
PEACE AND DEVELOPMENT IN AFRICA

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And my special thanks to the local organizer, Dr. Robert Mtonga, a good friend, who has made it possible.

Africa faces three simultaneous problems that must be addressed; economic development, disease, and peace. Drawing on the work of Jeffrey Sachs and others, this article explains the nature of each of these problems and possible solutions. A comprehensive program of action is advocated with sustained commitment to support those nations that are truly using that support to free themselves from the vicious cycles of war, disease, and poverty that currently plague much of Africa.

I think I should start with a “*Tikulan-dilani ndi manja abili*!” (“welcome with our both hands”), as the locals would say in the frame of the traditional Zambian hospitality. I’m pleased to be in the heart of Africa, for this 20th International Colloquium on the Brain and Aggression (CICA).

This year’s theme, “socio-economic responses to structural adjustment programmes in Zambia,” within the frame of the UN International Year of the micro-credits, is a continuation of the ethos of ICUS (International Conferences on Unity of Sciences)¹ and of Pugwash² Conferences on Science and World Affairs in favor of a peaceful enjoyment of life. In keeping with the Pugwash tradition, we will grapple with issues relevant to the topic by using science to offer non-partisan, yet global solutions to local problems that best our erstwhile world today.

Why have we chosen as a general title “Peace and Development”? Because, the concept of peace in Africa will have meaning only when underdevelopment is tackled effectively. One can talk of conscience, moral law, dignity of man, truth, justice, freedom, democracy, love, and free will to a well fed and secure person and something will sink in. However, to hungry, poverty stricken, unemployed, low income earner, poorly housed, illiterate, ignorant, malnourished and diseased persons these are empty words and do not make sense in their circumstances. This explains why fewer people in poor countries than in rich ones own computers and have access to the internet: simply because they are too poor, are illiterate, or have other more pressing concerns, such as food, health care and security. So, even if it were possible to wave a magic wand and cause a computer to appear in every

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household on earth, it would not achieve very much: a computer is not useful if you have no food or electricity and cannot read. The benefits of building rural computing centers, for example, are unclear. Even more, as the late Pope Paul VI asserted several decades ago, “nowadays the name of peace is development.”

Besides of the breathtaking beauty and diversity of Africa, with an extraordinary, energetic and resilient people, it is also a place plagued with problems so endemic and widespread that no continent, no matter how prosperous, could tackle them on its own. Among the threat from international terrorism, the spread of weapons of mass destruction, and climate change, which are problems common to all the world, Africa is particularly vulnerable to the last one. It has been estimated that the African GDP could decline by up to 10 percent because of climate change. If we agree that the problems of Africa need to be addressed, maybe we should focus on some specific problems, also shared by many other countries, such as poverty, debt, disease, conflict, corruption and weak governance. Let us consider some possible ways of addressing or solving them.

POVERTY

It is a paradox that the continent that provides resources for the rest of the world harbors many of the poorest people in the world. Africa, far from being prosperous, is the world's poorest continent. As the British Premier Tony Blair has explicitly expressed, "half the population of sub-Saharan Africa lives in absolute poverty. And, uniquely, whereas the economy is improving in other areas of the world, Africa is getting poorer. The average income per head is lower now than it was 30 years ago."^c This can induce an understandable sense of hopelessness that progress can be made.

Why is poor Africa is becoming even poorer? Jeffrey Sachs mentions four possible causes:

- 1) Historical reasons: "After 300 years of slavery (between 10 and 15 millions slaves were taken from Africa), one century of colonialism did not leave much education or basic infrastructure. Then, after the independence of the African states, the continent became a pawn in the chess of the Cold War."
- 2) Most of the poor countries are far from the economic centers, and they don't have an adequate infrastructure for inexpensive transport of goods. This is worse in landlocked nations like Zambia.
- 3) Endemic diseases like malaria are affecting health.
- 4) A high propensity toward natural catastrophes, such as the plague of locusts that destroyed the Western part of the continent in 2004, or the famine and drought aggravated by the climate heating from the combustion of hydrocarbons.

The issue of poverty is linked with general underdevelopment. Poverty remains the single greatest cause of misery; and the surest *remedy for poverty is economic growth*. It is true that growth is usually associated with more environmental damage; for example, with pollution (the disposal of waste is also a growing global problem), but even if development creates such problems, it pales in comparison with the harm caused by the economic backwardness.

We know that economic growth can be helped by *aid*, if it is used right. More aid would probably ease Africa's poverty. Although past aid has largely been wasted, in the future it could be made to work. Aid should

be lavished on the countries that use it constructively to promote wealth creation and denied to corrupt and incompetent regimes that will steal or squander it.

The overwhelming economic and environmental predicaments of the poor cannot be solved by the poor alone without substantial cooperation with the rich, and conversely, the predicament of the poor cannot be allowed to persist without bringing peril to the rich. Either we will achieve an environmentally sustainable prosperity for all, or we will all suffer from the chaos, conflict, and destruction resulting from the failure to achieve this. Even if the task cannot be accomplished without technical, economic, industrial interventions from outside, the Africans themselves have the most important role to play in development of Africa. A *mutual cooperation* has to be present.

Development and Traditional Life

This brings us to consider the possibility that the framework of this economic model, which is inherent behind aid giving, is not the only possible one, or compatible with traditional ways of life, even if most of the world now adheres to it. Many of the clauses in international conventions protecting the exploitation of children are becoming a new subtle way of imposing modernity on many people still living in a traditional manner.

To give an example, one of our African colleagues attending this seminar pointed out that a mother training a girl child to carrying firewood on her head is often considered to be exploitation by westerners. He explained that in Africa only a few pieces of wood would be carried in the beginning, and little by little, this will be increased as strength is built up. In reality we do the same in Western countries. Do not we encounter in our supermarkets little carts for little children to push around to buy goods—all training for the big carts they will push in the future? Westerners don't see this as exploitation, it is considered healthy, as Africans carrying firewood by their children. Somehow we have to expand our minds and hearts to look at traditional systems to see what they can contribute and what can be maintained in a developing society. Do we really want the entire world to be a copy of a Western way of life?

A group of world leaders has long pushed a simple proposal: If Africans

govern themselves better, as they appear to be doing (wars seem to be declining; some rulers are proving honest and democratic), rich countries should invest more and give more aid. Grand schemes to help Africa have failed dismally in the past. So Africans want long-term commitments: for example, governments and businessmen have earmarked twenty infrastructure projects around the continent, in energy, transport and irrigation that would boost private economic activity. Donors might make specific pledges to finance these. Parts of the continent could use much more aid than they get. The challenge, though, is to spend any extra money well. That means focusing on better-run countries. Which, though?

One way of choosing is to use the results of the African Peer Review Mechanism, under which governments are visited by experts from elsewhere in Africa who offer advice on how to run countries better. In contrast, there are countries with too much corruption and therefore unsuitable for more foreign aid. Kenya is an unfortunate example of it. Last year, Britain's envoy to Kenya, Sir Edward Clay, complained that corrupt ministers were "eating like gluttons" and "vomiting on the shoes" of foreign donors, and handed over a dossier detailing twenty corruption scandals involving ministers. The missing money, according to William Bellamy, the American ambassador in Nairobi, could fund anti-retroviral treatment for every HIV-positive Kenyan for ten years.

Foreigners may contribute to corruption in Africa, willingly or unknowingly, but they do not cause it. The root of the problem according to many African politicians is rich western firms offering irresistible inducements to previously blameless African officials. But in reality, it is most often the officials who abuse their power to extort money from blameless citizens. For every shady multinational slipping a minister a sack full of cash for a contract, there are thousands of African policemen robbing people at roadblocks, or African bureaucrats inventing pointless rules so that they can demand bribes not to enforce them. Africa will not prosper until corruption is checked

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and governance improves. And this task should be first and foremost the responsibility of the African countries and people themselves.

There has to be cooperation in the transfer of technology, trying to avoid problems like the high cost of western currencies, limitations imposed to the use of techniques, restrictions imposed to exporters, excessive dependence from foreign competences, need of high specialized workers. But, the transfer of technicians does not seem to be wise as development cannot take root. Africans should use or train their own local experts.

Aid should be *predictable*, to help the recipient plan for the long term. It should mostly be in the form of grants, not loans, to avoid future debt traps. It should support the local priorities of African governments rather than [donors'] special enthusiasms. And it should be *untied*: that is, the recipient should not be obliged to buy goods from the donor, in order to avoid unnecessary abuses in the aid. Any type of aid given to Africa

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has very strong political, economic, social and technological ties from the donor country. The aid forces many countries in the continent to adopt inappropriate technology, hire

experts, use companies and industrial products from the donor country.

There are some instances, for example in population and family planning programs where the donor countries give drugs that are banned in their countries to be used in the recipient countries. Depo Provera is a case in point, which is freely used in the continent, but it is banned in the majority of developed countries. Similar abuses are found in other forms of aid such as food, fertilizers, transfer of technology. In the field of industrialization they are driven by profit motives. They transfer old machines to developing countries at fantastic prices to establish industries that cannot compete in international markets.

Africans need to be wise to these schemes, but also realize that they cannot attract enough unrestricted aid unless they can show how it is actually leading to development. Too many sympathetic donors have seen too much misuse.

And there is also the problem of the *debt relief*. Not everyone thinks large-scale relief is a good idea. Those African nations with a decent credit rating, such as Botswana, might worry that a write-off could put investors

off the whole continent. But big aid spenders, such as Japan, may prefer canceling debt to paying for tricky projects in remote places in Africa. The change for the better in some governments makes them deserving. Look at the situation of Nigeria. It is scarcely better off than before its oil boom began, because of corruption and misuse. But, during the last two years a new economic team has made strenuous efforts to impose discipline, and tried to ensure that public funds are spent more transparently. This may be a reason for granting Nigeria debt relief, since there is a fair chance that the proceeds of debt relief would be invested sensibly.

The Africans would like to see progress on *trade* too. The trade imbalance between Africa and the rest of the world is colossal. The continent is a producer of large quantities of raw materials, which are shipped to other countries annually. It is also a consumer of large quantities and varieties of manufactured goods. This pattern of international trade leaves Africa with deficits every year, and is makes life on the continent unbearable. The national economic activities in the third world are often designed to impoverish the host country by under-pricing the locally produced goods to attract cash that does not go to the producers. Good strategies are needed on how to boost the African capacity to trade, by developing harbors and infrastructure or technical expertise in trade negotiations. We must also work to slash farm subsidies

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in rich countries and other barriers that limit trade with poor ones. We need to tear down the trade barriers that keep African goods out of open markets, and bring to end unfair agricultural subsidies, which hurt farmers in poor countries.

Private initiative is more than welcome in economy. Israel may be an example. Israeli Major General Dr. Baruch Levy, Chairman of Galilee College's Board of Trustees, said, "Through our example, we can show

other countries that if you invest in human resources, you can become one of the most advanced countries in the world.” Let me mention two quite positive examples: the use of micro-credits and of mobile phones.

2005 is the *UN International Year of Micro-credits*, as tools to overcome poverty. Microfinance programs are not like traditional charity, welfare, or most other development projects. Money is loaned to clients, not given to beneficiaries. In contrast to the *Monte de Piedad*, a Spanish institution which lent money to the poor people with the guarantee of something valuable (like pawn shop), the micro-credits system lends with only the word as a guarantee and a good explanation of the project for which the money is needed. One also must demonstrate a willingness and capacity to work. Repayment is required, and interest and/or fees are charged in an amount that will ultimately be sufficient to cover the costs and create a sustainable microfinance institution. Throughout the world, the typical microfinance

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client is a low-income, self-employed person, who does not have access to the services of formal financial institutions. As a powerful instrument for self-empowerment, microfinance can allow the poor to become economic agents of change. Their loan-assisted

activities not only contribute to household income, but also, if granted to women, can increase their status within the household.

Creating a culture of repayment is critical to a program’s success. If a person or group doesn’t appear to make a payment, staff will go to their houses. Up to this point, repayments have been near perfect. That pattern will surely not continue forever, but it should not be put in jeopardy by failing to show up on the due dates to collect. Microfinance programs bring about economic development at the grass roots, one client at a time. Who knows what the effect will be?

The spread of *mobile phones* is a very remarkable way to use technology to promote bottom-up development. The mobile phone is the technology with the greatest impact on development, reducing transaction costs, broadening trade networks and reducing the need to travel, which is of particular value for people looking for work. And they do not rely on a permanent electricity supply and can be used by people who cannot read

or write. Anecdotal evidence for mobile phones' ability to boost economic activity is abundant: they enable fishermen or farmers to check prices at different markets before selling produce, make it easier for people to look for jobs, and prevent wasted journeys.

Zambia is quite a good example. You use mobile phones to make cash-less payments, such as for laundry, petrol stations, and dozens of bigger shops and restaurants. I've learned, for instance, that the local distributor of Coca-Cola bottles for Soweto market is located in a tatty corner of Lusaka. A full load costs 10m kwacha. In cash, this amount (about \$2,000) can be hard to get hold of, takes ages to count and—being ten times the average annual wage—is too tempting to thieves. So Coca-Cola now tells its 300 Zambian distributors to pay for deliveries not in cash, but by sending text messages from their mobile phones. The process takes about 30 seconds, and the driver issues a receipt. Faraway computers record the movement of money and stock electronically. Mobile phones thus reduce transaction costs, broaden trade networks and substitute for costly physical transport. They are of particular value when other means of communication (such as roads, post or fixed-line phones) are poor or non-existent.

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Another interesting characteristic is that mobile phones are widely shared. One person in a village buys a mobile phone, perhaps using a micro-credit loan. Others then rent it out by the minute; the small profit margin enables its owner to pay back the loan and make a living. When the phone rings, its owner carries it to the home of the person being called, who then takes the call. Other entrepreneurs can set up as "text message interpreters," sending and receiving text messages (which are generally cheaper than voice calls) on behalf of their customers, who may be illiterate. So, although the number of phones per 100 people is low by rich-world standards, they still make a big difference.

The strong demand for mobile telephones in poor countries is illustrated by booming subscriber growth. Subscriber growth in several sub-Saharan

African countries exceeded 150 percent last year, and there are now eight mobile phones for every 100 people in Africa, up from three in 2001. World Bank figures show that people in developing countries spend a larger proportion of their income on telecommunications than those in the rich world. Yet this is all merely indirect evidence for the impact of mobile telecommunication on overcoming some of the problems economic growth.

These are a couple of examples, even if at very modest level, of how Benjamin Franklin's philosophy is also present in Africa. I believe Franklin had a solution to help guide our behavior in business. It is my opinion that Max Weber erred in his landmark study *The Protestant Ethic and the Spirit of Capitalism*, by not mentioning Ben Franklin's belief that we should channel our innate drives into activities that will "do good." It also seems to me

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that doing good should not necessarily be confined to works of charity. His public-minded philosophy was "do good, do well." Franklin's accomplishments include: starting a fire department and a public library; reorganizing the mail service; raising money to build a hospital, founding the University of Pennsylvania, inventing the lightning rod and the Franklin stove, as well as being a

diplomat to secure financing for the American Revolution. Many activities that have made the world a better place, are business-oriented, allowed the individual to prosper and build wealth, yet are not charity.

DISEASES

Mobile phones are important, but so is education and health care. A lot of things are required for growth. A consequence of poverty is the *health inequality*. The health gap is also widening. In most of Africa between 45-55 percent of the total population is under 14 years of age. The dependency ratio is very high. Infant mortality is also very high and the state of health services is very poor compared to other countries. Life expectancy in the majority of the African countries is 55 years. We have to tackle this situa-

tion deepening in the knowledge of the big killers, such as AIDS, malaria, and other endemic diseases.

Africa is the continent worst hit by the *HIV/AIDS* epidemic. Of the over 40 million people living with HIV/AIDS worldwide, nearly 75 percent live in sub-Saharan Africa, whose population is only about 10 percent of the world's inhabitants. And among the 22 million people who have died of AIDS, 14 million have been Africans. In some countries, four out of ten people are infected. Life expectancy is falling, and could soon be down to just 30 years. AIDS is the main cause of the shortening of the life expectancy in sub-Saharan Africa.

In the mid-1980s, Uganda and Tanzania shared the macabre distinction of being the two countries leading the world in the incidence of HIV/AIDS. The first case in Uganda was discovered in 1982, in the South-west district of Rakai bordering Lake Victoria.

The mysterious disease, then known as "slims," infected 17 fishermen at Kasensero Landing Site. However, due to continued civil strife, the silent epidemic went largely unnoticed until 1986 when the then country's new president, Yoweri Kaguta Museveni,

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sent 60 of his elite soldiers to Cuba for training. In September Cuban president Fidel Castro informed the Ugandan president that 18 of the soldiers had tested positive for the human immunodeficiency virus. By the late 1980s, the picture in Uganda could hardly have appeared more bleak.

In the first decade of Museveni's administration, the president implemented a low-cost, indigenous, and effective response. As a result, nationwide HIV seroprevalence rates decreased from 22 percent in 1991 to 6 percent in 2003. And, according to a 2003 report from the U.S. Agency for International Development (USAID), Uganda "has experienced the most significant decline in HIV prevalence of any country in the world," reversing the epidemic's tide by harnessing both government and civil society to collaborate in relieving human suffering. Today, Ugandans can look back toward the brink of chaos on which their country had teetered and marvel. Uganda has stepped away from the deadly edge by marshaling its full resources-social, economic, political, and spiritual, to join the battle

against AIDS. With the HIV/AIDS pandemic still raging out of control in dozens of countries, it is urgent that we learn lessons from Uganda's story. Uganda's success in reversing the rising tide of HIV/AIDS has attracted widespread attention and serious evaluation. These lessons promise success to other nations in their fight against HIV/AIDS and other sexual diseases.

In a speech titled *AIDS: The Greatest Leadership Challenge*, the Ugandan president described the deadly virus as "*a good disease*," because, unlike other diseases that are airborne or transmitted through casual skin-to-skin contact, AIDS is, largely, "an infection of choice. It is largely sexually transmitted disease and can therefore, be avoided through proper sexual behavior." And a U.S. government report titled "*What Happened in Uganda?*" concludes

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that "Uganda's response, such as high-level political support, decentralized planning, and multi-sectoral responses, do not affect HIV infection rates directly. Sexual behavior itself must change in order for seroincidence to change."^d

Two types of sexual behavior change have been identified, both of them important in fighting AIDS. In the first type of sexual behavior change, called *risk reduction*, a sexu-

ally active man who has multiple sexual partners and has never used any protection begins to wear a condom. By so doing, he has changed his behavior in a way that reduces his and his partners' risk of transmission. But he has not altered his risky behavior; that is, he has not reduced the number of sexual partners or shown any measure of sexual self-control. This type emphasizes condom use and the treatment of sexually transmitted infections. The other behavioral change, called *risk elimination*, is considered more fundamental, a primary behavioral change, because it involves either abstaining from sexual activity for a time or decreasing the number of sexual partners.

The Uganda's ABC model, recently adopted by USAID, emphasizes three dimensions of sexual behavior: abstinence, be faithful (fidelity), and condoms (used consistently). Here A and B relate to risk elimination or

primary behavioral change, while C corresponds to risk reduction. Sexual abstinence and marital fidelity thus are emphasized as the primary solution to HIV/AIDS and stressed publicly. This is also the policy in Zambia, as I have discovered on billboards on the side of the roads, when traveling through your country: “condom is not the solution,” “avoid illegal sex”...

The 20-30 million of people living with HIV/AIDS in sub-Saharan Africa and 14 million Africans who have died of AIDS, makes of AIDS doubtless a grave disease in this continent. And it explains, therefore, its almost daily presence in the mass media. But its ciphers of mortality and morbidity are not comparable at all to the ones of other social diseases of the poor world which, unfortunately, seem neglected by the media: 20 million AIDS infected people in Africa versus around 171 million with tuberculosis and more than 300 million with malaria.

More than two billion people, the 40 percent of the world population, live in areas of high risk of *malaria*, which is one of the main causes of death in children younger than 5 years of age (20 to 30 percent). The parasite that causes malaria, *Plasmodium falciparum*, kills one child every 30 seconds. At the moment, there are reckoned to be about 500 million cases of malaria around the world every year. It is still present in more than one hundred countries: in the American continent, in Asia, and the vast majority in Africa (90 percent of people with malaria are in Africa). Just in sub-Saharan countries around 88 million new cases every year are estimated. If temperature, rain and the kind of mosquito characteristic of sub-Saharan Africa make of this area an ideal place for malaria, the socioeconomic and health conditions, the almost continuous wars, and the increasing resistance to the insecticides explain the lack of progress on its eradication.

Although the *Africa Malaria Report 2003* concluded that in some countries in the east and south of the continent the amount of malaria had increased, according to the *World Malaria Report 2005* there is no evidence that these ciphers have changed since 2000. The lack of progress on malaria has been due to the lack of effective ways to address the disease. Mosquitoes are becoming resistant to the insecticides used. Moreover, scientists are finding increasing resistance to drugs that have been mainstays of malaria treatment. In particular, there is no way known to combat the spread of resistance to traditional treatments such as chloroquine and sulfadoxine-pyrimethamine; and also, inevitably, there is a lack of money.

These obstacles, however, are now being removed—and this could lead to a revolution. The simplest way to stop the disease is to prevent infected mosquitoes from biting potential victims. The deployment of bed nets impregnated with insecticides is helping prevent infection. The repellent qualities of such nets mean that they can protect an entire room (and therefore family) overnight. So in Africa, a continent with a population of around 800 million and a tendency toward large families, 100 million nets could make a substantial impact.

Attitudes toward treatment are also changing. In the past year the malaria-treatment policies of 21 countries, including those with the highest infection and mortality rates, have shifted from advocating out-dated (but cheap) therapies with failure rates as high as 80 percent to using new treatments, such as that based on artemisinin, a new compound which has

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emerged as an effective treatment for those already infected that have efficacy rates of around 98 percent. The supply of artemisinin is rising to match this demand.

Producing a vaccine against malaria would be particularly welcome. A British medical journal, the *Lancet*, on November 15, 2005, has just suggested a candidate vaccine—called Mosquirix or RTS,s/AS02A. Experimental trials have been conducted by researchers from the University of Barcelona in Spain, and the Health Ministry in Mozambique.

The World Bank also has proposed to rise between \$500 million and \$1 billion over the next five years—cash that will be used to buy bed nets and drugs, and also to provide support to countries that lower taxes on medicines used to treat the disease. The upshot is that the future looks brighter than critics might think. Whether malaria truly will be rolled back over the coming years remains to be seen, but the tools seem to be now there.

Reducing infection with the malaria parasite could also help tackle the other big killer faced by African people, AIDS. A study conducted by Anfumbom Kfutwah of the Pasteur Centre in Cameroon^e has found that babies born three months after the rainy season were more likely to be infected with HIV, the virus that causes AIDS, than babies born at other

times of the year. Malaria infection boosts production of a substance that might significantly increase the replication of HIV in the placenta. If solid evidence of a link does emerge, health authorities would be well advised to treat pregnant women carrying HIV with anti-malarial drugs, to prevent the virus from being passed from mother to child.

Tuberculosis is another important disease to be considered. One third of the world's population (1.700 billion people) suffer from it, and every year there are about 9 million new cases, with 3 million deaths. Even if it is not an exclusive disease of Africa (for example, there are also high amounts of TB in Indonesia, Indochina, and the Andes), the highest amount of TB is in sub-Saharan Africa, with around 171 million people with tuberculosis.

Another neglected disease is the *leishmaniasis*, transmitted by the bite of a sand fly. Its symptoms include fever, weight loss, enlargement of the spleen and liver, and anemia. The most dangerous version of this disease, visceral leishmaniasis, affects 1.5 million people around the world and kills 200 thousand of them every year. Several drugs to treat it are available. The trial shows that an antibiotic called paromomycin is effective for treating it. But their usefulness is limited either because the parasites have evolved resistance to them, or because they are too expensive.

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Diarrhea should also be mentioned, because it kills 2 million people a year, most of them children, by dehydrating them. It is a symptom, rather than a disease. Indeed, it has eight common causes in the tropics (four bacteria, three viruses, and a protozoan). Instead of scattering its efforts among these causes, researchers are sifting through orphan compounds that might attack dehydration directly, by stopping the secretion of water into the gut. Such a drug would augment oral rehydration therapy—a combination of salt and sugars mixed into water that is the standard regimen used in the developing world.

I would add a short concluding comment. About 90 percent of the planet's disease burden falls on the developing world. Yet only 3 percent of the research and development expenditure of the pharmaceutical industry is directed toward those ailments. Their markets are not particularly interesting

for pharmaceutical firms, compared with, say, new anti-cancer drugs for the rich world. We should arm-twist researchers to contribute their expertise to the development process *pro bono*, raise development funding from non-commercial sources, and get their owners of drug patents to donate the intellectual property. For instance, Bill Gates is putting part of his money to good use. Tax the world selling overpriced Microsoft products, amass a private fortune and use it to save millions of lives in poor countries. The thought of Gates applying his software-creating skills to developing new medicines makes me wonder, though. Does this mean that poor countries will be hit with vaccinations that fail to work every so often, prevent compatibility with differing medications, allow other viruses to enter the body and wreak havoc with the system, turn immunisations into a near monopoly and frustrate users daily through over-complexity? Indigenous drug research must also be developed.

A government backed partnership, mixing for-profit and not-for-profit cultures would also be of help. For instance, in 2003 it was established a Global Fund To Fight AIDS, Tuberculosis and Malaria mobilizing donations for projects to tackle these three afflictions. It accounts already for a quarter of donor spending on AIDS, more than half of donor spending on malaria, and two-thirds of that on tuberculosis.

PEACE

This situation of health inequality is clearly a source of conflict in Africa. Conflict and famine drive millions to flee their homes, being triggers for mass migration. Both create the conditions for terrorism and fanaticism. Violence is structurally rooted in many factors, such as economic, social and political imbalance, unequal distribution of resources, poverty, squalor and unemployment, diseases and ignorance. A main cause of violence is the lack of education, or even more precisely, the wrong educational policy, which favored the removal of discipline and moral constraints from human behavior. There are also other socio-political factors facilitating violence, such as the deeply rooted corruption and the abuse of instruments of oppression, whether they come from the government institutions (so-called “institutional violence”), or it is used by other factions who view themselves as oppressed.

One of the world's gravest challenges is state failure. The World Bank lists about 30 "low-income countries under stress" and 46 "fragile" states. In the toughest cases, these states have lost control over most of their territory and stopped providing even the most basic services to their people. Only Somalia unambiguously fits this definition. A larger group of countries, mostly in Africa, are close to failure. Some, such as Zimbabwe, are wandering toward the edge of a cliff. In Zimbabwe we see the great damage that can be done to a country, its economy, its people and their potential, by the destruction of democracy and the failure of governance. The tragic effects of war have also been seen elsewhere. At least 2 million people have died in Sudan's north-south conflict over the past 21 years, and millions more have been affected. A comprehensive peace agreement could turn Sudan around; but Darfur remains a catastrophe, and we cannot turn our attention away from it.

States can fail because of external shocks, or they can decay from within, or both. Afghanistan and Angola collapsed when their colonial overlords suddenly withdrew. In Sierra Leone and Congo, the state was looted into putrescence, thus inviting rebellion and ultimately, collapse. It is tough to mend a failed state, but the fact that some formerly failed states (e.g., Mozambique) are now doing quite well, shows that it is not impossible. Some countries, having recently failed, appear to be recovering, if fitfully: Afghanistan, Haiti, Sierra Leone and Liberia all fall into this category. And although treatment is costly (the UN mission in Liberia costs \$800 million a year) the cost of doing nothing is often higher. When governments collapse, it is not only bad for citizens who thereby lose the law's protection. It can also cause regional or even global repercussions, because lawlessness breeds terrorists and creates a space for them to operate. The chief reason why the world should worry about state failure is that it is contagious. Liberia's civil war, for example, infected all three of its neighbors, thus destabilizing a broad slice of West Africa. Congo's did the same for Central Africa.

One of the world's gravest challenges is state failure. The World Bank lists about 30 "low-income countries under stress" and 46 "fragile" states. States can fail because of external shocks, or they can decay from within.

Lisa Chauvet and Paul Collier, of Oxford University, have tried to measure the cost of a typical poor country becoming a “low-income country under stress”, i.e., as unstable as Nigeria or Indonesia, but nowhere near as bad as Liberia. They suggest that even costly interventions, if they help to stabilize a failing state, are likely to be worthwhile. Looking only at war-torn states, they found that three types of intervention were highly cost-effective, even before one considers the value of saving lives. One good idea is to try to restrict the sales of commodities that fuel war. Extractable minerals often provide both the means to fight and an incentive to do so: rebels in Sierra Leone, for example, dug diamonds to pay for arms, and fought to seize power so they could grab all the mines. A global embargo on ‘conflict diamonds’ has reduced the flow of cash to similar rebel groups, thereby probably foreshortening a war or two at minimal cost. Another worthwhile tactic is to offer generous aid to war-flattened. The most cost-effective way

Not all interventions go well. But the UN is quite good at peacekeeping, despite its well-publicized blunders.

of stabilizing a failed state, however, is to send peacekeepers.

Not all interventions go well. But the UN is quite good at peacekeeping, despite its well-publicized blunders. Of the eight UN-led missions examined by a RAND Corporation study, seven brought sustained peace (Namibia, El Salvador, Cambodia, Mozambique, Eastern Slavonia, Sierra Leone and East Timor), while only one (Congo) did not. An earlier RAND study looked at eight American-led missions and found that only four of the nations involved (Germany, Japan, Bosnia and Kosovo) were now at peace, while the other four (Somalia, Haiti, Afghanistan and Iraq) were not, or at any rate, not yet. Liberia is small (with a population of only 3 million), accessible from the sea and blessedly free of citizens who imagine they have a sacred duty to kill peacekeepers. This may be why it has proven simpler to pacify than, for example, the vast and nearly landlocked Democratic Republic of Congo. The Africa Union is also playing an increasing role in settling conflicts.

But pacification is only the first step. To ensure that a recovering failed state does not fail again, it needs a government that is legitimate and competent enough not to invite another rebellion. And nation-building is the hardest task of all. A heartening example is Sierra Leone, which collapsed

bloodily in the late 1990s. Three years ago, it was in roughly the same situation as Liberia is today, held together only by 17,000 blue helmets. The peacekeepers have pulled on gradually, as Sierra Leone's army has grown stronger with British training. The country is still poor and ill governed, but it is no longer doomed. An important reason for optimism is that with the UN's help, Sierra Leone is holding to account those most responsible for despoiling it. Sierra Leoneans will see justice done on men who used to be untouchable. That could be the first step towards establishing the rule of law in country that has never known it. Sierra Leone thus is slowly recovering from its civil war, and Mozambique, a country brought to its knees by vicious fighting, has also cut its levels of poverty by almost a third since peace.

Conflict in Africa, thus, although still devastating where it occurs, is decreasing, and governance has been improving faster in Africa than in many other areas of the developing world.

CONCLUSION

Let me conclude these short reflections on peace and development in Africa, saying that a *comprehensive program of action* is needed, with sustained commitment to implementation by Africa and by the international community. We need concerted action to improve opportunities and growth, building the infrastructure needed for private-sector growth, to reduce debt and to extend debt relief, to provide more resources to tackle HIV, malaria and TB, to reduce rates of infant mortality, to fight corruption and to promote peace and security. We also need to tackle trade barriers which push up prices for our consumers, prevent African countries exporting their products and see America and Europe spending more on subsidizing its own farmers than on aid to Africa. But, if we really want a successful effort for building peace, this comprehensive program of action cannot be limited to socioeconomic solutions, but it has to consider «the importance of dialogue, justice and forgiveness», instead of using force and demonizing the enemies, as the late John Paul II stressed on the New Year 2005, in occasion of the World Day for Peace.

But this program of action cannot be any Western model, even if it may have worked quite well in other places. Peace and development show differ-

ent forms and they have to be addressed under different aspects according to diverse latitudes and circumstances. Not any foreign model nor any way is necessarily valid for winning the war on development in which Africa is immersed today. Real solutions cannot be imposed from abroad, but based on your own culture, on the African values. A truer path to development, as an African reviewer has reminded me, has to be based mainly in *self-reliance* and achieved *in an African way*. It would be very convenient therefore to have a retrospective look to the traditional African values, because they may help us to uncover excellent tricks for promoting peace and development in Africa. This looking for solid support in the past might be quite useful for

Tolerance makes possible a peaceful coexistence not only within a community but also between different communities.

finding adequate formulas and efficient means for solving the problems of the present and the future.

And what are the main African peculiarities or ideologies? I could mention a few: *negritude*, authenticity, *ujama*, *harambee*, hospitality, tolerance. But I would limit myself to consider only the importance of this

last one in the traditional African society, because it is precisely the spirit of *tolerance* what makes possible a peaceful coexistence not only within a community but also between different communities.

Tolerance within a community.

The members of the same society, especially if this is a traditional one, as it is usual the case in Africa, follow the same socialization process and receive, generally speaking, the same formation, according to the roles they have to play within the group. This explains the consensus you usually observe within the society. But this does not prevent the existence of different individualities nor the eventual emergence of strong individualities that impose themselves on the others. Well, it is this socio-political organization what allows the members of the community to accept one another such as they are. In the traditional Africa, violence has never been considered as a factor of social dynamism. One of the roles of a good chief consists precisely in being able of tranquilizing their people and solving situations

of crisis before the crisis may explode. In these situations, stability is assured by a balance of all the lines of dissension and of all the divergent points of interest related to the social structure.

Tolerance between different communities.

Frequently we are habituated to perceive our neighbors—the different clans or the ethnic groups—as enemies that all they want is making war against us. But this way of showing the relationship ‘them vs. us’ is a stereotype far from reality. And this reality in fact is the characteristic African hospitality, the friendly welcoming that Africans offer so spontaneously to the foreigner. This enthusiastic welcoming is addressed also to strange people, quite unknown and different in their appearance and in their habits, as so many white scouts and colonizers did experience.

And this same philosophy would also be present in the armed conflicts. Both belligerent parties consider, I hope, that the lost of just a few human lives is too much, that they should not exterminate the enemies, because they are human like we are, and, as it is stated in Einstein-Rusell Manifest, the starting of the Pugwash Movement, we all should ‘remember our humanity’. Instead of war, what we have to do is trying to solve the conflicts by means of negotiations. Dialogue thus is one of the main factors of development... and peace. If we want development, peace, and tolerance, we have to deep in the knowledge of the roots of aggression and intolerance, and in the particular peculiarities of each people, such as precisely we are trying to do in this series of CICAs.

The above issues are some of the problems that can be undertaken to study, even if they are not meant to be exhaustive. Many important areas have been left out, beyond the scope of this meeting. For example we have omitted many other important issues and problems which also pose threat to peace and stability in the world in general, and particularly in Africa: cultural conflicts, nationalism, institutional transformation, panafricanism, logistical bridges, religious conflicts, ideological tensions, acquiring of armaments, etc.

We have to tackle first the primary problems threatening peace in the region. The activities of the academics, like us, must respond to the needs of the people and whose solution will lay sound basis for peaceful co-existence. Far from being an ivory tower, or used by politicians and other leaders as tools for fostering activities that violate the dictates of conscience, the *Intelligentsia* must bring science and technology to solving community problems. In the past academicians, scientists and technologists have discovered all types of innovations, some of which had profound influence in the course of human history. Unfortunately the innovators were not keen in monitoring how their innovations were used—whether to benefit or destroy humanity. We should provide corrective measures to this unfortunate situation. It is now the time to stand up and be counted in the fight for a peaceful and developed world.

When we assert that a sustainable development will not be possible without a peaceful world, we cannot forget that peace is something more substantial than merely the absence of war, and that prosperity cannot be limited to economical growth as a remedy, as often it is the case, but it has to include something more important and not necessarily connected with the economical development—call it what you like: inner peace, spirituality, happiness. Some of the poor underdeveloped people are happier than the great consumers of the so-called developed world, as the rate of suicides ratifies.

We should foster truth, justice, freedom, love and peace even if we gain nothing materially. This is what the good sense of right or wrong would say to the conscience. There are reasons for optimism. I remain hopeful that we can succeed in these aims. It is vital for the world that we do. For this peace symphony to reach every ear in Africa, development must be part and parcel of the drum. I am sure that the characteristic African ‘timelessness’ will help on that, because, as a Swahili proverb says, *HARAKA, HARAKA HAINA BARAKA* (hurrying up brings not peace).

Notes

1. The International Conferences on the Unity of the Sciences held from 1971-2000 focused on applying values to science to guide scientists to solutions to key humanitarian and peace issues.

2. The Pugwash Movement, inspired from the *Russell-Einstein Manifesto* of 1955, which called upon leaders of the world to renounce nuclear weapons and “remember their humanity,” was awarded the 1995 Nobel Peace Prize in recognition of its effort into bring scientific insight and reason to bear on threats to human security arising from science and technology in general, and above all from the catastrophic threat posed to humanity by nuclear and other weapons of mass destruction.

3. Tony Blair, A year of huge challenges, *The Economist*, 1 January 2005.

4. See: Chris Baryomunsi, “Back from the Brink,” *World and I*, December 11, 2004.

5. Fighting malaria, *The Economist*, 19 November 2005.