

The Occasional Papers of the School of Social Science are versions of talks given at the School's weekly Thursday Seminar. At these seminars, Members present work-in-progress and then take questions. There is often lively conversation and debate, some of which will be included with the papers. We have chosen papers we thought would be of interest to a broad audience. Our aim is to capture some part of the cross-disciplinary conversations that are the mark of the School's programs. While members are drawn from specific disciplines of the social sciences—anthropology, economics, sociology and political science—as well as history, philosophy, literature and law, the School encourages new approaches that arise from exposure to different forms of interpretation. The papers in this series differ widely in their topics, methods, and disciplines. Yet they concur in a broadly humanistic attempt to understand how, and under what conditions, the concepts that order experience in different cultures and societies are produced, and how they change.

José Serra was a Director's Visitor to the Institute for Advanced Study in 2003. He is Professor of Economics at the University of Campinas and former Brazilian Minister of Planning and Budget (1995-1996) and of Health (1998-2002). His tough and outspoken campaign to assure universal access for Brazilians to the drugs that make up the HIV/AIDS cocktail has been internationally recognized and acclaimed. As Serra says in an issue of the Ford Foundation Report: "We've put our case to the world and we've fought for it. And what is our case? It is that access to medicines is a basic human right."

The Political Economy of the Brazilian Struggle Against AIDS was presented at a Friends Forum. The Friends of the Institute are individuals who, through their support and involvement, become partners in the advancement of research and scholarship at the highest level, while providing an important link to the community.

The Political Economy of the Brazilian Struggle Against AIDS

In the early 1990s, World Bank experts made a projection about what the number of AIDS cases in Brazil would be. Their guess was that approximately 1.2 million people would be infected with the disease by the end of the decade.¹

Their pessimism was certainly justified. In the opinion of many international and national observers, Brazil was highly fertile ground for a devastating attack by the disease. It is a country with a large population, a per capita income of less than three thousand dollars per year, an unequal distribution of income, and a very large number of poor people: in 1990, approximately 44% of the population lived below the poverty line.²

At the same time, the Brazilian health system was viewed as being in a precarious state. Other basic social indicators, such as infant mortality, were higher than in countries in the same per capita product bracket. Despite the progress achieved since the 1930s, infectious-contagious diseases still accounted for more than 5% of annual mortality rates. Finally, the poorer segments of the population were concentrated in large urban centers, where transmission of disease tends to be far more intense.

Fortunately, and perhaps surprisingly, the experts' projections proved to be unrealistic and greatly exaggerated. Current estimates about the infection rate now rise to only about half of the previously forecast number. Moreover, AIDS-related mortality rates have decreased by 50% in the last six years.³

The error was not due to incompetence on the part of the World Bank technicians but, rather, to an apparently unexpected competence on the part of Brazil.

Conditions and factors for success

Explanations for the failure of the World Bank experts' prediction must necessarily be based on recognition of three fundamental conditions.

In the first place, the Brazilian health system was not as ineffective as it had seemed. It has been able to coordinate prevention campaigns targeted at specific diseases with the development of state-of-the-art medical practice in hospitals and other public institutions. Indeed, it's capacity for prevention campaigns has been shown to be better than might reasonably be expected. The public health sector plays a predominant role in the system and coordinates activities at the federal, state and municipal levels, providing services throughout a geographic area of 8.5 million square kilometers to a population of 170 million people. This system provides universal access to health assistance free-of-charge. At least 80% of the population depends precisely on this type of assistance.

Since the nineties, Brazil has managed to eradicate such diseases as poliomyelitis and measles while sharply reducing the occurrence of all other major infectious-contagious diseases.⁴ At the same time, the nation's growing technical capacity has moved its annual rate of organ transplants into second place among all countries of the world-and this is easily one of the most complex of all medical procedures.

In the second place, it is important to recognize that, in its initial stages, the AIDS

epidemic—unlike other grave infectious-contagious disease before it—made inroads among the middle and upper classes, including those with higher levels of education. As a result, its impact on the media and other opinion makers was much more powerful than such diseases as tuberculosis, malaria, cholera and so many others that tend to flourish among the poorer members of society, who lack the power to make themselves heard.⁵ From the beginning of the AIDS outbreaks, enormous and unabated pressures were brought to bear upon government authorities to be accountable for the adoption of rapid, effective and broad-based measures to combat the disease.

There is no doubt that this situation contributed greatly to the enormous and effective mobilization of civil society in the battle against AIDS. The Public Health System received the assistance of more than 600 NGOs, involving the work of more than 20,000 people in more than two thousand projects targeted at prevention, assistance and support—and all of these could count on the financial backing of the government. The staff responsible for coordinating the campaign against AIDS at the Ministry of Health took on the semblance of an independent agency—of even an NGO—as was evinced by its autonomy, the absence of political appointments, and its degree of technical excellence.

As a final condition, there was the coincidence between the emergence of the AIDS epidemic and the final stage of Brazilian re-democratization in the first half of the 1980s. In 1982, for the first time in 20 years, a freely and directly elected governor, Andre Franco Montoro, took office in the State of São Paulo. The principles of human rights in general and the right to health and the rights of minorities in particular were among the hallmarks of the new administration, as was its desire to work with social movements.

Among those most active in these social movements were many who defended the rights of homosexuals. Because, at the time, the looming AIDS epidemic was considered to pose the greatest danger to the lives of homosexuals, these activists demanded a rapid response on the part of the Brazilian government. The major lines of the nation's response to the disease were developed in this context of increasing integration between the actions of the government and social movements. Because of this fact, Brazil was one of the few countries that took steps to prepare itself to cope with the onslaught of the disease as early as the mid-80s.

Given these three conditions, the relative success achieved in the formulation and execution of the Brazilian anti-AIDS policy was linked to three further factors.

The first factor was the stability of government policy, which managed to avoid the oscillations that have traditionally characterized social policies in Brazil. One should cite here the eight-year period during which President Fernando Henrique Cardoso remained in office (1995-2002), having been re-elected to a subsequent second term, and the undeniable fact that the same period was marked by the formation of a *virtuous* circle: a public policy that begins to produce positive results and that is preserved and developed in part because there is no change in the Administration.

Secondly, the continuity that marked those years was crucial to making efforts against the disease economically feasible from the viewpoint of both budget resources and the costs of prevention and treatment. Here, let us recall that prevention is relatively cheap: on average it costs ten times less than treatment.

From the standpoint of the budget, I have to recognize the successful alliance that existed in the period between those economists responsible for the management of the Ministry of Health and those involved directly in the end-activities of the Ministry. This is particularly true in the case of AIDS (see Table 1): in current dollars, federal spending on AIDS increased from US\$330 million to US\$600 million in the period from 1997 to 2002.

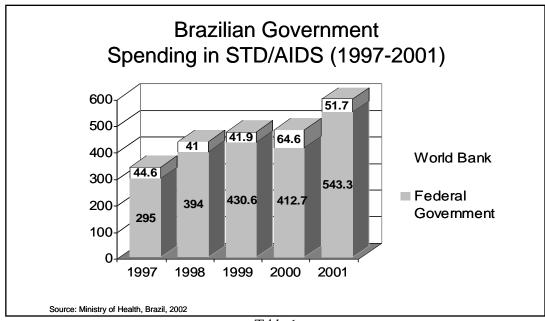


Table 1

In terms of costs, in order to achieve medium and long-term effectiveness, the measures adopted required a process of international mobilization that, though initially inconceivable in scope, ultimately provoked enormous changes in the world pharmaceutical market. The average cost of antiretroviral treatment per person—using the drugs available on the international market—dropped by approximately 58% between 1997 and 2002 (Graph 1). This treatment cost is equivalent to between one-fourth and one-fifth of what is spent in the United States.

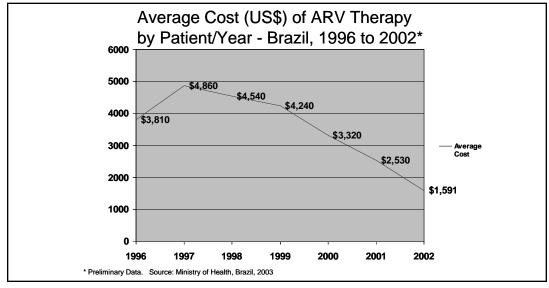
The third factor was the achievement of a consensus on how best to carry out the task of prevention and how to combine preventive measures with treatment of the disease in an integrated socially targeted conception permeated by the principles of nondiscrimination and the defense of human rights.

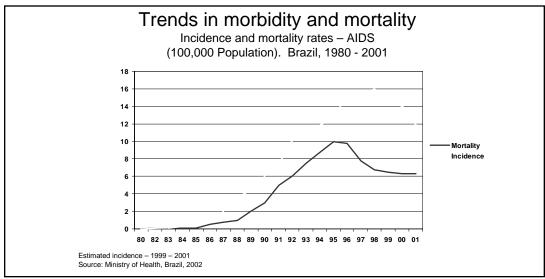
These were the factors underlying the relative success of the Brazilian policy to combat AIDS, a program considered the best in the developing world-as noted by the United Nations, the World Health Organization and the international media.

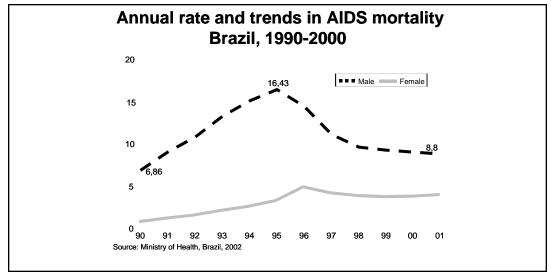
As I mentioned above, it is now estimated that there are 600,000 HIV positive persons in the country—in contrast to the World Bank's prediction of 1.2 million. The rate of HIV is below the 0.6% mark. The number of new cases per year has declined steadily, from approximately 25,000 in 1998 to more or less half of that total—somewhere between 10 and 15,000—in 2003.⁷ Mortality caused by the disease has fallen by more than 50% since 1996 (Graphs 2 and 3)

Prevention

One good example of the progress made by the prevention campaign is the level of AIDS awareness found in primary and secondary schools in the capital cities of 14 Brazilian states: a UNESCO survey showed that 68% of them had ongoing projects dealing with drugs, AIDS and other sexually transmissible diseases, while 97% of the student population know how AIDS is transmitted.







According to Government sponsored surveys, the use of condoms increased by a factor of approximately 15 in the last ten years. Among men with occasional sexual partners, 78% used condoms. The use of condoms in first sexual relation increased from 5% to 55% between 1986 and 2003.

At this point, let us consider one of the fundamental questions at the roots of Brazil's anti-AIDS strategy: the preventive measures adopted and the publicity campaigns that have accompanied them emphasize safe sex. This does not, of course, negate the fact that abstinence may often be desirable and advisable, particularly among youth. However, for the population as a whole, emphasis has been given to sexual relations and how to avoid the danger of contamination. This concept of "safe sex" has been well accepted among opinion makers and—I would insist—even those in religious circles have tended of late to tone down their criticism.

In relation to the higher risk groups, Brazilian experience has demonstrated the efficiency of strategies aimed at harm reduction. These are targeted to specific forms of behavior in each segment of the population and attempts are made to understand their cultural standards and to work within their environment. For example, in relation to those addicted to intravenous drugs, the fundamental effort is to foster the use of new needles and syringes while providing technical orientation on more secure application methods.

This is an approach that has had great short-term effectiveness because it attacks the immediate problem. However, it also has medium and long-term importance: in bringing together those dependent on drugs and those responsible for health care services, the process of recovery is facilitated. Strong support on the part of the mental health care sector, coupled with legal and policy measures, can lead to significant progress in coping with drug problems.

It is interesting to observe that, in the United States, infection through needles accounts for more than one third of registered AIDS cases.⁸ However, the current administration feels that providing needles and syringes may stimulate drug use and thus represent an additional cost for taxpayers. There is absolutely no evidence for this position and it is obviously far cheaper to provide needles than to treat the disease.⁹

Thus, over the short-term, the principal target of secondary and tertiary assistance is not the elimination of the behavior of the more vulnerable population groups, but rather improvement in the physical well-being of, for example, those addicted to drugs. This simultaneously induces them to take greater care and helps them to assume active roles within society. The (temporary) inability of those addicted to drugs to abandon their use over the short-term, while regrettable, is also real. The same kind of thing can be said about the ability of prostitutes to abandon their profession over the short-term.

Targeted interventions have been quite successful: Intravenous Drug Users (IDU) have gone from being 21% of those infected by AIDS in 1994 to 11.4% in 2000. In a period of eight years, 160 projects aimed at harm reduction provided coverage to 65,000 IDUs. In one large city participating in the program, the rate of HIV declined from 63% to 42% in seven years. In another, the rate dropped from 50% to 7% in four years. Certainly, more research is required before we can gain a deeper and longer-term understanding of these changes.

There has also been a significant drop in the incidence of the disease among other vulnerable groups too. The proportion of sex workers infected by AIDS stood at 6% in 2000, a significantly lower precentage than was found in Canada where the rate had risen to 15%. The ratio of homosexuals contaminated by the virus dropped from 10.8% in 1999 to 4.7% 2001.

Treatment

Since the early 1990s, the Ministry of Health has operated a program aimed at providing free-of-charge medication to combat AIDS and its consequent opportunistic infections. However, it was only in 1996 that the Congress approved legislation, and President Cardoso issued a decree, that guaranteed universal free-of-charge access to all necessary retroviral drugs.

Criteria for the distribution of medication are defined by the Ministry of Health, which is responsible for coordinating these efforts. The Ministry has also implemented and coordinates a large treatment and laboratory network (see Tables 2 and 3).¹⁰ This network was organized simultaneously with the drug distribution system and not as a prior condition for it. If the latter approach had been adopted, neither the distribution effort nor the network would have ever gotten off the ground. This is a very important if controversial point in any discussion of how to implement a system or program for the delivery of medicines free-of-charge in developing nations. Many of those who are opposed to this effort, or who are skeptical with regard to its potential, base their positions precisely on the necessity of defining these prior conditions.

HIV - AIDS: FREE UNIVERSAL CARE

- 889 health services for people with HIV-AIDS:
- 375 Conventional Hospitals
- 79 Day Hospitals
- 54 Home Therapeutic Care Services
- 381 Specialized Outpatient Services

Source: Ministry of Health, Brazil, March 2002

BRAZILIAN ANTIRETROVIRAL (ARV) ACCESS PROGRAM: MAJOR ASPECTS

- Universal and free of charge access to ARV drugs policy established in mid 90's (Federal Law, November/1996)
- Number of patients under ARV treatment (2003): 135,000 individuals (95% adults, 5% children)
- National ARV treatment guidelines (Adults, Children and Pregnant Women)
- National network of alternative care services: 889 services (March 2002)
- National Network on HIV viral load: 66 laboratories
- National Network on CD4+ cell count: 78 laboratories
- National ARV logistic control system: 480 dispensary units

Currently, approximately 135,000 persons receive the AIDS cocktail and the concomitant monitoring required by this distribution system. In the developing world, approximately 300,000 AIDS victims receive this type of attention. In other words, despite having less than 2%t of the cases detected in the world, Brazil distributes 40% of ALL the medications provided free-of-charge. Concurrently, while the average number of AIDS victims in the world who receive complete treatment stands at about 5%, Brazil is quite close to reaching a full 100% of those in need.

The major effect of access to treatment has already been mentioned: the mortality rate consequent upon AIDS has dropped by at least 50% since 1996. In such large urban centers as São Paulo, the reduction is in the range of 70%. In other words, studies suggest that since 1996, 90,000 deaths—as well as 60,000 new AIDS cases—have been avoided.

"Treatment" is not only pharmaceutical: there is also a support system in place, especially for the poorest and most vulnerable social groups. "Support Houses" have been organized by civil society, including churches. These centers play an important therapeutic role, provide material and psychological assistance and sometimes even offer victims a place to live. In many cases, the assistance is extended to other members of their families.

Brazilian experience demonstrates that treatment not only directly reduces mortality rates, but also strengthens prevention efforts. One of the most obvious ways in which this occurs is through the reduction of the rate of vertical transmission of the virus—from mothers to their offspring—either during pregnancy or in the period of breastfeeding (Table 4). As is well known, this transmission can be avoided when the mother takes antiretroviral drugs.¹¹

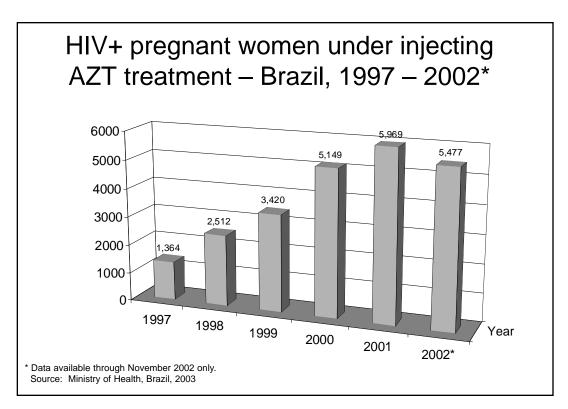


Table 4

The viral load of those under treatment also diminishes, contributing to reductions—although not elimination—in the rate of horizontal transmission.

The impact of treatment on prevention goes even further. With the possibility of receiving universalized free-of-charge treatment, it has been possible to convince much of the population to submit to voluntary and confidential testing, thus greatly improving detection of the disease in its earliest stages. This, in turn, reduces contamination rates, since testing tends to reduce the number of people who have the disease without being aware of it. ¹² Moreover, people under treatment tend to maintain a close relationship with the health system and support network. They are able to continue working and living with their families and have experienced considerably less difficulty in preserving their self-esteem. Consequently, they tend to feel more capable and more prone to take measures to avoid contaminating others.

The Brazilian anti-AIDS treatment experience leads to four important conclusions.

First, studies carried out in the country have demonstrated that the major factor in the decision of people to comply fully with therapeutic procedures is the quality of the medical service provided. A developing nation is, in fact, capable of registering the same rate of compliance as more developed countries.

Secondly, some observers have claimed that the treatment requirements are of such a degree of complexity that they are likely to lead to so complex that the creation of new HIV strains resistant to all drugs, particularly in developing countries. Although this does occur in the case of tuberculosis (though not in Brazil), these claims have proven to be unsubstantiated as far as AIDS is concerned. Studies have demonstrated that primary resistance in Brazilian patients is one of the lowest in the world: 6.6%, compared to 15 to 26% in the United States, 10 to 17% in France, and 23 to 26% in Spain.

Thirdly, observers have also claimed that easy access to medicines, given their relative efficacy, could transform AIDS into a chronic disease much like diabetes, for example. They argue that this changed status could lead the more vulnerable groups to adopt more risk-associated types of behavior in their use of drugs and their sexual relations. This is a plausible danger, but there is as yet no evidence that it has occurred in Brazil. A national survey carried out during the 2002 Carnival celebrations (February) revealed that HIV positive patients undergoing treatment contributed to strengthening prevention measures through their increased use of condoms.

Finally, there is an economic lesson to be drawn from Brazilian experience in dealing with the disease. The program in Brazil has achieved an excellent cost/benefit ratio: outlays for both opportunistic diseases and hospitalizations have been sharply curtailed. In fact, these illnesses have fallen by more than 80%. In the case of tuberculosis, the State of São Paulo (which accounts for 50% of known cases of AIDS) has registered a falloff of 75%.

It is now estimated that 360,000 hospitalizations directly or indirectly related to AIDS have been avoided in the last five years. This amounts to a savings of approximately US\$1.3 billion for the government. A similar amount has been saved in outpatient treatment, including drugs to combat opportunistic diseases. At the same time, outlays on AIDS have neared the mark of US\$2 billion or, in other words, less than the opportunity costs of non-treatment.

There is no doubt that the reduction in antiretroviral therapy costs has been essential to the achievement of these results. This reduction has occurred as the country has begun producing certain medications domestically, while at the same time pressure has been exerted on the manufacturers of medicines with patents recognized in Brazil.

Medicines and patents

On intellectual property, our administration did not begin from a position based upon a doctrinaire principle or even a political-electoral strategy for all that some multinational pharmaceutical industry CEOs and several media organs have claimed that the measures we adopted were aimed at benefiting a possible presidential candidacy for our party.

No, the reason underlying the measures adopted was our legal obligation to ensure the free-of-charge distribution of medicines. Going further, since we were aware that the *real*-dollar rate of exchange was strongly overvalued and that this situation could not continue, it was obvious that the AIDS program would soon become unfeasible if only as a consequence of the rising costs in national currency. This conclusion was further confirmed by the maxi devaluation of the nation's currency in January 1999.

We therefore made every effort to encourage national production of the anti-AIDS cocktail components. Since the creation of the World Trade Organization (WTO) in 1995, and under strong and highly successful U.S. pressure, Brazil has agreed to provide intellectual property protection to the pharmaceutical industry. But because Brazil's new intellectual property legislation did not enter into effect until May 1997, medicines used in the country up until that time were not entitled to patent protection. With Ministry of Health incentives, Brazil built the capacity needed to produce internally eight of the thirteen components of the anti-AIDS cocktail not entitled to patent protection. This effort resulted in a cost reduction of 80%.

With respect to ingredients that are more difficult to substitute—due to technological barriers and/or patent rights (for products introduced after 1997)—the only way for us to fulfill our legal obligation was to exert direct pressure on the pharmaceutical industry with the aim of forcing prices downward.

To achieve this end, it is important to observe that Brazilian patent legislation states, in accordance with WTO TRIPS agreement obligations, that compulsory licenses can be issued not only in cases of national emergencies (Article 71) but also when abuses of economic power, such as high prices, are found to exist (Article 68).

At the end of the day, there was no need to issue compulsory licenses. The publication of an Executive Order in October 1999 (Decree Number 3.201, which granted the Minister of Health the power to declare a national health emergency and grant compulsory licenses) provided us with sufficient leverage to convince pharmaceutical giants, such as Merck, Roche and Abbott, to offer us prices substantially lower than before. The price reduction exceeded 50% for the four main imported antiretroviral drugs. In overall terms, we can estimate that these price reductions for antiretroviral drugs made it possible for the Ministry of Health to save more than US\$500 million per year over a period of six years.

There were considerable reactions on the part of several governments—particularly in the U.S.—and multinational pharmaceutical companies to these new policies. A careful strategy was constructed to face this mounting pressure; it took a three-tiered approach:

- (i) We obtained international support from the world media, NGOs and academia;
- (ii) We made a permanent effort to persuade, and declared ourselves willing to negotiate, particularly with the United States government and the European Union;

(iii) We mobilized a majority at the WTO with the aim of generating backing for Brazil's position thus making it possible for other developing countries to adopt similar policies.

Our position as government was not aimed at proposing the abolition of intellectual property protection, but rather to suggest and defend a position stating that patent rules must make it possible to achieve a balance between the objectives of the private and public interests. While pharmaceutical companies may claim the right to charge monopolistic prices thereby generating the resources needed to invest in innovations, the public interest in broad and immediate dissemination of technologies capable of saving lives must also be recognized.

To achieve this end, there must exist an organized and countervailing power that lies in the countries that consume medicines of essential importance to public health. At the Fourth WTO Ministerial Meeting (Doha, November 2001), Brazil took the initiative of defending the idea that it is up to national governments to decide the grounds upon which they will grant compulsory licenses for life-saving medicines. This initiative was fully successful: it was adopted in paragraph 5-B of the Declaration on the TRIPS Agreement and Public Health:

"Each Member has the right to grant compulsory licenses and the freedom to determine the grounds upon which such licenses are granted".

Likewise, the protection of public health must take precedence over commercial interests, as stated in paragraph four of the same Declaration:

"We agree that the TRIPS Agreement does not and should not prevent Members from taking measures to protect public health. Accordingly, while reiterating our commitment to the TRIPS Agreement, we affirm that the Agreement can and should be interpreted and implemented in a manner supportive of WTO Members' right to protect public health and, in particular, to promote access to medicines for all."

Fundamentally at stake is the creation of a system of price differentiation that would favor developing countries. Actual circumstances tilt in the other direction. These lifesaving medications have no generic version as yet and their consumption cannot be postponed. At the same time, patent protection impedes companies other than the patent owner from competing in the same market-evidently ideal conditions from the viewpoint of the pure monopoly. Furthermore, the pharmaceutical industry sets the prices of its products in line with the purchasing power of the population of the developed countries, and they are not subject to competition in their countries of origin. Consequently, these products are practically inaccessible to the vast majority of the population of the developing nations where per capita income is anywhere between 10 to 40 times less than the level that prevails in OECD countries.

It should be noted that the proposed differentiation would not necessarily generate direct harmful effects for the multinational pharmaceutical industry as approximately 90% of its markets are concentrated in the developed nations. At the same time, if the prices charged in the developing nations were lower, this would increase consumption there, partially if not totally offsetting the loss of profit margins per unit of product by increasing the overall volume of profits generated by greater sales.

The pharmaceutical industry has another argument against price differentiation that, for highly sensitive political reasons, it refuses to spell out: lowering prices elsewhere might have a demonstrative effect on the U.S. and other developed markets and, consequently, foster a reaction against the exorbitant prices paid in those nations. While such a fear is eminently understandable, such a reaction would be a healthy development.

As it happened, it was at the moment when the tension generated by our policy reached its apex that the American administration changed hands. This provoked some degree of skepticism in Brazil: what possibility of success could there be for our efforts in light of the strong financial support that the pharmaceutical industry had provided to the Bush electoral campaign.

Fortunately, we were obstinate enough to reject the position taken by those skeptics, many of whom favored a strategic retreat. We had already become somewhat disillusioned by the public stance of the Clinton administration toward Brazil's medical policy. It should be recalled that, on his last day in office (January 19, 2001), President Clinton requested the opening of a panel against Brazil at the WTO, which called into question the compatibility of Article 68 of Brazilian intellectual property legislation with Article 27 of the TRIPS Agreement. The Clinton Administration's aim was clearly to intimidate Brazil through possible economic sanctions and to force us to stop pursuing drug price reductions. Keep in mind that, with the exception of the United Nations Security Council, the WTO is the only international organization empowered to apply economic sanctions against a member country.

Ironically, it was precisely this request for a Panel that convinced us to pursue (at the 2001 WTO Ministerial Conference in Doha) a juridical mechanism intended to block new attempts to contest Brazilian patent legislation and compulsory license mechanisms which had been designed to protect the health of the population.

As it turned out, during the first months of the Bush Administration, the United States not only backed away from the request for a WTO Panel against Brazil-they did this on the very day of the opening ceremony of the UN General Assembly Special Session on HIV-AIDS, in New York, in June, 2001—but also became a signatory to the decisions taken at the WTO Conference on November 15, 2001 in Doha, Qatar.

There was one factor that, although not decisive, certainly aided us in obtaining a final agreement from the United States: in October 2001, a month before the beginning of the Doha Conference, the U.S. faced a bio-terrorist threat of exposure to anthrax. The U.S. Secretary of Health and Human Services, Tommy Thompson, followed Brazil's so-called bad example: Bayer Laboratories—the only patent holder of ciprofloxacin in the USA—was asked to agree to a significant price discount with the understanding that a refusal would lead to a compulsory license on its CIPRO drug. As Bayer declared bluntly to the USA Securities and Exchange Commission, on January 15, 2002 when the company filed a Form 20, "the USA and Canadian governments contemplated compulsory licensing of our ciprofloxacin antibiotic [. . .]"

As you might know, it took almost two years—from Doha to Cancun—for WTO members to agree on how to set up a mechanism for those countries with no or insufficient drug production capacity to import patented medicines from other countries.

The degree of complexity involved in this agreement can be sampled in one of the arguments, raised by multinational pharmaceutical industries and their countries of origin: there is a real risk that products could be diverted from a developing nation to a developed country. For example, part of the medicines sold to Africa at one-half or one-third of the price charged in their markets of origin could be re-exported to these markets. This possibility was overcome through a perhaps cumbersome but workable procedure.¹⁵

Another argument used to delay the decision-making process at the WTO reflects

different commercial concerns: developing countries with manufacturing capacity could profit from exporting patented drugs—produced under compulsory license schemes—to those nations with no production capacity at all. The idea behind proposed regulations prohibiting this was to block south-south trade, or south-south solidarity. However, in this case, the greatest threat was seen to come from the north and in the Cancun discussions, this type of arrangement was rejected.

At this point one could ask why, if Brazil has managed to reduce the cost of the antiretroviral cocktail so significantly, the country is willing to implement measures that would so radically and permanently modify operation of the worldwide commercial pharmaceutical market?

Our concern in these matters has no doctrinaire or political motivation, nor does it reflect any special bias in relation to the research-based pharmaceutical industry. There are two future-oriented and fundamental concerns shared by most of the developing world: first, that new medicines (for instance, for AIDS and cancer) will come on to the market and, as has occurred in Brazil since 1997, that will be entitled to patent protection; and secondly, that the technologies required are becoming increasingly more sophisticated, thus raising new and powerful barriers to the entry of new producers, independently of intellectual property rights.

If our concerns are correct predictors of what will come to be then, at the very least, it will be necessary for countries like Brazil, India and China to come together in order to make production of more complex medicines economically feasible and, eventually, to generate the bargaining power that the developing countries will need to achieve lower prices.

International Cooperation

Brazil's position in relation to AIDS has aroused considerable interest, particularly to the extent that it contrasts sharply with the average situation of most developing countries.

It is not my intent to go into great detail in describing and analyzing this situation. It is enough to recall that, according to UN reports, there are about 42 million people infected by the virus in the world and that 70% of them are concentrated in sub-Saharan Africa. Eighty percent of the 3 million deaths caused by AIDS in 2000 were concentrated in this region. Recently, there seems to have been some degree of deceleration of world growth in the number of persons infected by HIV. However, this could be attributed to increased mortality caused by the spread of the disease itself, approximately 50% between 1999 and 2003 (two to three million people).

Progress in combating the disease has been small and as the same reports warns, "there are indications that the global rate of infection could accelerate as the epidemic expands in Asia and Eastern Europe." Of particular concern is the outlook for the countries that were once part of the Soviet Union, as well as China and India, both of which are still in the initial stages of the spread of the disease. It should also be stressed that the governments of these nations are only now awakening to the looming tragedy and beginning to show signs that they may be ready to take the disease more seriously. Just over ten years ago, the major obstacle to coping with AIDS in Africa, which had rates comparable to those found in Latin America at the time, was not economic. The fundamental obstacle was disdain and ignorance.

South Africa clearly reveals the consequences of the prejudice, stupidity and omission that marked the initial stages of the epidemic in both the apartheid and post-apartheid periods. The nation has a per capita income level quite close to that of Brazil but the rate of

AIDS infection is similar to that found in Zambia, which has nine times less income per inhabitant. At the start of the '90s, the infection rate in South Africa was quite close to that registered in Brazil but growth in the number of infections was exponential—from 0.7 to 20.1% of the adult population in the period from 1990 to 2001. It is estimated that average life expectancy in South Africa has diminished by a number between 18 and 25 years in comparison to the period prior to the AIDS outbreak!

No matter what the explanations for the differences between the South African and Brazilian situations, one factor must be underscored: in the Brazilian case, AIDS first took root among the middle and upper middle classes and generated an enormous impact among opinion-makers in the nation's media. In South Africa, the epidemic afflicted the poor black population, a demographic segment that simply did not have the same power to interpret the meaning of the disease nor the ability to mobilize a response to it. This was true even in the post-apartheid period.

Today, the fundamental challenge for South Africa and the sub-Saharan region is economic. The money spent in recent years on combating the disease in the developing countries has increased sharply, moving from US\$200 million to almost \$US5 billion in the period extending from 1996 to 2003. To achieve the same results as were attained in Brazil would require for Africa alone approximately US\$ 20 billion per year. This led Brazil to insist on a proposal calling for creation of a Global Fund within the United Nations framework that would provide grants to the lower income countries and/or those with high rates of HIV.

In other words, for middle-income countries like Brazil in which propagation of the disease has been curbed, the proposed solution of international price discrimination to the country's benefit would be enough. For other countries, there would be a need for financial grants to be used for the purchase of medications, even at lower prices.

The United Nations Secretary General, Koffi Annan, presented a proposal in 2001 that would create the Global Fund for Combating AIDS that would also include funds for the fight against malaria and tuberculosis. The initial estimate was that contributions would expand to an annual level of US\$10.5 billion by the year 2005. However, the results have been very disappointing: by mid-2003, the Fund had received commitments of total (not annual) future contributions equivalent to less than US\$5 billion.

At the initiative of the Bush administration, the United States decided to go beyond what the previous administration had done and participate in a more decisive and substantial manner in the international effort against AIDS. However, even when one recognizes that these steps represented an advance in comparison to the Clinton period, one must underscore the limitations that have somewhat tarnished the initiative.

President Bush proposed allocations of US\$15 billion in international assistance over a period of five years, for combating AIDS, tuberculosis and malaria, setting aside a total of US\$3 billion for the next fiscal year(2004). Later on, however, this figure was cut to US\$2.4 billion.

Furthermore, one-third of these resources are tied to the condition that anti-AIDS campaigns focus on sexual abstinence without emphasizing the need for condom use. Similar restrictions were imposed on programs that involve harm-reduction measures for prostitutes and users of intravenous drugs. Limitations have also been imposed on transfers of resources to organizations that support abortion. Finally, the major share of this assistance will not be channeled to the United Nations Global Fund, but will be applied unilaterally, thus weakening the process of overall planning of the battle against HIV. With regard to the Global Fund, the law authorized a separate allocation of up to US\$1 billion per year. However, up to the moment that I delivered this paper in October 2003, the administration had

committed itself to a donation of no more than US\$200 million.

There are two circumstances that would generate some degree of cost relief for African and South/Southeast Asian countries. In the early stages of providing treatment, distribution of only a part of the pharmaceutical cocktail would already generate substantial and positive effects. Moreover, the economies attained by providing treatment would be substantial, as demonstrated by Brazilian experience, particularly as measured by the costs of hospital treatment and the treatment of opportunistic diseases. This financial savings does not even account for one of the phenomena that is most typical of the more devastating stages of the disease: the loss felt in the skilled labor force would be curbed.

To give an idea of the potential for generating savings, it is enough to state that, in South Africa, the proportion of hospital beds occupied by AIDS-related illnesses is 70% of the adult cases and 30% of children's cases. In Zambia's largest hospital, 80% of the beds are occupied by AIDS patients.

Obviously, there are restrictions here other than those of a financial nature. There are those based in ignorance, as exemplified by the South African government, whose president Mbeki, until recently insisted that AIDS was not caused by HIV and who went so far as to doubt the effectiveness of the proposed treatment despite the fact that it has been recognized throughout the world. His latest blunder was to say that he knew of no one with HIV or who had died of AIDS. His office has since claimed that he was referring to his immediate family. The fact of the matter is, however, that even today (October 2003) the country has not yet adopted any strong and organized media campaigns aimed at preventing the disease.¹⁷

Then there are the kinds of restrictions found when countries such as the United States and Germany—both of which are highly important in terms of international aid—that refuse to accept the fact that treatment is an essential complement to prevention.

Others insist on the imposition of an almost endless list preconditions that they claim must be in place before they can provide care and treatment rather than understanding them (as we discussed above) that effective care must be the result of a simultaneous effort to improve medical services, human resource training, and infrastructure for the delivery of medicine and other treatments. It was for no other reason that American authorities questioned the capacity of Africans to implement effective programs against AIDS.

The Hiding Hand and Latitude

The Brazilian fight against AIDS has been successful precisely because it has managed to overcome or avoid the obstacles already pointed out: shortages of financing, religious barriers, prejudice, lack of political will, ignorance and overestimation of the costs and difficulties involved.

With regard to these latter aspects, it is appropriate to recall the provocative principle of the hiding hand suggested by Professor Albert Hirschman in his reflections on economic development and, more specifically, in his effort to understand the difficulties and accomplishments of different investment projects.¹⁸

The principle of the hiding hand involves the underestimation of the uncertainties and difficulties in implementing certain projects. Paradoxically, this under-estimation ends up facilitating the decision to implement such projects. In other words, the hiding hand

"is essentially a mechanism that makes the risk-averter take risks and in the process turns him into less of a risk averter.[. . .]It is essentially a way of

inducing action through error, the error being an underestimation of the project's costs or difficulties [...] It provides an escape from one of those formidable "prerequisites" or "preconditions" to development. It permits the so-called prerequisite to come into existence after the event to which it was supposed to be a prerequisite." ¹⁹

As Hirschman himself warns, it is not operationally so useful to be told that underestimation can be helpful in "eliciting creative energies that otherwise might never have been forthcoming." However, though not operationally useful, it is certainly advisable both as an analytical and an interpretative posture.

An orthodox examination of all the prior conditions required for an effective battle against AIDS would, without doubt, have greatly discouraged the governmental and social energies that were eventually mobilized in a concerted effort to cope with the disease.

Evidently, the hiding hand cannot be summarized solely in the underestimation of the difficulties involved. It also involves another underestimation: that of the project planner's problem-solving ability. If this capacity did not exist, that is, if the ability required to mobilize the health sector throughout the country with the unprecedented support of civil society and international public opinion and the ability to reduce the costs of medications had not been hidden then the campaign against AIDS may well have been overpowered by the enormous complexities and demands that had to be faced.

In any case, the fact that a developing country has benefited from an underestimation of the costs and the difficulties of implementing such an ambitious project may well be viewed as an essential condition to success, though it is by no means sufficient to ensure such success.

To enrich this interpretation of what happened in the Brazilian struggle with AIDS, we should reflect upon another concept suggested by Albert Hirschman: the application of the latitude concept that may help us to understand the varied social and economic processes involved.²¹ In this instance, Hirschman is concerned with how "the greater or smaller the extent of latitude in standards of performance—or tolerance of poor performance—[is taken] as a characteristic inherent to all production tasks":

"When this latitude is narrow, the corresponding task must be performed just right; otherwise it cannot be performed at all or is exposed to an unacceptable level of risk—for example, the high probability of accidents in the case of poorly maintained or poorly operated airplanes. Lack of latitude, therefore, generates powerful pressures for efficiency, quality performance, good maintenance habits and so on [...][Or there can be a] wide latitude of goods and services: items that can be and are produced and marketed according to high quality standards, but for which lower quality will not generate disastrous effects."(pp. 19 and 21)

Hirschman observed that less developed countries may well enjoy greater comparative advantages in tasks marked by limited latitude, such as the organization of good airline companies, than in tasks with broader latitude, such as road maintenance. In the first case, "the nature of the task would oblige them to do well".²²

There is no doubt that the health sector enjoys a lesser degree of latitude than such other areas of activity as, for example, mass transit systems or even education. Health is such a sensitive area of activity that poor or even disastrous performance immediately generates enormous concern and protest. Moreover, latitude is not distributed within this sector in a homogenous manner; for example, less latitude is allowed the prevention and

treatment of infectious-contagious diseases than in the provision of hospital treatment or psychiatric care.

Viewed in this framework, the attack against AIDS had even less latitude than efforts against other infectious-contagious diseases. There are a number of different considerations in play: the enormous danger of the disease; the contamination mechanisms that involve intimate forms of difficult to change behavior; the immense costs (compared, say to tuberculosis, for example) and the complexities of the necessary medicines and, consequently, the problems inherent to the distribution of such products; the demand for a broad array of efficiently operating laboratories and health facilities; the disease's potential for spreading throughout an entire national territory (in contrast to malaria, for example, which is basically restricted to regions of rain forests).

Due to these factors—and others already cited that relate to public opinion—the performance of health authorities in their efforts against AIDS is judged with particular severity. The executors of such policies are allowed no maneuvering room and delays and errors are less tolerable than those in other areas.

Nonetheless, I would also affirm that the very narrow latitude of the effort against AIDS—high risk activity, not easy, nor cheap, nor quick—has, paradoxically, functioned as a strong positive factor in the success of the Brazilian experience.

After all, Brazilian experience in its battle against AIDS has demonstrated that, in the less developed nations of the world, consistent and courageous policies put forward by an activist state, backed by social mobilization, can block the spread of the worst pandemic of the century and ensure those infected of a dignified life. The challenge is how to replicate, and even improve upon that experience in other underdeveloped countries. This is an enormous and precious task, for the battle against AIDS across the world is a battle for fundamental human rights, if not for life itself.

ENDNOTES

Lecture delivered at the Friends Forum of the Institute for Advanced Study, Princeton. I would like to express my thanks for the comments and suggestions offered by Paulo Teixeira, Director of HIV Aids at the World Health Organization and one of those responsible for the conception, organization and execution of the campaign against this disease in Brazil. I also took advantage of the information provided by the STD/AIDS Coordinating Staff of the Brazilian Ministry of Health. More specifically, my thanks to Alexandre Granjeiro, Raldo Bonifácio and Cristina Possas. My very special thanks to diplomat José Marcos Nogueira Vianna for his assistance in researching this paper. Without his invaluable services during the period in which I was Minister of Health, we would not have achieved success in our external negotiations on patents and medicines. I have also made good use of the comments and suggestions offered by João Bihel, Adam Ashforth and Andre Medici.

- According to the World Bank report, "using the current estimate of HIV positive people with the other epimodel assumptions, implies that, in this scenario, the number of people currently infected with HIV grows from 425,000 in 1991 to 1.2 million by 2000". See The World Bank, "Staff Appraisal Report—Brazil—AIDS & STD Control Project," Report number 11734-br, October 8, 1993, p. 68.
- Or, in other words, without sufficient income to satisfy even their most basic needs in the areas of food, apparel, transportation, health and housing. More than one-fifth of the population was found to be unable to satisfy their basic food needs. See Ricardo Paes de Barros, Ricardo Henriques and Rosane Mendonça: "A estabilidade inaceit vel: Desigualdade e Pobreza no Brasil" (The unacceptable stability: Inequality and Poverty in Brazil), Discussion Text no. 800, IPEA, Rio de Janeiro, 2001.
- 3 Unless otherwise indicated, all of the numbers cited in this paper were provided by the STD/AIDS Coordinating Staff of the Ministry of Health.
- With the sole exception of dengue, despite the fact that, after AIDS, the struggle to combat this disease has consumed the largest volume of resources. This is an extremely difficult task, since there is neither vaccine nor therapy. The infection originates in household habits that are very difficult to alter and flourishes particularly in the large urban centers of the hottest regions of the country.
- 5 Another disease that is somewhat comparable to AIDS is hepatitis-C. Though it too is extremely grave, it is less lethal than Aids. However, only in recent years have health authorities become fully aware of the gravity of the disease.
- 6 It was no coincidence that the Secretary of Health of the São Paulo government at the time was Dr. João Yunes and that one of those principally responsible for the anti-AIDS movement was Paulo Teixeira. When I was Minister of Health, I appointed both Dr. Yunes as the

National Secretary of Health Policy, and Dr. Teixeira as the national coordinator of the campaign against AIDS (he succeeded Dr. Pedro Chequer, another leading public figure in the anti-AIDS campaign).

- 7 See Paulo R. Teixeira, Marco Antonio Vitória and Jhoney Barcarolo: "The Brazilian Experience in Providing Universal Access to Antiretroviral Therapy," IAS Conference on HIV Pathogenesis and Treatment, Paris, July, 2003.
- 8 See The Economist, September 13, 2003, p. 30.
- 9 Or hepatitis-C, for that matter. The Economist, p. 30.
- 10 A good summary of the effort made to monitor and control treatment can be found in Paulo Teixeira, et alli, "The Brazilizn Experience": "a network of more than 1,000 public alternative care and HIV testing services has been established to provide the necessary infrastructure to support this (anti-AIDS) policy[...]the national response to the AIDS threat was responsible for creating positive externalities which impacted several other health areas, including the infrastructure provided by the Public Health System itself. In order to adequately monitor the patients, the Brazilian Ministry of Health has established a National Network of Viral Load Laboratories and a network of CD4+ and CD8+ lymphocyte counting laboratories, with 80 and 65 units, respectively. Moreover, considering the overall impact and probabilities involved in ARV delivery, the Ministry of Health decided to establish a national genotyping network, able to perform and interpret the results of HIV-1 resistance tests using adequate and rational criteria. In this first phase, 14 laboratories have been accredited and 60 reference expert genotyping physicians from different parts of the country have been trained to meet the demand on a regional basis. The Brazilian MOH has also put in place a specific computer-based system for logistic management of ARVs (named SICLOM) in order to ensure rational supply and consumption throughout all 480 dispensary units. The major objectives of this logistic control system are: 1) to control drug stocks at the national, state and municipality levels; 2) to ensure the efficiency and safety of the drug supply; 3) to adequately plan for drug purchases; 4) to assure optimal drug management."
- 11 Though considerable, progress in this area has not been sufficient in recent years, as is evident in the fact that, up until 2002, approximately 40% of pregnant women infected by HIV were being treated with AZT (out of a total of 17,000). The target defined by the Ministry of Health is to raise this level to 100% by 2006.
- 12 Up to the present, no more than one third of the Brazilian population has been submitted blood tests capable of detecting HIV. In the developed countries, this percentage is falls within the range of 50 to 70%. Just as in the case of pregnant women infected by HIV, this is a factor that depends more on the operation of the National Health System as a whole (SUS) than it does on anti-AIDS campaigns.
- 13 The comment published in the *New York Times* with respect to this declaration reflects the favorable position taken by the international media: "The Brazilian government, which has challenged he giant drug companies' patent defenses perhaps more aggressively than any other country, hailed the World Trade Organization's declaration on drug patents as an important victory for the developing world's fight against health scourges like AIDS." *New*

York Times, "Brazil Welcomes Global Move on Drug Patents," November 16, 2001.

- 14 The American argument was based on an erroneous assumption that Article 68 of the Brazilian intellectual property rights legislation automatically allows the government to grant compulsory licenses whenever a patent is not "locally worked" after a lapse of three years. Quoting the USA officials at the WTO: "Brazil's 'local working' requirement stipulates that a patent shall be subject to compulsory licensing if the subject matter of the patent is not 'worked' in the territory of Brazil. Brazil then explicitly defines 'failure to be worked' as 'failure to manufacture or incomplete manufacture of the product,' or 'failure to make full use of the patented process." See WTO, WT/DS199/1 G/L/385 IP/D/23, June 8, 2000. The Brazilian side argued, however, that the local working requirement clause cannot be invoked independently of the abuse economic of power clause. Simultaneity must exist. The patent holder, therefore, must fail to respect both clauses at the same time. Only this simultaneity would allow the executive branch to grant a compulsory license and this is compatible with the TRIPS Agreement. On the other hand—and this point weakened the Clinton administration's accusation—we discovered that US domestic legislation, had, and still has, a very similar clause (US Code, Title 35, Patents, Chapter 18 [38]). In order to prove this, Brazil also requested the opening of an official consultation process, which would lead to a panel against the USA, should the need arise.
- 15 The mechanism, though cumbersome, was the only one the WTO members countries could agree to in Geneva, a few days before the start of the fifth Ministerial Conference in Mexico. Very detailed import and export procedures were elaborated in order to avoid the possibility of sidetracking drugs to developed countries—for instance, pills will have special packaging and other specific features in order to differentiate them from those being sold on developed markets.
- 16 United Nations, General Assembly, "Progress towards implementation of the Declaration of Commitment on HIV/AIDS," Report of the Secretary-General, New York, July 25, 2003.
- 17 There is still another factor that make AIDS prevention difficult in South Africa: many people believe that the infection is the result of witchcraft. Even when they accept that AIDS is an infectious disease, many of those infected attribute this to the fact that they were somehow "chosen" as a result of the witchcraft prepared by someone who desired to place them under a curse. In this regard, consult the very interesting article by Adam Ashforth, "An Epidemic of Witchcraft? The implications of AIDS for the Post-Apartheid State," African Studies 61:1 (2002). During a trip to Zululand in October 2003, Professor Ashforth reported that in 25% of the deaths caused by AIDS, the families attributed the disease to witchcraft or *Isidliso*, an evil work of the people they call witches.
- 18 See Albert O. Hirshchman, *Development Projects Observed*, Washington D.C: The Brookings Institute, 1995 [1967]. See especially Chapter one and the Preface to the 1995 reissue.
- 19 Development Projects Observed, pp.26 and 29.
- 20 Development Projects Observed, p. ix.
- 21 Development Projects Observed, Chapter Three. See too: Albert O. Hirschman, Rival Views

on Market Societies, Cambridge, MA: Harvard University Press, 1992, Chapter One.

22 Rival Views on Market Societies, pp. 19 and 21.