The contemporary HIV/AIDS crisis in South Africa represents an acute example of how infectious diseases can undermine national resilience and regional stability. Roughly 25 percent of the country’s adult population is currently infected with HIV, which makes South Africa one of the most severely affected AIDS states in the world. The consequences of the disease have been as marked as they have been pervasive, negatively impacting on virtually all levels of the country’s security—broadly defined—as well as significant aspects of Pretoria’s frontline neighbors. As James Wolfenson, president of the World Bank, has remarked:

Many of us used to think of AIDS as a health issue. We were wrong. AIDS can no longer be confined to the health or social sector portfolios. Across Africa, AIDS is turning back the clock on development. Nothing we have seen is a greater challenge to the peace and stabilities of African societies than the epidemic of AIDS. . . . We face a major development crisis, and more than that a security crisis. For without economic and social hope we will not have peace, and AIDS surely undermines both.1

This chapter examines the current AIDS crisis in South Africa and assesses its impact on the country’s internal human and wider geo-

strategic stability. We first explain the basic epidemiology of the virus and explore the principal factors associated with its high incidence and spread in South Africa. We then discuss the main security implications of HIV/AIDS, delineating these in terms of human costs, economic development, military preparedness, and civil disorder. We follow this with a critique of Pretoria’s response to the epidemic before finally considering the relevance of the South African case, both regionally and to the outside world.

WHAT IS AIDS?

The causative agent of AIDS is HIV, a retrovirus first isolated in 1983 (by Luc Montagnier and Robert Gallo) that works by attacking the CD4 cells, which organize the body’s overall immune response to foreign bodies and infections. There are two types of immunodeficiency virus: HIV-1, which has caused most of the infections worldwide, and HIV-2, a more slowly acting mutation of the virus that seems to be concentrated mainly in West Africa. In southern Africa, the dominant strain is HIV-1 (henceforth referred to simply as HIV), at least nine different clades of which have so far been identified.

AIDS normally develops after a median time period of between eight and ten years when an infected person’s immune system has been so weakened that it can no longer fight off opportunistic infections, such as pneumonia, TB, and diarrhea, that it would normally be able to resist. TB, in fact, is the most likely cause of death of HIV-positive individuals; in sub-Saharan Africa, for instance, cocontaminations

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3 Clade is a biological term designating a group of organisms that are evolved from a common ancestor.

4 Author interview, Medical Research Council (MRC), Durban, August 16, 2001. See also Whiteside and Sunter, AIDS, p. 2.
occur in more than 80 percent of people afflicted with one or the other of the diseases.\(^5\)

While HIV has proven extremely difficult to fight once a person is infected, it is extremely vulnerable outside the body. The virus must therefore be transmitted through the exchange of bodily fluids, as occurs during such practices as sexual intercourse, blood transfusions, and the sharing of needles. However, because HIV is so fragile, even these modes of infection tend to be inefficient, normally requiring repeated exposure before full acquisition occurs.\(^6\)

The early symptoms of HIV infection typically include chronic fatigue or weakness, severe and sustained weight loss, extensive and persistent swelling of the lymph glands, diarrhea, and severe deterioration of the central nervous system. Full-blown AIDS is characterized by the onset of viral, bacterial, fungal, or parasitic secondary infections caused by pathogens that the immune system can no longer control. Death is caused not so much from the immunodeficiency virus itself as from the opportunistic infections that are its results.\(^7\)

SCOPE AND SPREAD OF HIV/AIDS IN SOUTH AFRICA

Statistics on HIV prevalence in South Africa are derived from annual surveys of pregnant women attending antenatal clinics in the public sector, conducted by the Department of Health. Although this sentinel sample excludes males and females who are either not pregnant or do not register at public sector facilities, it is thought to provide a reasonably accurate assessment of trends occurring among mainstream, sexually active South Africans. Extrapolations to the general population are generally based on two main assumptions: first, that 80 percent of all pregnant women attend public sector antenatal

\(^5\)Author interview, London School of Hygiene and Tropical Medicine, London, August 20, 2001.


clinics; and second, that the ratio of women who are HIV-positive to
men who are HIV-positive remains consistent at 1 to 0.73.\(^8\)

In absolute numbers, South Africa has the highest number of HIV-
positive citizens of any state in sub-Saharan Africa, which is, itself,
the part of the world most severely affected by the epidemic.\(^9\) The
most definitive data on the national scope of the virus comes from
the Medical Research Council (MRC) in Durban. According to its
2001 report (which was released in fall 2001, despite government
attempts to suppress it), 4.7 million South Africans were living with
HIV/AIDS as of the end of 2000. This equates to slightly less than 25
percent of the country’s total adult population (24.5 percent of
women attending antenatal clinics in October 2000 tested positive),
up from just 0.76 percent in 1990. When children and infants are
included, one in nine South Africans is currently thought to be HIV-
positive. Of those, 420,000 had developed full-blown AIDS by the

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\(^8\)Mark Colvin and Eleanor Gouws, “Thukela Water Project Feasibility Study: An
Assessment of HIV/AIDS—its Context and Implications for the TWP,” paper provided
to the author, August 2001. It should be noted that several commentators in South
Africa question the validity of using antenatal surveys to determine the country’s
overall HIV prevalence. Apart from underrepresenting the middle class and substan-
tial proportions of race groups other than black Africans (through omission of the pri-
ivate sector), biostatisticians also criticize the lack of a consisting sampling frame for
the surveys. Above all, they point to the different collection and testing methodologies
adopted between the country’s provinces, stressing that no centralized control exists
over which clinics submit samples or how individual patients are tested (author inter-
views, MRC, Durban, and SABTS, Johannesburg, August 2001).

\(^9\)According to the WHO, 23 million people were HIV positive in sub-Saharan Africa by
the end of 1999, nearly 70 percent of the world’s total at that time. Comparative fig-
ures for other regions were

- South and Southeast Asia: 6 million
- Latin America: 1.3 million
- North America: 920,000
- East Asia and the Pacific: 530,000
- Western Europe: 520,000
- Caribbean: 360,000
- Eastern Europe and Central Asia: 360,000
- North Africa and the Middle East: 220,000
- Australia and New Zealand: 12,000.

end of 1997. More alarmingly, the MRC report shows AIDS as the leading killer in South Africa, linking no less than 33 percent of all fatalities in the country to the disease. The council projected that by 2002 the virus would account for twice the number of lives lost as a result of either car accidents or murders.

Significant regional variations occur in the republic’s HIV incidence levels. The most severely affected province is KwaZulu-Natal, where 36.2 percent of the population is infected with the virus. The Mpumalanga, Gauteng, and Free State administrative districts follow, each with incident rates between 27 and 29 percent. The least affected provinces are the Northern and Western Cape, where prevalence levels currently run at approximately 11 and 8 percent, respectively (see Table 3.1).

The prevalence of HIV/AIDS in KwaZulu-Natal, Mpumalanga, Gauteng, Free State, and North West, relative to the Cape provinces, largely appears to reflect the major transportation routes that connect the country’s northern neighbors with cities such as Pretoria, Johannesburg, and Durban. Many of these so-called “frontline states” are severely affected by HIV, the spread of which has been availed by truck drivers who frequently engage in multiple, unprotected sexual encounters (see below). Analysts at the MRC in Durban also believe that the higher incidence rates along the eastern South African corridor are indicative of a higher black-to-white demographic ratio, more acute poverty, and less proactive local government response to AIDS.

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14Author interview, MRC, Durban, August 16, 2001.
Table 3.1


<table>
<thead>
<tr>
<th>Province</th>
<th>1998</th>
<th>1999</th>
<th>2000</th>
</tr>
</thead>
<tbody>
<tr>
<td>KwaZulu-Natal</td>
<td>32.5</td>
<td>32.5</td>
<td>36.2</td>
</tr>
<tr>
<td>Mpumalanga</td>
<td>30.0</td>
<td>27.3</td>
<td>29.7</td>
</tr>
<tr>
<td>Gauteng</td>
<td>22.5</td>
<td>23.9</td>
<td>29.4</td>
</tr>
<tr>
<td>Free State</td>
<td>22.8</td>
<td>27.9</td>
<td>27.9</td>
</tr>
<tr>
<td>North West</td>
<td>21.3</td>
<td>23.0</td>
<td>22.9</td>
</tr>
<tr>
<td>Eastern Cape</td>
<td>15.9</td>
<td>18.0</td>
<td>20.2</td>
</tr>
<tr>
<td>Northern Province</td>
<td>11.5</td>
<td>11.4</td>
<td>13.2</td>
</tr>
<tr>
<td>Northern Cape</td>
<td>9.9</td>
<td>10.1</td>
<td>11.2</td>
</tr>
<tr>
<td>Western Cape</td>
<td>5.2</td>
<td>7.1</td>
<td>8.7</td>
</tr>
<tr>
<td>National</td>
<td>22.8</td>
<td>22.4</td>
<td>24.5</td>
</tr>
</tbody>
</table>

SOURCE: South African Department of Health.
NOTE: True values are estimated to fall within a confidence interval of 95 percent. This should be taken into account when interpreting the data.

As might be expected, the rate of infection is greatest among the 20–29 age group, which tends to be the most sexually active. Statistics for 2000 show an overall prevalence level in this category of nearly 60 percent, compared with 16 percent for the under-20 age group, 24 percent for the 30–34 age group, 16 percent for the 35–39 age group, and between 11 and 13 percent for the 40–49 age group.15

South Africa is still far from feeling the full effects of its HIV crisis and, indeed, is really only just emerging from the first phase of the epidemic. Over the next decade, the republic is expected to see further increases in HIV infections—the rates of which are not expected to level off until 2010—accompanied by a rapid surge in AIDS deaths—the incidence of which is projected to peak somewhere between 2009 and 2012 (see Table 3.2).16 As Martin Schönteich, a

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15Department of Health, National HIV and Syphilis Sero prevalence Survey, p. 8. See also Whiteside and Sunter, AIDS, p. 51.
16Author interviews, ISS, Pretoria, August 13, 2001; MRC, Durban, August 16, 2001; and University of Cape Town, August 17, 2001.
senior researcher at the Pretoria-based Institute of Security Studies (ISS), remarks, “Most areas of South Africa have only recently begun to move from the asymptomatic HIV phase of the epidemic to the AIDS phase. In simple terms, the people who are visibly ill today are the under one percent who were infected in 1990.”17

In an attempt to provide greater clarity to the future dynamics of HIV in South Africa, several models have been developed to map the likely progression of the disease over the next 10 to 15 years. One notable project, which was undertaken by Metropolitan Life on behalf of the UN Development Program in 1998, forecasts an overall HIV prevalence rate in 2010 of 6,195,000 infected individuals, with

AIDS cases exceeding 800,000. The Actuarial Society of South Africa, working in conjunction with the University of Cape Town, has developed similar mathematical models and predicts that HIV prevalence levels will peak in 2006 at around 16.7 percent of the population as a whole—although certain regions such as KwaZulu Natal are expected to register highs approaching 40 percent.

MAIN FACTORS ASSOCIATED WITH THE SPREAD OF HIV/AIDS IN SOUTH AFRICA

Various factors have contributed to the contemporary HIV/AIDS crisis in South Africa, including heterosexual sex, the low status of women, prostitution, sexual abuse and violence, and prevalent risk-prone attitudes. Each of these causal influences is discussed below.

Heterosexual Sex

In the black population, heterosexual sex remains the main transmission mode for HIV in South Africa. Although drug use is common, unlike in many developed countries, in South Africa most narcotics are either swallowed or smoked; viral infection via the sharing of dirty needles has, as a result, been relatively uncommon. Equally, standards and facilities operated by the South African National Blood Service are world class and equivalent to those in Europe and North America. All blood that is donated for transfusion purposes is vigorously tested and categorized according to a four-fold risk schema, which ensures that only samples with an HIV infection potential of 0.06 percent or less are used. Finally, while unpro-

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18Whiteside and Sunter, AIDS, p. 69.
19Author interview, University of Cape Town, August 17, 2001. See also ING Barings, Economic Impact of AIDS in South Africa, pp. 1, 6.
20Author interview, ISS, Pretoria, August 13, 2001. During surveillance of four sentinel sites in Cape Town, Durban, Port Elizabeth, and Gauteng (Johannesburg/Pretoria) carried out in 1998, heroin abuse accounted for only 2 percent of visits to treatment services and only half of these involved injection of the drug. Alcohol was by far the most abused substance, with smoked cannabis and Mandrax accounting for almost all of the remaining cases. See Charles Parry, South African Community Epidemiology Network on Drug Use, January–June 1998 (Phase 4), available at http://www.mrc.ac.za.
21Author interview, SABTS, Johannesburg, August 14, 2001.
tected male-to-male sex—now officially known as “men having sex with men” (MSM)—did contribute to the original development of HIV in South Africa’s white population, access to well-equipped health clinics combined with increasing awareness about the dangers inherent in traumatic intercourse have helped to mitigate prevalence levels in this particular segment of the population.22

Among black South Africans, however, casual, unsafe, and abusive sex remains endemic and has provided a ready-made vector for the spread of HIV—the exchange of bodily fluids. Cultural norms play a substantial role, particularly the general acceptance of multiple partners and preference for unprotected sex wherein the use of condoms is specifically eschewed. Often intercourse is also “dry,” involving the use of powders and herbs designed to prevent vaginal lubrication. Such practices obviously lead to increased friction and greatly elevate the risk of viral transmission through internal cuts and lesions.23

Low Status of Women

Further exacerbating the situation is the patriarchy inherent in black South African society. Women are commonly regarded as inferior and akin to property, and expectations are for sex to be given whenever and however demanded. Such a duty, entrenched in years of tribal tradition, remains an integral feature of many rural communities and is one that is rarely, if ever, questioned. This ingrained gender structure has negatively affected the empowerment of women and, in so doing, undermined female options for refusing intercourse and/or insisting on safe practices such as the use of condoms.24

22 Author interview, MRC, Durban, August 16, 2001.
Prostitution

The sex trade has also emerged as a major vector for the spread of HIV in South Africa. Prostitutes are used widely throughout the country, something that is particularly true of long-distance truck drivers and rural-urban migrant mine workers—both of whom are forced to spend long periods of time away from their homes and families. Viral infection rates among these segments of the population have skyrocketed in recent years, both on account of the inherent dangers of multiple partners and the African preference for unprotected sex (commercial truck drivers are known to pay double for intercourse without a condom). During the next three to four years, the prevalence of HIV in the transportation and migrant-concentrated mining (as well as construction) sectors is expected to soar to at least 23 percent, and possibly as high as 29 percent, with prostitution use remaining one of the primary causes of transmission.

25 Apartheid established both migration and prostitution as a way of life for many South Africans. The Bantustan system crammed much of the country’s black population into crowded, impoverished homelands, which led to the breakdown of traditional cultural structures. Adults, mainly men, were forced to migrate to large cities to find work, often living for extended periods of time in single-sex hostels that were legally “off limits” to their families (at the system’s peak in 1985, 1,833,636 South Africans were working as migrants). Urban prostitution, as a result, became the norm for many male workers, including those married to rural wives. Although there are now fewer migrant workers in the country (South Africans live where they choose), the legacy of apartheid remains: Sectors such as the mining industry continue to rely heavily on a migrant labor force and still provide hostel accommodation for their employees. Moreover, although migration has declined internally within South Africa, it remains a significant source of employment for tens of thousands of individuals living in neighboring states. In 1998, for instance, the South African mining industry employed a total of 198,653 foreign migrants, the bulk of whom came from Lesotho, Botswana, Swaziland, and Mozambique. (See Whiteside and Sunter, AIDS, p. 63.)


Sexual Abuse and Violence

Added to these various factors is a culture of sexual abuse and violence, which is now entrenched in southern Africa and is, in many ways, a product of the lack of female empowerment noted above. Rape has become increasingly common, especially among teenage boys who suffer little, if any, social stigmatization from engaging in the practice. Indeed, in many rural schools, “jock rolling” (gang rape) is regarded as “cool” and generally associated with the most popular and socially confident members of the local community. There has also been a major increase in sexual victimization on account of urban legends and myths. One of the most alarming such myths is the widespread belief that an HIV-infected male can cure his disease by having sex with a virgin. Forced sex between older men and young girls has, as a result, become increasingly common, especially in the viral endemic belts of KwaZulu Natal and Mpumalanga provinces. Overall, roughly 50,000 women are raped every year in South Africa—three times the figure for the United States.

Prevalent Risk-Prone Attitudes

Finally, many black South Africans are simply willing to accept the dangers associated with unsafe sexual practices, such as the frequent use of prostitutes. For most, the predilection toward risk-enhancing behavior stems from a fatalistic attitude borne of past racial abuses suffered under the apartheid system, combined with the extraordinarily high level of internal violence and conflict that the country has experienced over the past five years (Johannesburg currently has one of the highest murder rates of any city outside a war zone).
Together these have engendered a belief that “life is cheap,” an expectation that death may occur at any moment, and a tendency to live for today without valuing tomorrow. As Alan Whiteside observes, this attitude can be summed up in the response: “If AIDS kills me in five years’ time, so what?”

Recent statements made by Thabo Mbeki questioning the causal link between HIV and AIDS have also affected attitudes toward sexual practices (see below). The South African President retains considerable influence among the population and his dissenting views on the origins of AIDS—which he attributes to poor living conditions, poverty, malnutrition, stress, and trauma—have undoubtedly helped to mitigate popular concerns about the dangers of engaging in unprotected, multiple-partner sex. Virologists and scientific academics have been especially critical of Mbeki in this regard, charging that the low rate of condom use in South Africa—which in 2000 averaged 21 percent between unmarried partners—can, at least in part, be attributed to the President’s widely publicized beliefs.

IMPACT ON SOUTH AFRICA

The impact of HIV/AIDS on South Africa’s security and stability has been significant. Not only has the disease led to large-scale human death and suffering, but it has also undermined social and economic stability and weakened military preparedness, and it may yet emerge as one of the most important contributors to crime over the next 10 to 20 years.

The Human Cost

From a purely numerical point of view, HIV/AIDS will have an overwhelming demographic impact on South Africa. More than 500,000...
people have already died from the disease, and cumulative numbers are projected to rise to at least six million by 2010.\textsuperscript{35} Because most people contract HIV at an early age, the bulk of these fatalities will fall on the young adult population. Premature deaths in the 25–29 age group, for instance, are expected to double over the next eight years because of AIDS, with numbers quadrupling in the 30–39 age category.\textsuperscript{36}

Children will also be severely affected. Mortality models estimate that anywhere between 13 and 45 percent of infants born to HIV-infected mothers will contract the disease, either during pregnancy or through breastfeeding.\textsuperscript{37} The high figure is especially alarming given that most children who become ill with HIV quickly develop AIDS and almost without exception die within five years of birth. Indeed, infant mortality has already soared from less than 1 percent in 1990 to 24.5 percent in 2000, reversing a positive trend that was frequently upheld as a gauge of Pretoria’s overall level of development.\textsuperscript{38}

The concentration of HIV/AIDS within these age groups has important ramifications for overall life expectancy in South Africa. This is because high numbers of deaths among children and young adults inevitably means that a large number of life years will be lost. According to statisticians at the University of Cape Town, life expectancy at birth will fall to 40 years by 2010, down from 60 years in 1997.\textsuperscript{39} Within the high-risk categories, however, projections are even more dire: For children born with the virus, life expectancy is


\textsuperscript{36}Whiteside and Sunter,\textit{ AIDS}, p. 75; Shell, “Halfway to the Holocaust,” p. 16.

\textsuperscript{37}Whiteside and Sunter,\textit{ AIDS}, pp. 75–76; Associated Press, “S. Africa Sued for Failing to Distribute AIDS Drug,”\textit{ Washington Post}, August 22, 2001, p. A14. The South African government consistently refused to provide antiretroviral treatment (ART), a treatment known to prevent transmission of HIV from mother to child, to pregnant women. Recently the Treatment Action Campaign won a legal case that will force the government to provide drugs that could halve the transmission risk.

\textsuperscript{38}Author interview, University of Cape Town, August 17, 2001.

\textsuperscript{39}Author interview, University of Cape Town, August 17, 2001. See also Whiteside and Sunter,\textit{ AIDS}, p. 76, and “The Cruelest Curse,”\textit{ The Economist}, February 24, 2001.
no more than 2.5 years; for those who contract the disease later in life, between 25 and 30 years. As Robert Shell, director of the Population Research Unit in East London, remarks, “In terms of mortality, it will be as if the South African population of 2010 had been put in a giant time machine and slammed back almost 30 years.”

The prevalence of AIDS among young adults is also liable to generate a burgeoning orphan population within South Africa. Nearly one million children under the age of 15 will have lost their mothers to the disease by 2005, a figure that, according to Department of Health estimates, will increase to over two million by 2010. Given the sexually transmitted nature of the disease, it is likely that many of these children will also lose (or already have lost) their fathers, resulting in a dramatic increase in the number of orphans as a percentage of the general population. Not only will these children severely strain the capacity of communities to support them, but they will also be at greater risk of engaging in delinquent and criminal behavior (see “Civil Law and Order and Crime” below).

The various demographic impacts of the HIV/AIDS crisis outlined will be felt most acutely in KwaZulu-Natal province, where most of South Africa’s viral infections have occurred. Models developed by Metropolitan Life forecast that AIDS-related deaths in this part of the country will rise from under 60,000 per year in 2000 to in excess of 110,000 by 2010. The practical effect of this near doubling of the mortality rate will be a provincial population that is some 15 percent lower than it would have been in a non-AIDS scenario. Most of these deaths will occur within the 20–39 age group, which will decimate the province’s economically productive workforce as well as feed into a growing legion of orphans that is expected to number in excess of 450,000 by 2010—nearly a quarter of the national total.

40Shell, “Halfway to the Holocaust,” p. 16.
43Whiteside and Sunter, AIDS, p. 72. See also Colvin and Gouws, “Thukela Water Project Feasibility Study,” p. 6.
The Economic Impact

In addition to the huge toll in human lives, HIV/AIDS will significantly affect South Africa’s growth and development. Over a quarter of South Africa’s economically active population will have contracted HIV by 2005, affecting sectors ranging from mining to retail and insurance. Most infections are expected to occur among semi- and unskilled workers, but the epidemic will also have a major impact on the highly trained sectors of the labor force (see Table 3.3). Finance and business services, for instance, are both forecast to face HIV prevalence levels between 9 and 11 percent.44 This will exacerbate an already serious skills shortage and significantly raise the remuneration and replacement costs for high-tech companies.45

On a more generic level, the AIDS epidemic will force employers to adjust their net contributions to worker pension, life, and medical insurance schemes (the overall premiums for which will be higher

Table 3.3
HIV-Positive Individuals per 100 Workers by Skill Levels, 1999–2010

<table>
<thead>
<tr>
<th>Year</th>
<th>Highly Skilled</th>
<th>Skilled</th>
<th>Semi- and Unskilled</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999</td>
<td>10.2</td>
<td>15.5</td>
<td>19.9</td>
</tr>
<tr>
<td>2000</td>
<td>11.2</td>
<td>17.5</td>
<td>22.7</td>
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<tr>
<td>2001</td>
<td>12.0</td>
<td>19.1</td>
<td>25.2</td>
</tr>
<tr>
<td>2002</td>
<td>12.6</td>
<td>20.5</td>
<td>27.4</td>
</tr>
<tr>
<td>2003</td>
<td>12.9</td>
<td>21.5</td>
<td>29.2</td>
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<td>2004</td>
<td>13.1</td>
<td>22.2</td>
<td>30.6</td>
</tr>
<tr>
<td>2005</td>
<td>13.0</td>
<td>22.6</td>
<td>31.6</td>
</tr>
<tr>
<td>2006</td>
<td>12.8</td>
<td>22.8</td>
<td>32.3</td>
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<td>2007</td>
<td>12.5</td>
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<td>12.1</td>
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<tr>
<td>2009</td>
<td>11.7</td>
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</tr>
<tr>
<td>2010</td>
<td>11.2</td>
<td>21.7</td>
<td>32.7</td>
</tr>
</tbody>
</table>


45“Young, Gifted and Dead,” *Sunday Times* (South Africa), July 9, 2000. The cost of replacing just one skilled laborer has been estimated at ZAR250,000 (approximately US$31,000).
because of increased demand). For the average company that assumes 66 percent the cost of such benefits, this could add 15 percent to overall wage bills by 2005 and about 30 percent by 2010.

Most firms will attempt to pass on these cost increases to consumers in the form of higher prices. This, combined with the higher premiums for health and medical insurance will result in lower take-home pay and associated household incomes. Domestic savings as a proportion of GDP will, therefore, suffer and are projected to be a full two percentage points lower than they would be in a non-AIDS scenario. In order to support sustained investment demand in the economy, South Africa will need to attract additional foreign inflows to fill the gap. Should this fail to materialize, a domestic savings crunch is liable to ensue, which will drive interest rates higher, further slowing overall GDP growth.

Government expenditures will also be affected by the HIV/AIDS crisis, largely because the medical costs for treating the disease that are not covered by private insurance will have to be borne by the public sector. This will have relevance for most of the unskilled labor force as well as the noneconomically active population. By 2009, it is conservatively estimated that Pretoria will be responsible for around 1,087,000 patients with full-blown AIDS. Assuming treatment costs of ZAR3,750 (US$468.75) per person per year, this will lead to annual increases in healthcare expenditures that over the course of the next eight years will be in excess of ZAR4 billion (US$500 million).

The result of these effects will be strongly negative for South African development. According to ING Barings, GDP growth rates will aver-

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46 It has been estimated that demand for private healthcare services and insurance could be at least 11 percent higher by 2010 than it would be in a non-AIDS scenario.


49 Data derived from Wharton Economic Forecasting Associates, 1999. See also “Young, Gifted and Dead,” *Sunday Times*. This heightened expenditure will exacerbate an already woefully inadequate level of funding for healthcare in general, which currently amounts to less than US$85 per person annually. Obviously, as more people become sick with AIDS, the more this (already) low figure will diminish.
age between 0.3 and 0.4 percent less per year as a result of AIDS, removing some US$22 billion from the economy (see Table 3.4). 50

The cumulative effect will be heightened poverty, which will undermine the resources that both individuals and the state at large are able to bring to bear to mitigate the effects of HIV/AIDS. This will precipitate a vicious downward cycle, with the disease not only driving underdevelopment, but in so doing, also providing the conditions necessary for its continued spread and proliferation. 51

The Social Cost

The social implications of the HIV/AIDS crisis are equally profound. Although the full impact of the disease will not be felt for some time,

<table>
<thead>
<tr>
<th>Year</th>
<th>Real GDP (Percentage)</th>
<th>Growth (Percentage Point Difference)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>0.7</td>
<td></td>
</tr>
<tr>
<td>2001</td>
<td>–1.0</td>
<td>–0.3</td>
</tr>
<tr>
<td>2002</td>
<td>–1.2</td>
<td>–0.2</td>
</tr>
<tr>
<td>2003</td>
<td>–1.4</td>
<td>–0.2</td>
</tr>
<tr>
<td>2004</td>
<td>–1.6</td>
<td>–0.2</td>
</tr>
<tr>
<td>2005</td>
<td>–1.9</td>
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</tr>
<tr>
<td>2006–2010</td>
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<td>–0.4</td>
</tr>
<tr>
<td>2011–2015</td>
<td>–4.7</td>
<td>–0.3</td>
</tr>
</tbody>
</table>


there are already indications of the type of problems the country can expect to face. In rural areas, AIDS is reducing the demographic pool from which future community leaders can be drawn and, through debilitation, helping to undermine civil participation in political affairs—both of which bear on the effectiveness of governance in what remains a nascent democratic state.\footnote{Author interview, University of Natal, Durban, August 17, 2001.}

Just as problematic is the effect that the disease is having on the effort to rebuild the educational system in the postapartheid era. Teacher deaths related to AIDS have risen by more than 40 percent since 2000 and currently stand in excess of 1,011.\footnote{Overall numbers of teacher AIDS-related deaths are projected to rise to 12,600 by 2010. See “AIDS Wipes Out [South Africa’s] Teachers,” \textit{Sunday Times} (South Africa), December 14, 2001; and “AIDS Wipes Out [South Africa’s] Teachers,” \textit{Sunday Times} (South Africa) (Internet version), available at http://www.Suntimes.co.za/2001/11/94/news/news02.osp, accessed January 10, 2001.} A severe shortage of both school and university instructors is expected to ensue during the next eight to ten years, which will play havoc with South Africa’s residual skills base and overall productive social capital.

On a wider scale, HIV/AIDS is having a profoundly negative psychological influence on victims, their extended families, and the fabric of civil society in which these social “units” exist. The emotional reaction to a positive diagnosis has tended to be far more acute than that to any other fatal illness because of the stigma that surrounds HIV—the disease has frequently led to the ostracization of entire families within their communities—and the fact that patients are usually relatively young when they become infected. Not only have these factors resulted in entrenched feelings of hopelessness, depression, despair, and anger, they have also directly affected the trust, interaction, and cooperation that lie at the heart of any functioning civil society.\footnote{Whiteside and Sunter, \textit{AIDS}, pp. 92–94; Shell, “Halfway to the Holocaust,” pp. 19–20.} The long-term effects of these community dynamics will be significant and are liable to continue to impinge on South Africa’s human development long after the AIDS epidemic has peaked.
Military Preparedness

Beyond human, economic, and social considerations is the impact that the current HIV crisis is likely to have on the capabilities and operational effectiveness of the South African National Defense Forces (SANDF). The prevalence of HIV within the military is somewhat difficult to determine due to a lack of publicly available data. However, the SANDF itself has acknowledged that between 10 and 12 percent of its soldiers are infected with the virus. Most commentators within South Africa believe this to be a conservative estimate at best and typically put overall prevalence levels closer to or above the national average of 22 percent. One report in 2000 claimed that as many as 60 to 70 percent of the military could be infected, a figure that is comparable or greater than that of other sub-Saharan armies (see Table 3.5). The bulk of those with HIV are believed to be within the 20–29 age category—the tactical and operational heart of the SANDF—with “guesstimates” of overall prevalence in that category as high as 50 percent.

HIV will undermine the combat readiness, effectiveness, and credibility of the SANDF in a number of ways. As the disease develops, more and more troops will have to be retired from active combat duty and transferred to less demanding support and logistics roles.

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55See “60% of [South African] Army May Be HIV Positive,” Mail and Guardian (South Africa), March 31, 2000. One unit in the border regions of KwaZulu-Natal has been repeatedly cited as having immunodeficiency rates in excess of 90 percent.

56Author interview with representatives from the South African Military Academy, Cape Town, August 18, 2001. See also Mills, “AIDS and the South African Military,” p. 70. All those joining the defense forces are required to undergo mandatory HIV testing prior to recruitment and all those identified with the disease are barred from entry. This means that HIV infection within the SANDF occurs after enlistment. There are several reasons accounting for this, notwithstanding the artificially ordered, structured, and isolated nature of the defense forces and the availability of healthcare and counseling services not available to the public at large. Soldiers are predominantly young, sexually active, governed more by peer pressure than established social norms and frequently dislocated from their families. These factors weigh heavily in favor of prostitution use, which, given the self-perceptions of invincibility that troops are typically imbued with, often takes place in the absence of condoms. Exacerbating the situation is the prevailing practice of inoculating combat forces with live attenuated viruses, which, when combined with highly stressful operational environments, is believed to help heighten the overall susceptibility to HIV infection.
Table 3.5
HIV Prevalence Rates in Selected Militaries in Sub-Saharan Africa

<table>
<thead>
<tr>
<th>Country</th>
<th>Estimated HIV Prevalence (Percentage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Angola</td>
<td>40–60</td>
</tr>
<tr>
<td>Congo (Brazzaville)</td>
<td>10–25</td>
</tr>
<tr>
<td>Cote d’Ivoire</td>
<td>10–20</td>
</tr>
<tr>
<td>Democratic Republic of the Congo</td>
<td>40–60</td>
</tr>
<tr>
<td>Eritrea</td>
<td>10</td>
</tr>
<tr>
<td>Malawi</td>
<td>75</td>
</tr>
<tr>
<td>Nigeria</td>
<td>10–20</td>
</tr>
<tr>
<td>Tanzania</td>
<td>15–30</td>
</tr>
<tr>
<td>Uganda</td>
<td>66</td>
</tr>
<tr>
<td>Zimbabwe</td>
<td>80</td>
</tr>
</tbody>
</table>


This will inevitably lead to a “hollowing out” of the army’s operational middle management and a concurrent loss of expertise and experience derived from the SANDF’s crucial 20–29 frontline age sector. Moreover, the practical effect of transferring HIV-infected combat personnel to fill backup logistics positions will be the creation of a support component that is both semitrained and increasingly sick.57

Development, discipline, and morale are also likely to suffer. Troopers discovering they are HIV-positive will have little incentive to attend training classes (as the possibility for a full military career will be effectively eliminated) and may well be tempted to be increasingly insubordinate (as consequences for disobeying orders will now be measured against the certainty of death). Unit cohesiveness will be similarly affected, both because of disruptions caused by AIDS-related sicknesses and reassignments and because of breakdowns in force collegiality brought about by the general stigmatization of soldiers infected with the virus.58

In addition to causing these organizational problems, AIDS is liable to have a direct bearing on Pretoria’s ability to participate in international peacekeeping missions. Current policy is that no HIV-positive personnel should be included in contingents slated for multinational or external duties. In effect, this means that nearly a quarter of the SANDF cannot be deployed overseas, which has greatly impinged on the government’s freedom to quickly employ combat units for foreign peacekeeping and peacemaking duties. According to officials with the country’s leading military academy, this is one of the main reasons for South Africa’s failure to play a more active role in trying to stymie the wave of civil violence that has engulfed the region surrounding the Democratic Republic of the Congo over the past three to four years.

A weakened military will have profound implications for Pretoria, both internally and externally. The nature of civil conflict in South Africa—which combines criminal, political, tribal, religious, and ethnic violence—is well beyond the enforcement capacities of the police, meaning that ultimately mitigation relies on the support of the defense forces. Seen in this light, any decisive reduction in the operational effectiveness of the SANDF is likely to have serious ramifications in terms of South Africa’s national security and stability.

Externally, South Africa’s inability to play a decisive role in regional peacekeeping missions is liable to undercut the country’s credibility as a viable regional hegemon and could act as a source of consider-


60 Author interview, Cape Town, August 18, 2001. See also Mills, “AIDS and the South African Military” p. 70. Besides these problems, AIDS is also likely to negatively affect the South African defense budget. As more and more soldiers become debilitated with HIV, so too will related healthcare, treatment, and personnel replacement costs rise. In certain sub-Saharan African armies, AIDS victims are already taking up 80 percent of military hospital beds. Replacing these soldiers and ensuring that they have access to sufficient medical resources will require substantial and ongoing investments, which a developing state such as South Africa (not to mention regional South African Development Community neighbors) can ill afford, much less sustain, for the next 10 to 15 years that the epidemic will take to run its course. For further details, see Heinecken, “Strategic Implications of HIV/AIDS in South Africa,” pp. 109–110.

61 Author interview, Cape Town, August 18, 2001.
able political embarrassment—particularly if forces cannot be sent to help contain sudden and widely publicized humanitarian emergencies. Moreover, because Pretoria’s military remains the best equipped and trained in sub-Saharan Africa, its absence from regional peacekeeping missions will significantly detract from the effectiveness of any future multinational deployments that are required. Consequently, zones of increased dissidence and conflict could quickly emerge, to the general detriment of stability in South Africa’s immediate neighborhood.

Civil Law and Order and Crime

Finally, HIV/AIDS could quite possibly emerge as one of the most important drivers of crime and civil instability in South Africa over the next two decades. One area that security analysts are paying particularly close attention to is the epidemic’s likely effect on the number of orphans as a percentage of the country’s general population. As previously noted, statistical models project that more than two million South Africans under the age of 15 will have lost their parents to AIDS by 2010 (see Figure 3.1).

Most of these youths will suffer from social and educational isolation as a result of the stigma that is attached to AIDS. Many will also be severely impoverished, particularly given that the loss of income-earning heads of households will occur in what are already the most marginalized and underdeveloped parts of rural South Africa. These two factors are liable to significantly exacerbate the effects of an age-crime correlation, which repeated criminological studies have shown to be at its height during the teenage years, especially when the individual in question lacks parental guidance, role models, and viable economic opportunities. There is, in other words, a danger of AIDS

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62 This latter issue would be especially acute if less militarily prepared states were able to respond to regional humanitarian emergencies and make highly visible contributions.


helping to produce a juvenile population that is at greater than average risk of engaging in delinquent behavior and exhibiting antisocial tendencies.  

Beyond the impact on orphans, the HIV/AIDS epidemic has the potential to negatively affect virtually all aspects of Pretoria’s criminal justice system. Not only is the disease projected to have a devastating effect on the effectiveness of the national police—which, given the age and marital structure of the force, is acutely prone to STDs—it is also liable to seriously degrade the efficiency of the judicial legal

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**Figure 3.1—Number of AIDS Orphans, 1998–2010**

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system by debilitating and/or killing key players, such as defense witnesses and trial prosecutors. Overall, this will both heighten the general perception that crime pays as well as serve to reduce popular confidence in the institutional enforcement capacity of the state. The former will provide added individual incentives to engage in crime, while the latter will work to exacerbate what is already a serious problem of mob justice and vigilantism.66

The net effect of these various developments will be entirely negative for South Africa’s civil stability, possibly reducing the country to widespread social anarchy within the next five to 20 years. In the words of one commentator, “As early as 2010, the year in which AIDS [is projected] to equal six million, South African society could be living out the values of a movie gangland dystopia such as [that portrayed in the movie] ’Mad Max.’”67

THE RESPONSE TO THE HIV/AIDS CRISIS IN SOUTH AFRICA

The Government Response

Despite the far-reaching and insidious impact that HIV/AIDS is having on South Africa, remarkably little concerted action has been taken by the government to address the disease. Although the true nature of the disease was largely unknown for many years and despite the challenges surrounding Pretoria’s own emergence from apartheid to democratic rule, it is generally accepted that far more could have been done and, more to the point, could be done now to stem the crisis.

A significant factor that has hindered government action over the last few years is the attitude of Thabo Mbeki.68 At the World AIDS Con-
ference in his own country, the South African President publicly questioned the link between HIV and AIDS, basing his views on the unconventional theories of Peter Duesberg and David Rasnick. Both of these scientists claim that AIDS is neither a new nor an unknown disease maintaining, rather, that it is a collection of preexisting viruses—the potency of which has been exacerbated by the twin effects of poverty and misapplied (Western-developed) pharmaceutical treatments. They also cite cases in which those confirmed with HIV have not developed AIDS as well as a handful of instances in which people have been diagnosed with immunodeficiency similar to AIDS but HIV has not been present to back up their contention that there is no necessary link between the two conditions.69

Although Mbeki has now withdrawn from the public debate over the root cause and epidemiology of AIDS, he has not retracted his previous endorsement of Duesberg and Rasnick. There is no doubt that the President’s prevailing attitude has served to delegitimize prevention programs that could have been instituted to contain and manage the disease, particularly the use of ARTs. These multidrug programs have been proven to substantially enhance the quality and length of life of HIV-infected persons and now form one of the most important weapons for battling AIDS throughout much of the Western world.70 These drugs are especially efficient at preventing mother-to-child transmission.

Initially, the high cost of ARTs—which runs to roughly US$10,000 per patient per year in the United States—precluded their use in most developing countries.71 However, over the past year, international pharmaceutical companies have substantially lowered the price of many of the drugs integral to these treatments to the extent that even the poorest countries in sub-Saharan Africa and the Asia-Pacific

70Author interviews, SABTS, Johannesburg, August 14, 2001, and MRC, Durban, August 16, 2001.
region can now contemplate their use. Pretoria has been largely unwilling to embrace the widespread adoption of ART programs, however. Although AIDS activists and pediatricians won a landmark ruling in December 2001 forcing the government to provide ARTs to expectant mothers infected with HIV—which has been shown to be an extremely cost-effective method of mitigating mother-child transmission—it remains unclear how comprehensively these drugs will be distributed. The Mbeki administration continues to argue that the effectiveness of ARTs remains unproven and that certain treatments may be toxic to the patient. The President has also made several ill-advised pronouncements alluding to the presumed motives of Western pharmaceutical companies in developing poor countries where up to 50 percent of people do not have access to even the most basic drugs.

At this stage, Pretoria’s main response to the epidemic has been to impress prevention and control through abstinence, faithfulness to one partner, and condom use. As part of this effort, ZAR500 million (US$62.5 million) has been invested in educational and awareness programs and more than 200 million condoms have been dispersed. However, these initiatives will have no bearing on the millions of South Africans who have already contracted HIV and who will die over the next five to ten years from AIDS. Moreover, most of the publicity has focused on a U.S.-style “Love Life” billboard campaign, the message of which health workers claim has been largely lost on the bulk of the population because of overly complex and

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72See Brubaker, “The Limits of $100 Million.” In large part, the willingness of international pharmaceutical companies to lower the price of ARTs stems from threats made by developing countries to ignore patent laws and allow the manufacture of generic drugs to treat AIDS.


74Although there are legitimate concerns about the toxicity of certain antiretrovirals, especially those used to treat perinatal transmission, the proven benefits of these treatments is generally considered to far outweigh any potential dangers that might ensue.


subtle wording and imaging.\textsuperscript{77} It is also worth pointing out that achieving widespread behavioral and attitudinal change will take time (as has been evidenced with antismoking campaigns), something that is likely to be especially true in the case of such basic drives and needs as exist in sexual relations.\textsuperscript{78}

One potentially useful development that has occurred was the creation of a National AIDS Council (NAC) in early 2000. Chaired by the Deputy President of South Africa, Jacob Zuma, the council aims to assist in AIDS policy formulation, coordination, information exchange, and programmatic assessment. The value of the NAC stems from its cross-representational membership, which denotes perhaps the most concerted attempt to date to bring together sectoral and technical experts in one overarching forum.\textsuperscript{79} At the time of this writing, however, the council had been accorded with neither the budgetary nor the programmatic authority necessary to effectively fulfill its stated mandate.\textsuperscript{80}

**Nongovernmental Responses**

The lack of concerted government action to deal with the HIV/AIDS crisis in South Africa has prompted several other stakeholders to institute policies and initiatives of their own. Notable examples have included

- *Measures precipitated by industry.* Several companies have been instrumental in working with surrounding communities to educate prostitutes on preventative behaviors, such as condom use, with many also offering free screening and HIV/AIDS treatment. A few firms have also begun to pay the full cost of treatment for their employees (though a substantial number are moving to contract labor to offset all responsibility in this regard). The Coca-Cola Foundation, for instance, has stated that it will coordinate the efforts of its sub-Saharan subsidiaries and bottling

\textsuperscript{77}Author interview, MRC, Durban, August 16, 2001.
\textsuperscript{78}Benatar, “South Africa’s Transition in a Globalizing World,” p. 360.
\textsuperscript{79}Whiteside and Sunter, *AIDS*, pp. 126–127.
\textsuperscript{80}Author interview, MRC, Durban, August 16, 2001.
partners to support AIDS education, prevention, and treatment programs across the region.81

- **Privately backed initiatives.** One of the most important developments that has taken place in this regard is a major health investment drive financed by the Bill and Melinda Gates Foundation. In 2000, the nonprofit organization announced grants in excess of US$90 million to help battle AIDS in Africa. The funds will be used to develop microbicidal treatments for women, train health workers, and provide for children orphaned by AIDS. Recipients of grants in South Africa include the Palliative Medical Institute, the Health Systems Trust, the Planned Parenthood Association of South Africa, and AFRICARE.82 In January 2001, the Gates Foundation also issued a grant of US$100 million to help support the vaccine development work of the International AIDS Vaccine Initiative and its South African chapter. The pledge has received additional backing from the World Bank as well as the Rockefeller, Sloan, and Starr Foundations.83

- **Ad hoc and sector-specific programs.** Two highly visible schemes have been instituted over the last few years, On the Right Track AIDS Train and Trucking Against AIDS. The first, in effect, acts as a moving conference that travels around the country promoting discussion and debate on HIV/AIDS and features delegates from women’s organizations, the scientific and academic communities, and the media. The second is a joint project aimed specifically at the road freight industry and promoting awareness about protected sex among long-distance truck drivers. Launched in 2000, the project involves representatives from the Department of Transport, the Road Transport Industry Education and Train-

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ing Board, trade unions, and commercial transportation companies (including Engen and Mercedes-Benz).84

Although privatized and industrial responses are important, the latitude for them to make a decisive impact on the spread of HIV/AIDS in South Africa has been minimal. As with the NAC, these initiatives have failed to attract support from the central administration and continue to be held captive to the predilections of a government that has so far eschewed a full, open, and constructive debate on the disease and its root causes based on objective evaluations of all available data.85

THE INTERNATIONAL RELEVANCE OF THE HIV/AIDS CRISIS IN SOUTH AFRICA

It is readily apparent that the HIV/AIDS crisis in South Africa carries significant consequences for the country’s security—economically, militarily, in terms of national crime, and as an issue of basic human survivability. The implications of the epidemic extend well beyond Pretoria’s national borders, however, and have direct relevance both regionally and internationally.

South Africa remains crucial to the overall stability of the sub-Saharan region by virtue of its relative wealth, power, size, and status. Not only do neighboring countries depend on Pretoria in terms of trade, investment, and markets, they also look to the republic as the logical state to help dampen and mitigate local sources of tension and conflict. In addition, the republic acts as a crucial diplomatic anchor in Africa, playing the lead role on such bodies as the Southern African Development Community and the Organization of African Unity. Any decisive reduction in South Africa’s own security, therefore, is sure to have a highly negative impact on wider regional stability, exacerbating the poverty, internal chaos, and general disruption that have confined countries like Zimbabwe, Zambia, Mozambique,

84Whiteside and Sunter, AIDS, pp. 128–130.
85Author interview, MRC, Durban, August 16, 2001.
DRC, Malawi, and Angola to the very lowest echelons of the human development index.\textsuperscript{86}

The pandemic also has direct relevance for the wider global community. South Africa remains a reservoir of HIV infection that puts other countries at risk, including, in era of globalization, those with boundaries far from Pretoria’s frontline states. Moreover, as noted above, any diminution in the republic’s own standing is almost certainly going to exacerbate instability in sub-Saharan Africa. This could well heighten pressure on outside states to undertake a more direct role in the affairs of the region, particularly resource-rich polities that presently rely on Pretoria to act as a viable African conflict dampener and middle power broker (such as the United States and the European Union).\textsuperscript{87}

Most significantly, however, the HIV/AIDS crisis in South Africa is a stark reminder of the pervasive and insidious impact that infectious organisms can have on a state’s wider stability and viability. Many of the conditions underscoring the spread of HIV—poverty, apathy, urban sprawl, misinformation, lack of public infrastructure, and societal dislocation/imbalance—have relevance to disease incidence in general and exist on a universal basis (albeit in varying degrees). A crisis of similar proportions could, therefore, break out in any country at any time, particularly given an international environment that is at once both global and interdependent in nature.

In short, the South African case underscores, in the most visible terms, the need for national and international disease preparedness. This requirement is as incumbent on the United States as it is on polities in Africa, Asia, Europe, and Latin America, and it is to consideration of this issue that this report turns in Chapters Four and Five.

\textsuperscript{86}Author interview, London School of Tropical Medicine and Health, London, August 20, 2001. For an explanation of the human development index, see http://www.undp.org/hdro/.

\textsuperscript{87}In this sense, if South Africa fails, so does southern Africa. Such considerations have particular relevance for America and European states such as France and Britain (the former by virtue of its role as a global hegemon, the latter due to their historic/colonial ties), as it would then, by default, fall to these countries to “pick up the pieces,” not only in South Africa but regionally as well.