records of contact between Europeans and

sub-Saharan Africans can be found in the Portuguese royal archives. In 1482 Diogo Cão sailed down the west African coast and discovered the estuary of a river so great that its silt-laden waters discoloured the ocean for many miles from the shore. On a subsequent journey Cão sailed up the estuary, landed near Matadi of today, and there met some of the people of the country. Although of course there was no common language the Portuguese understood that they were in the territory of a powerful ruler whose capital was distant from the coast. Cão left four Franciscan monks to see if they could contact the king, and took hostages back to Portugal. There they were well received by the king, clothed, converted to Christianity, and encouraged to act as future interpreters. In 1487 they were sent back to the Congo with Cão's third expedition and Cão himself, together with a retinue of fellow-countrymen and these Congolese interpreters, were invited to visit the ruler of the land, the Mweni-Congo, at his capital of Mbanza in the hills behind the coast. There the Europeans found this African ruler seated on a royal stool of ivory, surrounded by his counsellors and his men-at-arms. The meeting was a great success. Within a few years of this visit to Mbanza, the 'royal brothers' of Portugal and Congo were writing letters to each other that were couched in terms of complete equality of status. Twenty-two of the Mweni-Congo's letters (he was baptised King Affonso) are preserved in the royal archives of Portugal. Written between 1512 to 1540 by various secretaries, the most important of whom, baptised as João Texeira, was evidently Congolese, they show a good command of the Portuguese language and bear on a wide variety of topics. Relations were also established between Mbanza and the Vatican and a son of the Mweni-Congo was educated in a Portuguese seminary and appointed in Rome as bishop of his country.

In the early years of Portuguese contact slave trading was undertaken on a small scale. The practice of one African monarch turning over a number of his captives to another who was his ally was common in Iron Age Africa and was far from rare in medieval Europe. Indeed European merchants and sea captains were still selling European slaves to the markets of North Africa. But as the overseas slave trade increased chaos descended on the Mweni-Congo's Kingdom. Repeatedly the Mweni-Congo asked his Portuguese 'brother' to

provide him with a ship, or the means of making one, but the Portuguese were determined to retain their maritime monopoly, and ultimately the Mweni-Congo sought to bring the slave trade to an end. In a strongly worded letter to John III, the Mweni-Congo wrote:

...We cannot reckon how great the damage is, since the above-mentioned merchants daily seize our subjects, sons of the land and sons of our noblemen and vassals of our relatives... Thieves and men of evil conscience take them because they wish to possess the things and wares of this Kingdom... They grab them and cause them to be sold: and so great, Sir, is their corruption and licentiousness that our country is being utterly depopulated... [We] need from [your] Kingdoms no other than priests and people to teach in schools, and no other goods but wine and flour for the holy sacrament: that is why we beg Your Highness to help and assist us in this matter, commanding your factors that they should send here neither merchants nor wares, because it is *our will that in these kingdoms [of Congo] there should not be any trade in slaves nor market for slaves.*(59)

Needless to say, such pleas were entirely ignored.

Such was the change in European perceptions of Africa over the subsequent four hundred years of the slave trade that it is was possible for Joseph Conrad to write about much the same place and people:

The reaches opened before us and closed behind, as if the forest had stepped leisurely across the water to bar the way for our return. We penetrated deeper and deeper into the heart of darkness... We were wanderers on prehistoric earth, on an earth that wore the aspect of an unknown planet. We could have fancied ourselves the first of men taking possession of an accursed inheritance, to be subdued at the cost of profound anguish and of excessive toil. But suddenly, as we struggled round a bend, there would be a glimpse of rush walls, of peaked grass-roofs, a burst of yells, a whirl of black limbs, a mass of hands clapping, of feet stamping, of bodies swaying, of eyes rolling, under the droop of heavy and motionless foliage. The steamer toiled along slowly on the edge of a black and incomprehensible frenzy. The prehistoric man was cursing us,

praying to us, welcoming us - who could tell? We were cut off from the comprehension of our surroundings; we glided past the phantoms, wondering and secretly appalled, as sane men would be before an enthusiastic outbreak in a madhouse. We could not understand because we were too far and could not remember, because we were travelling in the night of first ages, of those ages that are gone, leaving hardly a sign - and no memories...

The earth seemed unearthly. We are accustomed to look upon the shackled form of a conquered monster, but there - there you could look at a thing monstrous and free. It was unearthly, and the men were - No, they were not inhuman. Well, you know, that was the worst of it - this suspicion of their not being inhuman. It would come slowly to one. They howled and leaped, and spun, and made horrid faces; but what thrilled you was just the thought of their wild humanity - like yours - the thought of your remote kinship with this wild and passionate uproar. Ugly. Yes, it was ugly enough; but if you were man enough you would admit to yourself that there was in you just the faintest trace of a response to the terrible frankness of that noise, a dim suspicion of there being a meaning in it which you - you so remote from the night of first ages - could comprehend. And why not? The mind of man is capable of anything - because everything is in it, all the past as well as all the future....

And between whiles I had to look after the savage who was fireman. He was an improved specimen; he could fire up a vertical boiler. He was there below me, and, upon my word, to look at him was as edifying as seeing a dog in a parody of breeches and a feather hat, walking on his hind-legs. A few months of training had done for that really fine chap. He squinted at the steam-gauge with an evident effort of intrepidity - and he had filed teeth, too, the poor devil, and the wool of his pate shaved into queer patterns, and three ornamental scars on each of his cheeks. He ought to have been clapping his hands and stamping his feet on the bank, instead of which he was hard at work, a thrall to strange witchcraft, full of improving knowledge. He was useful because he had been instructed; and what he knew was this - that should the water in that transparent thing disappear, the evil spirit inside the boiler would get angry through the greatness of his thirst, and take a terrible

vengeance. So he sweated and fired up and watched the glass fearfully (with an impromptu charm, made of rags, tied to his arm, and a piece of polished bone, as big as a watch, stuck flatways through his lower lip), while the wooded banks slipped past us slowly, the short noise was left behind, the interminable miles of silence - and we crept on, towards Kurtz.(60)

Heart of Darkness is a novel, but Conrad had worked in the Congo and was presenting an albeit dramatised version of the European conception of "darkest Africa". His fictional account followed many others that claimed to be factual or even scientific. For example David Hume, the great British empiricist, wrote in 1748:

I am apt to suspect the negroes, and in general all the other species of men (for there are four or five different kinds) to be naturally inferior to the whites. There never was a civilised nation of any other complexion than white, not even any individual eminent either in action or speculation. No ingenious manufacture amongst them, no arts, no sciences... Such a uniform and constant difference could not happen, in so many countries and ages, if nature had not made an original distinction betwixt these breeds of men. Not to mention our colonies, there are NEGROE slaves dispersed all over Europe, of which none ever discovered any symptoms of ingenuity; tho' low people, without ingenuity, will start up amongst us, and distinguish themselves in every profession. In JAMAICA indeed they talk of one negroe as a man of parts and learning; but 'tis likely he is admired for very slender accomplishments, like a parrot, who speaks a few words plainly.(61)

One of the most prolific exponents of this line of reasoning was Edward Long, the son of a Jamaica planter. In his history three volume *History of Jamaica* we find another of the central themes of racist ideology:

When we reflect on... their dissimilarity to the rest of mankind, must we not conclude, that they are a different species of the same *genus?*... Nor do [orang-utans] seem at all inferior in the intellectual faculties to many of the Negroe race; with some of whom, it is credible that they have the most intimate connexion and consanguinity. The amorous intercourse between them may be

frequent... and it is certain, that both races agree perfectly well in lasciviousness of disposition.(62)

And Thomas Atwood, chief judge of Dominica and later of the Bahamas, stated:

Negroes are in general much addicted to drunkenness, thievery, incontinency [i.e. promiscuity], and idleness... Idleness is so very predominant in negroes, and their dislike of labour is so great, that it is very difficult to make them work; sometimes it is necessary to have recourse to measures that appear cruel, in order to oblige them to labour.(63)

Racism "being now able not only to maintain its ground, but to bid defiance to all its *Opposers"* profoundly influenced many of the leading European intellectuals and writers of the last three centuries: John Hunter, the father of British surgery, Carl Linnaeus, the Swedish botanist, and Charles Bonnet, the Swiss naturalist are but a few who contributed to the pseudoscience of racism; Charlotte Bronte and William Thackeray and many others reflected in their literary work the racism prevailing in the society around them.

As Europe began to come to terms with the Nazi holocaust, racism lost much of its intellectual respectability, a process hastened by independence in the colonies and the black civil rights movement in the United States. But whilst the expression of racism may be less acceptable, the underlying racist beliefs, particularly those pertaining to Africa and Africans, remain integrated into the European and American world view. Thus within the scientific literature about AIDS and Africa all the racist themes can be found underpinning arguments for which scientific evidence is contradictory or absent: Africans are primitive peoples living in isolated tribes cut off from civilisation, so could have harboured diseases for centuries before they spread to the rest of the world; They are evolutionarily closer to monkeys, thus could more readily acquire monkey diseases, perhaps by having sexual relations with monkeys or at least involving them in their sexual practices; They are sexuality unrestrained, and a sexually transmitted disease would therefore spread more rapidly amongst them than any other people; Their intelligence is limited and they cannot understand the

complexity of a disease such as AIDS, and their objections to being attributed with its source are harmful to themselves and do not need to be taken seriously. We are all the products of our culture, and it is unlikely that the western scientists who accepted the AIDS from Africa so uncritically were aware of the source of their views. This may be understandable, but their failure to even consider, let alone debate the objections raised by Africans is surely quite unacceptable. It is also bad science.

If the intrinsic scientific merits of the AIDS from Africa hypotheses are insufficient to justify its retention, and it is being sustained by a combination of desire to distract attention from a laboratory origin and racist beliefs about Africans, what is the historical context in which this has taken place? It is appropriate to begin with the development of biological warfare during the Second World War, when all the major combatants tested such weapons, in the case of the Germans and Japanese on large numbers of human subjects. After the war the Americans, in close collaboration with the British, allocated substantial resources to develop these weapons. So important did they regard biological warfare that they gave Japanese scientists who had regularly sacrificed human prisoners during experiments immunity from prosecution for war crimes in exchange for the information so gathered. For two decades from the early 1950's more than 200 experiments were conducted in the US alone. "Harmless" bacteria were released on military and civilian targets, including whole cities. In other experiments pathogenic bacteria were tested on animals on rafts off the Bahamas, the carcasses of the animals being burned at sea. The scientists conducting these experiments were based at the American military base at Camp Detrick, later renamed Fort Detrick, in Maryland, US, and in Britain at the Microbiological Research Establishment at Porton Down. The diseases considered most promising in the 1950's were Anthrax, Brucellosis, Tularaemia, Psittacosis and Q fever, caused by bacteria, and viral haemorrhagic fevers such as Rocky mountain spotted fever and Rift Valley fever.(64)

Unlike bacteria, viruses survive and multiply only within cells, and laboratory experimentation with viruses became very much easier when "immortal" cell lines were developed during the 1950's. The

determination of the molecular structure of DNA by Watson and Crick in 1953 opened up the possibility of manipulation of the genetic structure of micro-organisms, and the possibilities were not lost on those engaged in biological warfare research. As early as 1962 forty scientists were employed at the US. biological warfare laboratories on full-time genetics research, and when Professor MacFarlane Burnet wrote of the dangers of molecular biology in 1966, he would undoubtedly have been aware that his fellow scientists were using this knowledge for military purposes. By 1969 the U.S. Department of defence sought funding to manufacture a new biological agent, presenting the following testimony to the House Appropriations Committee:

Within the next 5 to 10 years, it would probably be possible to make a new infective micro-organism which could differ in certain important respects from any known disease-causing organisms. Most important of these is that it might be refractory to the immunological and therapeutic processes upon which we depend to maintain our relative freedom from disease.(64)

It is important to realise that whatever the intentions of scientists, molecular biology research was and remains imprecise, and the results are therefore unpredictable. The first immortal cell line was taken from the cervical cancer of young American woman who died 1951, and was called HeLa after the first two letters of her first and last names. This cell line was passed to laboratories throughout the world and grew so well that in the late 1960's it was discovered that many laboratory cell lines thought to have been immortalised by laboratory techniques were contaminations by HeLa cells, and many experiments were discredited. Viral contamination of cell cultures has also been persistently problematic. A notable example was a "new" human retrovirus called HL23 which was cultured from human leukaemia cells. Subsequently this "new" virus was found to be two "old" contaminating monkey viruses.(65) The debacle of the African green monkey virus hailed as the precursor of HIV but found to be a laboratory contaminant was a similar and far from unusual event.

Public disquiet about the dangers of biological warfare found political expression in 1968 when, at the Standing Eighteen Nation

Disarmament Committee in Geneva, the British proposed that disarmament of biological weapons be negotiated separately from chemical weapons, and introduced a draft Biological Weapons Convention which would commit all signatory states to renouncing the weapons for all time. The US. and the Soviet Union initially greeted this proposal with little enthusiasm, but under mounting domestic pressure President Nixon supported the proposal. The Soviet Union then abandoned its opposition, and in 1972 the two nations signed a treaty that they would "never in any circumstances develop, produce, stockpile, or otherwise acquire or retain" any biological weapons. The US. government was left with a research establishment at Fort Detrick capable of producing almost every known human pathogen and millions of infected mosquitoes, fleas, ticks and flies to deliver them to target populations. In a consummately political move, President Nixon ordered a large part of this establishment to be transferred to the National Cancer Institute, and Litton Biotechnics, a division of Litton Industries, was privately contracted to run the operation.(64) No longer useful for waging war on communism, the army's DNA and genetic engineering programs were co-ordinated into anti-cancer research and molecular biology programmes for President Nixon's ill-fated War on Cancer, which officially began with the signing of the National Cancer Act on December 23, 1971. Officials were hopeful that a cancer cure would be discovered in time for America's bicentennial birthday celebration in 1976. Working on the premise that viruses caused cancer, numerous experiments were conducted inoculating viruses, with and without prior alteration of their genetic structure, in cell cultures or laboratory animals not normally infected by the virus. By 1976 there was still no proven association between human cancer and virus infection nor any prospect of effective treatment. The Director of the National Cancer Programme was forced to resign, and future efforts were directed towards researching possible environmental factors responsible for cancer. (65)

For obvious reasons scientists engaged in biological warfare research do not publish their findings in scientific journals, and the extent of overlap between biological warfare research and cancer research is not public knowledge. It is well known that some of the leading

scientists who failed to find a cure for cancer were later credited with the discovery of HIV and became the "Godfather's" of AIDS research. If the origin of the AIDS epidemic could be traced even circumstantially to laboratory experiments for biological warfare or cancer research, the trail could end with these leading AIDS experts. It is hard to believe it is a co-incidence that these same scientists have been the most ardent proponents of an African monkey origin for HIV.

There is little doubt, also, that biological warfare research did not cease in 1972, but continued either within the terms of the disarmament treaty or covertly outside it. For no good scientific reason AIDS researchers have associated the Ebola epidemic in Zaire in 1976 with the origin of AIDS. In the film *And The Band Played On* based on the book written by Randy Shilts a team from the World Health Organisation investigated and attempted to control the epidemic. This was untrue. The medical team were members of the American military who received support from the South African Government, and the same military team was also studying Lassa fever in West Africa.(66)

AIDS science has at its heart a small number of assumptions and at first glance it may seem difficult to understand why there is so little debate or even diversity of opinion amongst the many scientists participating in this complex research activity. Part of the explanation for this lies with normal scientific practice. Each field of science, or at least mature science, has a core of theories, described by Lakotas as the 'hard core' of research programmes, or, in a somewhat different conceptual framework, by Kuhn as paradigms.(67,68) Scientists working in the field are unlikely to challenge the existing paradigm, in part because of training and discipline, which can constitute a form of internal censorship, and in part from external peer pressure. The latter can be of a very practical nature, as scientific careers can only progress if funds can be obtained for research projects and the results of research are published in learned journals. Leading scientists in the field normally have influence over both the allocation of funds within their field of research, and, by the process of peer review and editorial control, publication in scientific journals.

Yet even 'normal' science does not function independently of its social, economic and political context. The days of the independent scientist conducting experiments in the study at home are long gone, and the political and economic priorities of government and industry now largely determine the allocation of funds. And, as scientists bring into their work their own particular cultural baggage, so too the results of their work are expected to conform with the prevailing cultural norms or vested interests. From the beginning of the epidemic the political aspects of AIDS have been exceptionally prominent. The conflict over who first isolated HIV was resolved, not in scientific meetings or publications, but in the White House, where the French scientist Luc Montaigner and the American Robert Gallo were officially recognised as 'co-discoverers' of HIV, and the extremely lucrative royalties from blood tests for HIV divided accordingly.(69,70) Such is the murkiness of AIDS science that Montaigner is now regarded as the sole discoverer, and Gallo has been found guilty of scientific misconduct.(71,72) But, as I have endeavoured to argue above, the high profile political endorsement of scientists like Gallo may be motivated by more than money. The manner in which science in the late twentieth century is organised and funded makes it possible for a small group of scientists very well connected to the political, military and industrial establishments to dominate their area of research, and in so doing, promote the interests of their sponsors rather than seek scientific truth.

Science is but one means of acquiring knowledge and understanding of the world around us and, like all human endeavours, it contains our partial understandings and individual and collective prejudices. However the central aim of science is to find theories that best explain available knowledge, and if the scientific process deviates from that aim, failure is likely, if not inevitable. If AIDS is caused by a virus that did not come from Africa but from a laboratory it would be foolish to expect success from scientists who may have deliberately or accidentally created the virus and who wish to divert attention from their past activities. The very failure of AIDS science, though, may be grounds for optimism, for flawed hypotheses cannot survive forever and sooner or later the obvious must be confronted. For those already suffering from AIDS it will, unfortunately, be far too late. *

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From the VirusMyth AIDS WebSite;
http://www.virusmyth.com/aids/ or
http://www.virusmyth.net/aids/ or
http://www.virusmyth.org/aids/

Recommended Reading

What if Everything You Thought You Knew About AIDS was WRONG!?

by Christine Maggiore

Emerging Viruses:

AIDS & Ebola--Nature, Accident or Intentional?"

by Dr. Leonard G. Horowitz

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policy, administrative rules and regulations.