CUBA AS A "WORLD MEDICAL POWER": The Politics of Symbolism*

Julie M. Feinsilver
Yale University

Although most government leaders espouse the principle of "health for all," few pay more than lip service to the ideal by allocating adequate resources for its development. In Cuba, however, health care is a basic human right and the responsibility of the state. Cuban leaders consider health indicators to be measures of government efficacy,[1] and as a result, health care has assumed an inordinately prominent place in Cuban government policies despite the present world economic crisis. Although affected to a lesser extent because of its integration into the Community for Mutual Economic Assistance (CMEA),[2] Cuba has nevertheless been increasing health care expenditures in the face of economic adversity.[3]

Since 1978 Fidel Castro has made a number of declarations about the direction of Cuban medicine, predicting that Cuba would become "the bulwark of Third World Medicine," put a doctor on every block, become a "world medical power," and equal or surpass the United States in certain health indices.[4] Given Cuba's identity as a small developing nation with scarce resources, a high degree of economic dependency on a distant benefactor (the Soviet Union), an economic embargo by its most natural trade partner (the United States), and the constant threat of destabilization from abroad, the question arises as to why Cuba would try to achieve such goals. Further, how could a small country like Cuba even attempt to become a "world medical power"? Also,

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how does becoming a world medical power fit in with Cuba's larger goal of societal transformation? This article will address these questions, assess whether Cuba's invocation of the phrase "world medical power" meets a minimum threshold of credibility, and analyze the symbolic significance of becoming a "world medical power."

CUBAN FOREIGN RELATIONS AND SYMBOLIC POLITICS

Geographically small states are presumed to have little ability to become major actors on the world stage, even less if they are developing countries with scarce resources. Some small developed states have held great power through military might, economic prowess, scientific and technical achievement, or political control over large territories or colonies.[5] But no small developing country has been able to exert power and influence characteristic of a major player in world politics except Cuba.[6]

Cuba has projected disproportionately greater power and influence through military might in Angola and Ethiopia, through economic largesse as a purveyor of military and civilian technical aid, as a mediator in regional conflicts, and as a forceful and persuasive advocate of Third World interests in international forums. Cuba's scientific achievements, while limited, are also being shared with other Third World countries, thereby furthering Cuban influence and prestige abroad.

What accounts for this seemingly disproportionate Cuban presence in world politics? Some have argued that Cuba acts as a proxy for the Soviet Union, but Cuba has pursued its own foreign policy, which at times has coincided with Soviet policy but at other times has diverged from it.[7] Cuba has even led the Soviet Union into commitments that it would not have otherwise made, as in Angola, Nicaragua, and Grenada. Soviet aid has clearly facilitated Cuba's international activism but has not determined it.

The Cuban government explains its policy of proletarian internationalism and solidarity as repayment of its debt to humanity for international assistance received, particularly in the early years of the Revolution.[8] Some observers note that Cuban foreign policy initiatives are geared toward ensuring Cuba's security in an adverse geopolitical situation through the support of progressive governments. Others refer to the existence of a large pool of young, underemployed educated and skilled workers that can be tapped for foreign policy purposes as a factor contributing significantly to Cuban international activism.

Demography and Soviet aid can partially elucidate how Cuba is able to sustain its activist stance. But the reasons why Cuba plays such a major role with relative success can be more easily understood by considering the power of symbolism. Cuba's success has resulted partly

from the vehement opposition of the United States. The failure of U.S. policy to overthrow the Castro government or to force changes in domestic or foreign policy has cast Cuba as a David confronting the Goliath of the North. This role, in turn, has helped convert this otherwise small, insignificant island nation into a major Third World power.

Despite decades of mutual hostility and mistrust, U.S.–Cuban relations can be characterized from the Cuban perspective as a love-hate relationship. While admiring the United States, Cubans hate its government for trying to overthrow and thwart their own. Notwithstanding the fraternal Soviet relationship with Cuba, Cubans seem to prefer that which is American. As a result, the United States has been the omnipresent unseen actor who, in the Foucaultian sense, has indirectly affected Cuba's policies when not affecting them directly.[9] While seeming to look elsewhere for recognition—to the Third World or the Socialist bloc—Cuba really looks to the United States for vindication.

The interpretation and manipulation of symbols is an important aspect of politics that can have serious consequences, as was demonstrated by one example of U.S.–Cuban relations.[10] In 1985 the U.S. government chose to affront Cuba politically and symbolically by creating an anti-Castro radio station named after the man revered in Cuba as the intellectual author of the Cuban Revolution, José Martí. This intentional symbolic attack added insult to injury. Castro was so outraged by the creation of Radio Martí that he broke off a recently signed immigration agreement with the United States and temporarily foreclosed the opportunity to lessen tensions between the two countries. The agreement was not reinstated for almost three years, during which time U.S.–Cuban relations were the worst they had been since the Bay of Pigs and the Cuban missile crisis in 1961 and 1962.

Symbols may also function as a kind of currency. As Pierre Bourdieu has shown, symbolic capital (goodwill, prestige, influence, power, and credit) can—like material capital—be accumulated, invested, and spent. Symbolic capital is created by the investment of material capital and time into a project. While the short-term benefits, which are symbolic, appear to be non-economic and therefore disinterested, the complete cycle of circulation of symbolic capital indicates that material capital is invested to produce symbolic capital, which is ultimately converted back into material capital. Thus symbolic and material capital become interconvertible.[11]

Bourdieu's concept of the accumulation of symbolic capital can be used to analyze Cuban foreign policy. Acquiring allies or a clientele requires investing both material and symbolic capital in the forms of economic, technical, or security aid and in political or moral support. Although exhibition of symbolic capital is always very expensive in economic terms, it is necessary for the further accumulation of capital in its

various forms.[12] As this article will show, Cuba's efforts to become a world medical power can be viewed in part as an exercise in symbolic capital accumulation.

IS CUBA BECOMING A "WORLD MEDICAL POWER"?

Cuban Claims

In numerous speeches, Castro has predicted that Cuba would become a world medical power. He has employed this concept in an attempt to win acceptance of the label he seeks to attach to Cuba in the near future, a label symbolic of much larger issues than health and medicine. The phrase "world medical power" connotes socioeconomic development, scientific achievement, a model health system, and influence in the international arena. Socioeconomic development is generally measured by a number of indicators, but the most telling are the infant mortality rate and life expectancy at birth because they encompass a range of other indicators as inputs, including sanitation, sewage systems, potable water, nutrition, medical services, education, housing, employment, equitable distribution of these factors, and economic growth.[13] Moreover, in order to become a world medical power, Cuban medicine should have an impact on other countries, and Cuban health achievements should be admired and considered worthy of emulation by others.

To be believable, Cuban claims of becoming a world medical power have to attain a minimum threshold of credibility. My analysis will use Cuban criteria to judge the country's success at what Cubans claim to be attempting. These criteria then will be compared with more "objective" criteria. Cuban criteria, although nowhere succinctly listed, include these five factors: general health indicators, especially the infant mortality rate and life expectancy at birth; the number and distribution of human resources, particularly the physician-to-population ratio and the overall health personnel-to-population ratio; provision and expansion of universal primary and preventive care and high-technology tertiary care; biotechnology research; and provision of medical aid to other developing countries.[14]

Cuban Success according to Comparative Health Indicators

By concentrating its resources in the health field, Cuba already has become a showcase for achievement in health. Its success has been acclaimed by Dr. Halfdan Mahler, the Director-General of the World Health Organization (WHO), and Dr. Carlysle Guerra de Macedo, Director-General of the Pan American Health Organization (PAHO), as

well as by medical professionals from the United States and other capitalist countries who have observed the Cuban health system in action.[15] Despite U.S. hostility toward Cuba, a U.S. government document stated in 1982 that the "Cuban Revolution has managed social achievements, especially in education and health care, that are highly respected in the Third World . . . , [including] a national health care program that is superior in the Third World and rivals that of numerous developed countries."[16] This success, which was built on a solid prerevolutionary base,[17] spurred Castro to announce in January 1985 that Cuba has stopped comparing its health statistics with those of other developing countries and has officially begun to compare its data with U.S. statistics.[18] Furthermore, Cuba claims to be competing with all capitalist countries in the expectation of surpassing their health indicators in the next fifteen to twenty years.[19]

A comparison of Cuban health statistics with those of developing and developed countries demonstrates that the Cubans have good reason to compare themselves with the United States and to consider themselves competitive because their health indicators are closer to those of the developed nations (see table 1). Cuba's overall success in achieving these health indices is illustrated by the infant mortality rate and life expectancy at birth. In 1982 Cuba's infant mortality rate had fallen to a level only one point higher than the average rate for all developed countries and was seventy-three points lower than the average rate for all developing nations.

By 1984 Cuba's infant mortality rate was 15 per 1000 live births, only 3.5 points higher than the U.S. 1982 rate (latest U.S. data at that time), and one of the lowest fifteen in the world.[20] Data for 1985 indicated a slight increase in Cuba's infant mortality rate to 16.5 per 1000 live births.[21] Cuban authorities vowed to redouble their efforts to lower the rate again to below 15 per 1000 live births for 1986.[22] Given the importance the Cuban government has placed on reducing infant mortality as part of the strategy to become a world medical power and its competitiveness with the United States, it is not surprising that this rate was decreased below predictions to 13.6 per 1000 live births in 1986 and 13.3 in 1987.[23] Cuba's infant mortality rate will probably continue to decrease as further efforts in that direction continue, such as the installation of perinatal intensive-care units in all maternity hospitals in 1987, increased genetic screening for congenital abnormalities, and the intensified efforts of the new family doctors.[24] The latest preliminary data for the United States indicate an infant mortality rate of 10.6 per 1000 live births in 1985 and 10.4 per 1000 live births in 1986, with rates for blacks almost twice the national rate, suggesting that Cuba is beginning to narrow the gap.[25] In 1982 life expectancy at birth in Cuba was surpassed only by Japan, Sweden, Switzerland, Denmark, Iceland, The

TABLE 1 *Selected 1982 Health Statistics for Cuba, the United States, the Soviet Union, and Averages for Latin America, Developed Countries, and Less Developed Countries*

Area	Health Expenditure per capita (in 1982 dollars)	Population per Physician	Population per Hospital Bed
Cuba	65	580	170
United States	589	500	170
USSR	178	250	80
Latin America (average)	30	1155	338
Developed Countries (average)	445	387	102
LDCs (average)	14	2044	570

Source: Ruth Leger Sivard, *World Military and Social Expenditures 1985* (Washington, D.C.: World Priorities, 1985), p. 39.

Netherlands, and Norway, being equaled by the United States, Canada, Australia, Belgium, and France.[26] It is also noteworthy that the five major causes of death for the general population and for infants were the same in 1982 for Cuba and the United States.[27]

Human Resources

Unlike systems in other developing countries, China, and the Soviet Union, Cuba has established a health-care system that is based on physicians rather than paramedics.[28] By the end of 1986, Cuba had 25,567 doctors, or one doctor for every 399 inhabitants.[29] Projecting the growth of the general population and the physician-to-population ratio for the year 2000, Cuba will have approximately one physician for every 196 inhabitants, a ratio far exceeding the island's medical needs as well as the physician-to-population ratios of the most developed countries.[30] Projections for the United States indicate that there will be 1 doctor for every 405 inhabitants in the year 2000.[31] Cuba is expected to have so many doctors by the year 2000 because Castro believes that there can never be too many doctors or health workers. He envisions having "a doctor on every fishing boat, on every merchant ship, in every school, in every factory, on every block."[32] He has also urged a massive increase in biotechnology research and international medical aid. A 1984

Infant Mortality per 1000 Live Births	*Life Expectancy at Birth (years)*	*Daily Calories as % of Nutritional Requirements*[b]	*Daily Protein Supply per Capita*[b] *(grams)*	*Population with Safe Water*[c] *(%)*
17	74	126	75	62
11	74	138	106	99
36	70	133	100	—
61[a]	65	111	67	71
16	73	133	100	94
90	59	104	58	51

[a]Data for most developing countries (except Cuba) understate infant mortality due to inadequate registration systems.

[b]These data are national averages and do not reflect distribution patterns. In Cuba distribution is equal for the rationed basic food supply but not for unrationed foods bought in the parallel (free) market.

[c]Data are for any year available between 1975 and 1983.

plan called for seventy-five thousand doctors by the year 2000 but was reduced in 1986 to sixty-five thousand: ten thousand to provide international aid, twenty thousand to provide primary care in the family doctor program (*médico de la familia*), thirty thousand to staff the various health-care facilities and research institutes, and five thousand to serve in factories and schools.[33]

The original plan called for sabbaticals provided by a reserve force of another ten thousand physicians, but this idea was temporarily suspended in the 1986 revision. Paid sabbaticals for physicians are not unusual in Communist countries, but they are remarkable for non-Communist developed countries and extraordinary for a small developing nation.[34] Whether or not this plan is implemented, the mere fact that it was given serious consideration and may eventually be implemented is amazing for a developing nation with serious economic difficulties. The plan is also indicative of Cuba's commitment to quality health care.

In addition to multiplying the number of physicians, Cuba is also

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TABLE 2 *Ratios of Doctors, Nurses, and Nursing Personnel per 10,000 Population, 1979 and 1984*

	Doctors		Nurses		Nursing Personnel	
Place	*1979*	*1984*	*1979*	*1984*	*1979*	*1984*
Cuba	14.8	19.1	14.6	26.5	13.4	9.0
Latin America	9.1	11.2	4.0	4.1	10.9	7.8
Caribbean[a]	5.0	7.1	18.3	22.1	8.2	7.8
North America	19.5	21.2	51.3	81.8	61.3	52.3
PAHO Region[b]	13.9	15.7	23.7	35.3	31.8	26.4

Source: Pan American Health Organization, *Health Conditions in the Americas, 1981–1984* (Washington, D.C.: PAHO, 1986), 150, 153, 154.

Note: All figures represent ratios per 10,000 population.

[a]Non–Latin American Caribbean.

[b]The Pan American Health Organization Region includes all of North, Central, and South America and the Caribbean.

training a large number of other health personnel in comparison with other countries in the region. Most developing nations suffer from a shortage of doctors and nursing personnel, as well as a shortage of nurses relative to the number of doctors (see tables 2 and 3). Developing countries with a good nurse-to-doctor ratio generally have a low number of doctors rather than a good doctor-support system, whereas in developed countries a reasonable nurse-to-doctor ratio may reflect adequate coverage for hospital-based and long-term care. The nurse-doctor ratio is important because it promotes efficiency in health-care delivery, extending scarce resources by allowing doctors to delegate routine work to nurses. The 1980 goal for the Pan American Health Organization region was 237 nursing personnel per 100 medical doctors. While Cuba did not meet the 1980 goal because it produces many doctors and nurses, it has made considerable progress toward this goal (see table 4). In 1984 Cuba's ratio of doctors per ten thousand inhabitants was almost double the Latin American ratio, and Cuba's ratio of nurses per ten thousand inhabitants was almost seven times as high.

More important than sheer numbers is the actual distribution of medical personnel across the country. Because the Cuban government controls entry into medical school, the type of training received, and employment on graduation, it can produce the quantity and variety of physicians needed according to long-range plans. Problems like understaffing of doctors in hospitals in the eastern provinces are being remedied by specialists from Havana filling the gaps in five-year assignments until enough local people can be trained. Similarly, family doctors are being dispatched from Havana to provide primary care to dis-

TABLE 3 Ratios of Nurses and Nursing Personnel per 100 Doctors, 1979, 1984, and 1987

Place	*1979*	*1984*	*1987*
Cuba	190.2	186.0	206.1
Latin America	204.6	128.8	—
Caribbean[a]	516.3	405.5	—
North America	578.8	631.8	—
PAHO Region[b]	450.8	439.6	—

Sources: Calculated from Pan American Health Organization, *Health Conditions in the Americas, 1981–1984* (Washington, D.C.: PAHO, 1986), 150, 153, 154; and República de Cuba, Ministerio de Salud Pública, *Informe Anual 1987* (Havana: MINSAP, 1988), 61.

[a]Non–Latin American Caribbean.

[b]The Pan American Health Organization Region includes North, Central, and South America and the Caribbean.

persed rural populations. Less developed specialties are also being given priority in medical education.[35] Some distributional differences persist, but they can largely be explained by the imperatives of a regionalized, hierarchically organized national health system. Despite these distributional differences, all Cuban provinces fare considerably better than the Latin American average in doctors and nurses per ten thousand inhabitants.[36] Compared with other countries, developed and developing, where rural areas and urban ghettos are underserved (if served at all), Cuba has a rather equitable distribution of medical personnel.

Innovative Primary Care

In an effort to "revolutionize" primary care, the Cuban government established the family doctor program in 1984. This program called for twenty thousand doctors and twenty thousand nurses to provide entry-level primary care on each city block and in the mountainous rural areas by the year 2000. Family doctors are trained in social and comprehensive general medicine and thus can focus on both cure and prevention, including education to alter unhealthy habits like sedentarism, smoking, and poor nutrition due to unhealthy traditional food preferences. Most family doctors and nurses live and work on the city block or in the rural community they serve in order to comprehend better the psychosocial and biological problems of their patients and to provide immediate and continuous care.[37] Preliminary results indicate that this program has cut medical costs through decreased hospitalization and emergency room use, better patient compliance due to im-

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TABLE 4 *Cuban Health Personnel in Training, 1984 and 1987*

Type	*1984*	*1987*
Medical students	21,000	24,629
Dental students	2,000	2,251
Graduate nurses	1,600	3,487
Nurses and medical technicians	29,000	20,156

Sources: *Granma Weekly Review,* 18 Nov. 1984, p. 3, and 14 June 1987, p. 12; and Republic of Cuba, *Public Health in Figures: Statistical Summary 1986* (Havana: MINSAP, 1987), 61, 65.

proved monitoring, improved patient fitness through the promotion of exercise and proper diet, and prevention.[38]

The family doctor program had already served more than one million people by 1985.[39] By mid-1988, 4.2 million persons were under the care of 6057 family doctors, including the dispersed rural population of the mountains in Guantánamo province, one of the more remote areas of the island.[40] Although the concept of family medicine is not new,[41] the way the Cubans practice it is innovative. More important, this program is the first concerted effort to provide such care universally, without charge, as part of an integrated national health system.

Beyond Primary Care

Cuba has also been increasing the quality and quantity of its human resources to further expand the provision of high-technology diagnostic imaging and medical care. Imaging is done with nuclear magnetic resonance (NMR), computerized axial tomography (CAT scanners), ultrasound, and with other means. Sophisticated medical procedures now performed in Cuba are numerous: heart transplants (since 1985), heart-lung transplants (1987), coronary bypasses, pacemaker implantation (since 1964), renal dialysis and transplants (since 1970), microsurgery to replace lost fingers and to perform opthamalogical procedures (since 1977), bone transplants, pancreatic and corneal transplants, combined kidney and pancreatic transplants (since 1985), bone marrow and liver transplants (since 1985), partial spleenectomy (1987), neural transplants to treat Parkinson's disease (1987), breast reconstruction by implantation of endoprostheses (1986), and extracorporeal lithotrixia.[42]

Moreover, in recent years, Cuba has been able to apply new medical procedures quickly. Four months after the Yale Medical School's Hospital performed its fifth heart transplant, the Hospital Hermanos Ameijeiras in Cuba performed its tenth.[43] At the postoperative end,

Cuba's intensive-care units across the island are equipped with high-technology monitoring devices and a large number of staff per patient.[44] A 1988 assessment of Cuba's foremost hospital, the Hospital Hermanos Ameijeiras, by a ranking PAHO official concluded that the staff "conduct research and use technology at the international cutting edge in the 38 medical specialties in which services are rendered."[45]

Biotechnology

Unlike most developing nations, Cuba has made great strides in research in biotechnology and genetic engineering. Cuban scientists have been synthesizing interferon and using it experimentally, employing genetic engineering techniques, and performing "monoclonal antibody work on alpha fetoprotein," among other activities.[46] The level of knowledge and quality of equipment of Cuban biogenetic engineering scientists are considered au courant by U.S. standards.[47] Yet Cuba has neither the resources nor the experience to be at the forefront of biotechnology research. Actually, Cuban scientists are taking bold steps in a few areas but are primarily acquainting themselves with the literature and some techniques that they have quickly mastered and are applying successfully.

The human resources needed for increasing Cuba's capability for biotechnology are partially projected in the plans for expanding the number of doctors by the year 2000, but many of these researchers are to be scientists rather than medical doctors. Cuba also requires more medical researchers for its twelve specialized medical research institutes where experimental and applied research has led to the development and application of new medical procedures, equipment, and cures.[48]

International Medical Aid

Domestic success in the medical field encouraged Cuban leaders to make health an important part of foreign policy. During the past twenty-six years, Cuba has provided civilian assistance to many Third World countries, in spite of its own economic difficulties. The first beneficiary was Ben Bella's newly independent Algeria, where Cuba sent a group of fifty-six doctors and other health workers for fourteen months in 1963,[49] despite the fact that half of Cuba's doctors emigrated shortly after the Revolution.

Currently, Cuba sponsors what the *New York Times* called "perhaps the largest Peace Corps style program of civilian aid in the world": some sixteen thousand doctors, teachers, construction engineers, agronomists, economists, and other specialists serving in twenty-two Third World countries.[50] In fact, Cuba has more doctors working

TABLE 5 *Communist Economic Technicians in LDCs, 1976, 1977, 1979, and 1981*

	1976 *Number* *(%)*	*1977* *Number* *(%)*	*1979* *Number* *(%)*	*1981* *Number* *(%)*
Total	70,145 (100)	89,345 (99.9)	107,300 (99.9)	118,760 (100)
USSR and E. Europe	45,345 (64.6)	58,755 (65.7)	80,830 (75.3)	95,685 (80.6)
China	20,415 (29.1)	24,015 (26.8)	12,860 (11.9)	—
Cuba	4,385 (6.3)	6,575 (7.4)	13,610 (12.7)	23,075 (19.4)

Sources: United States Department of State, *Soviet and East European Aid to the Third World, 1981* (Washington, D.C.: U.S. State Dept., 1983), 20; Central Intelligence Agency, *Communist Aid Activities in Non-Communist LDCs, 1979 and 1954–1979* (Washington, D.C.: CIA, 1980), 10, 21; CIA, *Communist Aid Activities in Non-Communist LDCs, 1978* (Washington, D.C.: CIA, 1979), 9; and CIA, *Communist Aid Activities in Non-Communist LDCs, 1977* (Washington, D.C.: CIA, 1978), 9.

abroad (fifteen hundred in twenty-five countries in 1985) than does the World Health Organization.[51] By January 1985, Cuba had one civilian international aid worker for every 625 inhabitants, whereas in 1982 (according to the latest disaggregated U.S. data), the United States had only one worker in the Peace Corps or the Agency for International Development for every 34,704 inhabitants.[52]

Cuba has also sent a far larger proportion of international economic technicians to developing nations than have the Soviet Union and Eastern Europe (see table 5). Cuba supplied 19.4 percent of the total Soviet, Eastern European, and Cuban economic technicians abroad in 1979,[53] although Cuba's population totaled only 2.5 percent of the combined populations of these countries.[54] Moreover, Cuba is the least developed of all of them. While the USSR and the Eastern European countries sent more economic technicians abroad than the Cubans, most were contract workers earning hard currency for their countries.[55] Moreover, Cuba's development of doctors as an export commodity is unprecedented. The Soviet Union, Eastern European countries, and China provide some medical assistance to developing nations, but it is a small part of their aid programs. None of these countries train surplus doctors specifically for export, as does Cuba.

In 1977 China had almost four times the number of economic technicians abroad as Cuba, but by 1979 Cuba was providing twice as many economic technicians due to the fact that China had cut its aid by 50 percent and Cuba had doubled its efforts.[56] In medicine alone, Cuba

has far outpaced China in providing international aid: Cuba sent as many health workers abroad in three years (1983–1985) as China sent in the past twenty-three years (1963–1986).[57] For data on the extent of Cuba's overseas medical program in recent years, see table 6.

During the 1981–1985 quinquennium, Cuban civilian internationalist technicians, professionals, and scientists provided services in the following countries: Angola, Algeria, Benin, Burkina Faso, Burundi, the Cape Verde Islands, Congo, Egypt, Ethiopia, Ghana, Guinea, Guinea-Bissau, Equatorial Guinea, Guyana, India, Iraq, Kuwait, Kampuchea, Laos, Libya, Madagascar, Mali, Mozambique, Nicaragua, Nigeria, São Tomé and Príncipe, Seychelles, Tanzania, Uganda, Democratic (South) Yemen, Zambia, Zimbabwe, Grenada (until October 1983), and Jamaica (ended in 1981). Medical aid was also provided to the Polisario Front in the Western Sahara and the Frente Farabundo Martí de Liberación Nacional guerrillas of El Salvador.[58] Twenty of these countries are known to receive Cuban medical aid, and it is likely that all do (except India), given that medicine is one of Cuba's more important aid sectors.[59]

Figures for 1977 indicate that Cuba provided between 45 percent and 84 percent of the doctors in seven countries (six of them in Africa) and sent 650 health care workers to Libya as well, of which 357 were doctors.[60] Cuba had 686 medical workers in Angola in 1981, of whom 335 were doctors and 12 were dentists. These workers saw about one million patients during that year.[61] By 1984 there were 234 Cuban medical personnel stationed in Ethiopia, of whom 130 were doctors and dentists.[62] In Ethiopia alone, between 1979 and 1981, Cuban doctors treated almost one and a half million patients.[63] In 1978 Cuban medical workers treated over 39,000 patients in the People's Republic of the Congo, and 200,000 patients during a fifteen-month stay in Guyana.[64] Although Cuba sent only twelve doctors to Grenada in 1979, by mid-1980, they had treated about half of Grenada's population and tripled Grenada's number of doctors.[65] During fifteen months in Iraq from late 1984 through 1985, Cuban physicians treated over one million patients on an outpatient basis, performed seventeen hundred operations, and assisted thirty-seven hundred births.[66] In 1986 there were 372 Cuban medical workers in various Iraqi cities, some of whom were orthopedists working at the Children's Orthopedic Hospital in Baghdad, a hospital developed with Cuban assistance.[67] The Cuban medical brigade in Nicaragua in 1987 "treated 856,000 patients, carried out 7163 major operations and delivered 1704 babies."[68]

These "proletarian internationalists," as they are called in Cuba, often work in remote areas, providing services never before experienced by the host country's population.[69] In Laos eleven members of a Cuban medical brigade organized two medical posts in remote areas.[70] Two Cuban medical brigades work in Mali, the larger one is in the

TABLE 6 Medical Internationalists, 1981–1985

Year	Total Medical Workers	Doctors	Dentists
1981	2000+	—	—
1982	2551	1319	—
1983	3044	1675	58
1984	2000	1200	—
1985	2500	1500	—

Sources: *Granma*, 10 Dec. 1981, p. 1; Granma, 28 July 1982, p. 3; *Granma Weekly Review*, 17 July 1983, p. 11; *Granma Weekly Review*, 18 Nov. 1984, p. 3; *Granma Weekly Review*, 24 Feb. 1985, suppl. p. 3; and Carlos Martínez Salsamendi, "El papel de Cuba en el Tercer Mundo: America Central, El Caribe, y Africa," in *Cuba y Estados Unidos: un debate para la convivencia*, compiled by Juan Gabriel Tokatlian (Buenos Aires: Grupo Editor Latinoamericano), 144.

Note: Cells without information indicate that data were not available.

remote town of Segou and the other in the capital, Bamako.[71] In the remote town of Harar, Ethiopia, the Police Hospital is staffed entirely by Cubans, with the exception of one Ethiopian doctor.[72]

Cuban medical aid workers also help train the local population, thereby producing their own replacements and reducing the ratio of Cuban physicians to the total indigenous physician population. This practice has been followed in Yemen, Ethiopia, and Guinea-Bissau. In Democratic (South) Yemen, Cubans constructed, equipped, and staffed the first medical school, and also provided direct medical care. The school opened in 1975 with fifty-seven students and seven Cuban professors, but by 1982, when the first doctors graduated, the school consisted of over four hundred students, twenty-four Cuban professors, and thirty-five Cuban-trained Yemeni professors. During the seven years prior to 1982, one hundred Cuban medical professors taught in Yemen.[73] As of 1979, Cuban medical assistance to Ethiopia included professors for the medical school at the University of Addis Ababa.[74] Aid to Guinea-Bissau to establish a medical school in 1987 included nineteen experienced medical professors, among them a founder of the premier postrevolutionary medical school in Cuba.[75] Cuba is also helping Guyana construct and staff a medical school at the national university.[76]

Having trained local doctors in some countries, Cuban internationalists can now dedicate their efforts to providing secondary and tertiary care and further training for local doctors. This shift occurred in Ethiopia, where in 1984 only ten Cuban medical workers (including six doctors) out of more than two hundred medical personnel delivered primary care services in remote areas "as a symbol of the solidarity of

our health workers." The remainder worked in thirty-four hospitals in twelve of Ethiopia's fourteen provinces.[77] This trend away from primary care has probably resulted from both an increase in the number of Ethiopian doctors trained and the number of Cuban specialists available for international assignments.

Cuban medical aid to other countries also offers medical care in Cuba. For example, in 1983 Cuba agreed to provide free hospital treatment for a certain number of Guyanese during that year and to extend for another two years the terms of the twenty-four Cuban doctors already serving in Guyana.[78] Nicaraguans requiring advanced medical procedures are also treated in Cuba. In 1987 a young Nicaraguan underwent a neural transplant in Cuba, and twenty Nicaraguan children underwent cardiovascular surgery.[79]

Cuba's international aid also includes free education in Cuba. While the Reagan administration has decreased the number of government scholarships for study in the United States available to Third World candidates, Cuba has steadily increased the number of international scholarships it offers. During the 1984–85 academic year, twenty-two thousand scholarship students from eighty-two developing countries were studying in Cuban high schools and universities, some at the postgraduate level.[80] In the area of medicine at the end of 1984, Cuba was hosting eighteen hundred scholarship students from seventy-five Third World countries who were studying to be intermediate-level medical technicians or doctors or were taking postgraduate medical courses.[81] By comparison, in 1982 the U.S. government funded only nine thousand scholarships for Third World students, and this number has decreased as funding for the program has been reduced.[82] Of all the foreign students studying at the university level in the United States in 1985, the U.S. government funded less than seven thousand.[83] Cuba also provided proportionately more scholarships than the Soviet Union, Eastern Europe, and China, which together awarded about fifty-five thousand in 1979.[84]

Particularly significant is the Cuban policy requiring foreign students to return to their own countries at the end of their coursework.[85] In contrast, various cohort studies indicate that between two-thirds and three-fourths of all foreign medical graduates who enter the United States to work or study never return to their home countries to practice.[86]

Cuba also donates medical equipment, supplies, and even complete facilities to countries in need. It recently gave the Bolivian government two fully equipped pediatric intensive-care units (one in 1985 and the other in 1987), and a third one is currently under construction.[87] Ecuador, El Salvador, Mexico, and Peru received significant medical aid from Cuba following major earthquakes.[88] Cuba also donated six rural

hospitals to Peru.[89] All these gifts are stunning examples of medical diplomacy toward capitalist countries. After all, who can fault the kind of aid that will save thousands of lives?

In addition to direct medical assistance and training programs, Cuba also shares its expertise by annually sponsoring numerous international medical conferences. These gatherings bring together hemispheric experts as well as those from some developed countries, the socialist countries, and international organizations. Apart from the scientific papers discussed, the Cubans use these opportunities to show off their own health system through scheduled visits to facilities. On the whole, conference participants have come away impressed with Cuba's accomplishments in health care.[90]

In July 1986, Cuba opened another major research center for genetic engineering and biotechnology research with the explicit intention of fostering international collaboration. The government expects the facility to house more than one hundred foreign researchers in addition to Cuban scientists in the near future.[91] Because the Cubans share their knowledge and expertise with other developing countries, some United Nations agencies have concluded that development aid to Cuba is a good investment precisely because of this multiplier effect.[92]

THE CREDIBILITY OF CUBA'S CLAIMS

Health Indicators

The credibility of Cuba's claims depends partly on the reliability and consistency of its demographic statistics. Some debate has occurred about the statistics, but most experts believe that the data are "of very high quality."[93] After four years of research in Cuba evaluating and using these statistics, Sarah Santana has concluded that the "Cuban statistical system meets most of the conditions and requirements generally considered necessary to achieve a complete reliable register and produce valid, trustworthy data."[94] She contends that the Cuban data reliably reflect the health status of the population.[95] Assuming the data are reliable, Cuba has succeeded in lowering the infant mortality rate and raising life expectancy to the levels characteristic of developed nations. Because health indicators are measures of government efficacy in Cuba, the government's claims that Cuban health indicators will soon surpass those of the United States may indeed prove to be credible.

In fact, recent studies indicate that the infant mortality rate in the United States will probably increase for the period after 1982 due to the effects of decreased federal spending on welfare and other social services for the poor, unemployment, lack of health insurance, and increased hunger.[96] While the U.S. government is decreasing prenatal care, maternal and child health programs, and supplemental feeding

programs through severe budget cuts, Cuba is strengthening these health programs and continuing its long-standing policy of providing supplemental food for women who are pregnant or breast-feeding and children under age seven.[97] For example, as of 1983 women in Cuba averaged eleven prenatal examinations and consultations, including an ultrasound examination to check for congenital malformations.[98] Furthermore, Cuban clinic personnel and mass organization liaisons seek out women who fail to attend prenatal appointments or educational lectures and urge them to continue their prenatal care. This attention continues beyond childbirth with a series of "well-baby" and pediatric appointments to monitor growth and development. In fact, one of the main achievements of the new family doctor program has been to decrease greatly the infant mortality rate in areas where they work, particularly in the remote mountain areas where the infant mortality rate has fallen to less than ten per thousand live births (below the overall U.S. rate).[99]

In a concerted effort to further decrease infant mortality, Castro ordered the construction of perinatal intensive care units in all maternal-infant hospitals.[100] With low rates of infant mortality, most infant deaths result from genetic defects and other internal factors requiring sophisticated medical treatment, particularly in the period around the time of birth.[101] Because the majority of infant deaths occur during this period, Castro's strategy, while rather costly, should be effective.

Further extension of genetic screening for congenital abnormalities and therapeutic abortions for those whose infants would not be viable will also lower the infant mortality rate, not to mention the costs of caring for a seriously malformed infant with little potential to become a productive member of society. The Cubans assert that women are not pressured to abort.[102] But given the intense campaign to decrease infant mortality, it is possible that many doctors may strongly advise and even pressure women to abort abnormal fetuses. No internationally accepted standards exist, and the potential quality of life of both the unborn child and the parents must be carefully considered.

Because abortion is frequently misused as a means of contraception in Cuba, it is not the potentially traumatic experience it can be in the United States.[103] Whether or not one approves of the ethical dimension involved, this practice will certainly give Cuba an advantage over other countries in the race to decrease the infant mortality rate.

The combined factors of Cuba's universal health care coverage, outreach programs, food rationing, and high priority on reducing infant mortality at all costs make it likely that Cuba will further decrease its infant mortality rate relative to the U.S. rate. If Cuba does so, it will accumulate symbolic capital by achieving one of the objectives in its campaign to become a world medical power.

The Domestic Health System

While the Cuban model for primary health care may not have been consciously adopted by the World Health Organization in its resolution entitled "Health for All by the Year 2000," the guidelines are strongly reminiscent of the Cuban health system. A notable exception recommends the use of paramedical personnel rather than doctors in primary care.[104] Not surprisingly, Cuba has often been compared favorably with the "Health For All" model and has already achieved its goals. The praise Cuba is receiving for its domestic and international medical work has obviously increased its prestige and influence (symbolic capital) in international forums. The results can be seen in Cuba's being elected to head the Non-Aligned Nations Movement (1979), to chair the Latin American Pediatric Association (1987), and to serve as vice-president of the UNESCO conference on its major project for Latin America and the Caribbean (1987).[105]

Becoming a world medical power also symbolizes scientific achievement or, at the very least, achievement in a sophisticated technological field. Although eliminating the diseases of poverty is primarily related to improvement in the standard of living, which includes public health measures and simple medical procedures, going beyond this level requires the use of high technology to diagnose, treat, and cure the diseases of development.[106] Now that Cuba has eradicated the diseases of poverty, it must focus on maladies afflicting the developed world, whose prevention requires changes in lifestyle rather than high-tech medical intervention.[107] As noted, lifestyle changes are important aims of the family doctor program. But the real and symbolic importance of being able to diagnose, treat, and cure chronic degenerative diseases cannot be overemphasized because many developing nations have neither the equipment nor the personnel to accomplish this goal. Those developing countries that have the medical equipment and staff suffer from a shortage of resources as well as their maldistribution, not to mention the inability of most of the population to pay for such services. This tendency makes Cuba's free provision of high-technology medical services to its entire population a remarkable achievement, again adding to its symbolic capital.

International Medical Aid

Cuba has become particularly adept at using medical diplomacy to further its political and economic objectives. Medical diplomacy has been defined by a U.S. presidential aide as "collaboration between countries on health matters for the purposes of improving relations with one another . . . [which produces] humanitarian benefit while simultaneously developing improved relations."[108] Because health is

prized by all as a necessity for personal as well as societal development, medical aid may indeed be a more effective instrument of foreign policy than more traditional methods.

Cuba's economic objective has been to earn hard currency through the development of a new export commodity—its human resources.[109] Initially Cuban aid was nonrepayable:[110] however, since 1977 Cuba has been charging fees on the basis of ability to pay. Poor countries receive aid free. Those able to pay, like oil-rich Libya and Iraq, pay in hard currency but at prices estimated to be considerably lower than those charged by the Soviet Union and East European countries, not to mention what Western technicians would charge.[111]

The top Cuban official for international construction, Levi Farah, specified two types of construction aid and their recipients: donations to Nicaragua, Grenada, Guinea, Mozambique, Tanzania, Laos, and Vietnam; and commercial contracts with Libya, Angola, Iraq, Congo, and Algeria.[112] No information is available on countries paying for Cuban medical aid other than Libya, Iraq, and possibly Angola,[113] but the above list suggests that the Congo and Algeria might be also paying.

According to an advisor to Cuban Vice President Carlos Rafael Rodríguez, Cuba charges eleven hundred dollars per month for a generalist medical doctor with eight years' experience. This amount is considerably less than charges levied by other bilateral or multilateral donors. In all cases of contracts and grant aid, the host country pays in-country living expenses and a small living allowance of about thirty dollars a month. Whether or not charges are levied, Cuba pays the salaries in Cuban pesos.[114]

It has been estimated that Cuba earned some fifty million U.S. dollars from work performed abroad by its civilian technicians in 1977 and an estimated one hundred million in 1980.[115] These figures cover all types of technical expertise and skilled workers. No disaggregated data are available to assess how much of this total was paid for medical services, but data on international construction indicate that most of the earnings were from construction. For example, Cuba had a construction contract with Libya in 1979 for one hundred and fifteen million dollars and another that year with Angola for twenty-five million.[116]

Nonetheless, one can estimate that if Cuba did charge Libya for the 357 doctors it supplied in 1977, and if these doctors had eight years of experience and were billed at eleven hundred dollars per month each, then Cuba would have earned over four and a half million dollars. By the same token, if Cuba charged Angola in 1981 for the 335 doctors it provided that year, then it may have earned nearly as much from that deal.[117] In both cases, a similar number of nurses and allied health workers were also supplied, although no data are available on charges for their services. These possible earnings are significant for

Cuba because it has few opportunities to earn hard currency due to trade dependence on the Eastern bloc countries and a relative lack of exportable goods.

The Cubans have also been earning hard currency by providing medical care to individuals from capitalist countries. They have advertised "sun and surgery" and "health tourism" in Cuba, offering their medical services to those who find prices at home to be considerably higher, even when travel to and from Cuba and accommodations are included.[118] According to a report in the journal *M.D.*, "arterial grafts, including 20 days in the hospital, cost $3363, a hysterectomy, $983, an abortion, $283, a new nose, $778," and consultation with university medical professors costs sixty dollars.[119] According to this journal, these are bargain prices. They have the potential to lure patients from capitalist countries in the Western Hemisphere as well as the Europeans to whom much of the advertising was addressed.

Price is not the only lure. Many developing countries lack the medical technology and highly trained specialists that Cuba has. Cuban physicians and medical scientists have also developed innovative cures, medical devices, and techniques that are largely unavailable elsewhere. One such device, an external "fixator" that supposedly lengthens bones, has already been applied by its developer, Dr. Rodrigo Alvarez Cambras, in thirty-four countries. Similarly, due to the demand for Cuban orthopedics, the Frank País Orthopedic Hospital is doubling the capacity of its forty-bed ward for foreigners.[120]

Doctors in the Dominican Republic often refer patients to Cuba for specialized treatment unavailable in their own country. They and their patients say that Cuban fees are about one-quarter to one-third as much as U.S. fees. While most people pay for treatment in Cuba, some charity cases are accepted. The demand for travel to Cuba from the Dominican Republic for various reasons has grown so much that weekly charter flights were begun early in 1988, despite the lack of diplomatic relations between the countries. In the first five months of 1988, "at least 150 Dominicans have flown to Cuba for medical treatment."[121]

Brazilians too are going to Cuba, particularly for treatment of a skin disease called vitiligo, for which Cuban medical scientist Dr. Carlos Miyares Cao discovered a cure. From September through December 1986, three thousand Brazilians were expected to travel to Cuba for "sun and medical care."[122] By 1987 Dr. Miyares had successfully treated eight hundred patients from twenty-four foreign countries, one hundred of them Venezuelans. He usually sees patients in Cuba but has also treated them in their own countries.[123] Foreign demand for the vitiligo cure has been so great that the Cuban government has estab-

lished the international Placental Histotherapy Center, which will treat foreigners two days a week.[124]

Not all health tourism earns foreign exchange, however. The Cuban Ministry of Public Health reported that in 1987 it provided free medical treatment for 175 patients from forty countries, although 505 applications were received (up from 358 in 1986). Of the 505, 316 were approved for treatment, and the remainder were still being processed. The charity cases included individuals from Algeria, Angola, Argentina, Benin, Brazil, Cape Verde, Colombia, Congo, Costa Rica, Dominican Republic, Ecuador, Equatorial Guinea, Ethiopia, Guinea, Guinea-Bissau, Guyana, Mexico, Mozambique, Nicaragua, Panama, Peru, São Tomé, Syria, Uganda, Uruguay, and Venezuela.[125]

One of Dr. Miyares's patients, an eight-year-old British girl, and her mother were brought as guests of the Cuban government because the family was too poor to pay the costs of the trip and treatment.[126] The symbolism of a developing country providing medical care to a citizen of a developed country, who moreover had been unsuccessfully treated at home, is extraordinary, and its propaganda value (or symbolic capital accumulation) is enormous.

Symbolism aside, Cuba's international assistance contracts have become even more important following various blows to the Cuban economy. The price of sugar, Cuba's major export commodity, plummeted to less than half of its production cost.[127] The decline in world oil prices has also severely hampered Cuba's ability to earn hard currency through reexporting surplus Soviet oil (now Cuba's major means of earning convertible currency). Then in November 1985, Cuba's major export crops were severely damaged by Hurricane Kate and may not produce average yields for some years. Furthermore, West European and Japanese currencies increased in value against the dollar, thereby increasing the cost of Cuba's imports from those countries and decreasing the purchasing power of Cuba's dollar-denominated exports. Cuban sources have estimated a loss of some six hundred million dollars in 1986 due to these factors.[128] Economic adversities also rendered Cuba's debt to the West of three and a half billion dollars temporarily unpayable in July 1986.[129] Cuba's development plan for 1987 was implemented with "half the foreign exchange imports considered vital and with a fourth of the imports from the hard currency area that were made in 1984."[130] The declining value of the dollar resulted in an increase in Cuban debt from 3.9 billion pesos for 1986 to 5.6 billion pesos for 1987.[131] Adding insult to injury, the Soviets reduced their subsidies to Cuba in 1986, paid less for Cuban sugar than previously, and did not lower their sales price for oil even though the world-market price was down.[132] Hence the export of technical and skilled workers has become

all the more important in filling the foreign-exchange gap left by diminished traditional exports.[133]

Cuba has a reasonably good chance to expand its export of human resources because an unfulfilled demand exists in developing countries for Cuba's expertise, particularly in the medical field. In 1978 Castro recognized the economic potential of exporting medical personnel and began to multiply the number of doctors Cuba produces specifically for that purpose. From 1978 through 1986, there were still not enough Cuban doctors to meet international demand, despite the requesting countries' willingness to pay hard currency for them.[134] Because Cuba charges less than either socialist or capitalist countries for commercial contracts (with the exception of China, which greatly reduced its aid program in the past decade),[135] it is likely that Cuban doctors, construction workers, and other technicians will win contracts on a purely competitive basis. Grant aid, however, seems unlikely to diminish short of radically conservative political change in recipient or potential recipient states. Moreover, recent diplomatic efforts toward nonradical regimes like those in Argentina, Bolivia, Brazil, and Venezuela have included medical aid and general scientific and cultural exchanges.

In general, ideological differences do not present an insurmountable obstacle to those seeking education abroad. A Central Intelligence Agency report indicates that Third World nationals who have studied in communist countries have obtained responsible positions on their return to their native countries despite the hostility of their own governments to communism. According to this CIA report, the increased development efforts by Third World countries, combined with their critical shortage of highly skilled and educated workers, should further stimulate the trend of their nationals seeking education in communist countries.[136] It seems reasonable to conclude that Cuba's potential for increased education of foreign nationals and for exporting its own highly skilled human resources, particularly doctors, should be good.

The Cuban government recognizes that establishing a model health-care system at home and providing international aid demonstrate the humanitarian nature of socialism in general, and of the Cuban Revolution in particular. Influence garnered from these endeavors undoubtedly aids in disseminating socialist ideology. But rather than being a fifth column advancing socialist revolution, Cuban medical aid has the potential to win converts through a more subtle, but nonetheless important, demonstration effect.

Costs and the Cuban Model

Although Cuba's health system continues to receive considerable praise from all quarters, it is not a plausible model for most developing nations primarily because doctor-based systems are costly in comparison with paramedic-based low-technology systems. Further, few governments have central control over the economy and the concomitant ability to allocate resources in the manner that Cuba does. Some aspects of the Cuban system are emulated in a variety of contexts, however. Countries like Mexico, Mozambique, Nicaragua, and Uruguay have adapted elements of the Cuban health model, in some cases in a specific geographic area and in others on the national level.[137]

The Cuban model is nonetheless symbolically important in that it indicates that developing nations can aspire to and achieve First World health systems. This significance, along with Cuba's international medical aid program, training of foreign students, and sponsorship of international conferences, contributes notably to Cuba's symbolic capital (political prestige) in the international arena, particularly in international organizations where symbolic capital (influence) accumulated in one forum may be carried over to another.

While comparative costs are difficult to calculate because of different accounting methods, some general observations can be made about strict economic costs (disregarding momentarily the political and symbolic benefits). First of all, the cost of employing doctors is considerably less in Cuba than in capitalist countries. Doctors' salaries are held constant and fall in the middle range of salaries, not much higher than those of teachers or engineers. Second, as the sole employer and purveyor of health services, the Cuban state can justify the costs of health care and preventive medicine by long-term savings from greater and longer worker productivity and the lesser cost of prevention when compared with treatment and rehabilitation. Third, domestic production of most pharmaceuticals and some basic health devices and supplies greatly reduces costs in Cuba, in contrast with the cost to other developing nations that must import these items.

Apart from the obvious direct costs of a health system, including the training of personnel, indirect opportunity costs come in the form of diverted investment that might be better used elsewhere, given the relative development of the health system compared to other sectors like housing, and the diversion of human resources from direct production to health services and from domestic to international health-care provision. Although it is difficult to measure human capital investment by strict cost-benefit analysis, if one takes the long-term view, Cuba's investment strategy may be a rational one, given their objectives of societal transformation and symbolic capital accumulation. But from a

strictly economic perspective that ignores other governmental needs and preferences, greater return could have been reaped from investment in sectors other than health.

Whether the Cuban people would prefer other investments—such as improvements in the quantity and quality of housing, transportation, foods, and consumer goods—cannot be determined definitively because survey research and opinion polling by foreigners are prohibited in Cuba. Personal interviews conducted in the course of this research indicate that while the Cuban people are pleased with the success of their health system, many would prefer investments in sectors that are less developed. And because the Cuban health system is far from perfect, they also want better health service.[138]

Clearly, if the Cuban government were concerned solely with its people's well-being, these factors might have been considered prior to further investments in the health sector. If balanced and harmonious socioeconomic development were the primary concern, then the trade-offs made in other sectors to finance the expansion of the health sector might not have been made.[139] Thus Cuba's giving priority to health-care investments despite the costs is partially explainable by the government's striving for legitimacy, which must be understood as resulting from Cuba's adverse geopolitical situation. In general, socialist states rely on their ability to meet the socioeconomic needs of their populations to legitimize their regimes.[140] That the Cuban government shrewdly recognizes this fact is shown in this statement of Castro's: "In the field of health, . . . we have been guided from the outset by a number of basic criteria. The first is to prioritize public health as one of the vital services for human society. Moreover, it is what the people value more than anything else. I can't understand how politicians do not understand that. . . ."[141] Taking this idea to its logical conclusion, Castro places such high priority on health that he takes a daily interest in the operations of the health-care system and has made health indicators the true test of government efficacy.

Investment in health differs from that in other sectors because the creation of a national health system is itself a monument to socialism both materially and psychologically. The Cuban Revolution has created numerous "health monuments," from rural dispensaries to specialized high-technology research institutes that dot the countryside, towns, and cities. It has also created "human health monuments" in the form of tens of thousands of doctors, dentists, nurses, and allied health workers whose daily contact with the people is a constant reminder of what the Revolution has done for all. This human contact is what differentiates investments in health and education from other government programs and services like housing, sewage disposal, potable water, and electricity. Thus the tendency of these "human health monuments"

to reinforce the values of the Revolution partially explains the disproportionate investment in the health sectors. Recognizing the significance of these "human health monuments," Castro has even called the new family doctors "symbols of the Revolution."[142]

The revolutionary government also created a sense of security—a freedom from fear of illness and the financial devastation it can bring—knowing that all Cubans will be given the best possible care, without prejudice or charge. Furthermore, the knowledge that the government is also attempting to prevent illness by promoting general health education, public health and medical measures, and socioeconomic development increases the population's sense of well-being. Even if all of these efforts were not appreciated by the beneficiaries (which is not the case), this investment in health would not be wasted because the objective outcome is the development of human capital necessary for the individual's own development and for societal transformation.

Castro himself has explained the investment in health on the symbolic level: "Public health became a challenge and a battleground between imperialism [the United States] and ourselves . . . and this multiplied our efforts. That is why we have developed this field and are striving to become a medical power with the best possible health indices."[143] Elsewhere he has stated that when Cuba eventually surpasses the United States in the field of public health, it would constitute Cuba's "historical revenge" for decades of hostility and particularly for the U.S.–initiated economic embargo that includes medicines, medical technology, and medical information.[144] Thus the economic dislocations created by the priority placed on health are the price of symbolic politics.

Because the accumulation of symbolic capital is always costly, Cuba's civilian international aid programs have occasioned high direct and indirect economic opportunity costs, such as decreased efficiency and productivity.[145] While the costs might outweigh the economic benefits,[146] in political terms, "the international benefits still appear to outweigh the costs," despite limits on Cuba's influence over its aid recipients.[147]

Objective Criteria

To be a "world medical power," Cuba should be at the forefront of biomedical research, medical education, health-care delivery, health-system organization, and the development and production of pharmaceuticals and medical equipment. Concomitantly, the health status of the Cuban population should be among the best in the world. By these criteria, Cuba is clearly not becoming a world medical power. But it has

transformed itself into a world-class health-care provider, an extraordinary achievement nonetheless.

CONCLUSION

The Cuban government has embarked on a program to become a "world medical power" for humanitarian, political, economic, and symbolic reasons. While meeting the populations' basic health needs is the primary reason for this extraordinary effort, the accumulation of capital, both symbolic and financial, has played an important role in Cuba's plans. On the political level, the need for legitimacy at home and abroad and a desire for international prestige and influence further account for Cuba's goal. Finally, Cuba's economic straits and the need for convertible currency have made further development of international services a necessity.

Cuba has managed to achieve success in the health sphere through the political commitment to allocate significant fiscal, physical, and human resources to this sector. Mass participation in the implementation of health projects has extended these resources considerably and made their impact much greater than previously possible. Furthermore, Soviet aid to other sectors has allowed the Cubans to divert more funds to health than would have been possible otherwise. Soviet aid, however, is not the determining factor in Cuba's success in the health sphere.[148]

While not credible by objective criteria, Cuba's claims of becoming a world medical power seem credible by its own definition: health indicators similar to those of the developed nations, an extensive network of health facilities and research institutes, a low doctor-to-population ratio, rapid development of biotechnology and genetic engineering, and medical aid to developing countries. Becoming a world medical power is thus symbolically significant because it validates Cuba's ability to project an image of itself as a scientifically capable, socioeconomically developed country despite its underdeveloped economic base. This symbol confers legitimacy, prestige, and influence (symbolic capital) on Cuba in domestic and international forums, particularly because Cuba shares its medical expertise. Although this capital is symbolic, it can ultimately be converted into material capital (commercial contracts, trade agreements, and aid from international organizations or developed countries) and can be spent or reinvested symbolically to further Cuba's political ends.

NOTES

1. República de Cuba, *Constitución* (Havana: Partido Comunista de Cuba, 1976), Artículos 48 and 49, pp. 36–37; and Ministerio de Salud Pública, *Salud para todos: 25 años de experiencia cubana* (Havana: MINSAP, 1983).
2. Cuba also trades with capitalist countries and is thus affected by revaluations of hard currencies, fluctuations in interest rates, and similar factors. Even Soviet trade subsidies are tied to world-market prices. See Susan Eckstein, "Capitalist Constraints on Cuban Socialist Development," *Comparative Politics* 12, no. 3 (April 1980):253–74; and Richard Turits, "Trade, Debt, and the Cuban Economy," *World Development* 15, no. 1 (Jan. 1987):163–80.
3. Republic of Cuba, Ministry of Public Health, *Annual Report of the Minister of Public Health 1986*(Havana: MINSAP, 1987), 3, 18; and *Granma*, 29 Dec. 1986, p. 3. See also the following issues of *Granma Weekly Review*: 24 Jan. 1988, p. 4; 14 June 1987, p. 12; and 12 Jan. 1986, p. 3.
4. Fidel Castro, *Second Period of Sessions of the National Assembly of People's Power: Closing Speech* (Havana: Political Publishers, 1978), 39–41; *Bohemia*, 15 Sept. 1978; *Granma*, 31 July 1981, pp. 1, 3; *Granma*, 10 Dec. 1981, p. 1; and *Granma Weekly Review*, 11 Mar. 1984, p. 4.
5. For a historical perspective, see the first part of *Small States in Europe and Dependence*, edited by Otmar Höll (Boulder, Colo.: Westview, 1983), especially 14, 55.
6. Peter Shearman, *The Soviet Union and Cuba*, Chathman House Papers, no. 38 (London: Routledge & Keagan Paul, 1987), 33.
7. Among the many works on this topic, see H. Michael Erisman, *Cuba's International Relations: The Anatomy of a Nationalistic Foreign Policy* (Boulder, Colo.: Westview, 1985); Jorge I. Domínguez, "Cuban Foreign Policy," *Foreign Affairs* 57 (Fall 1978):83–108; and Jorge I. Domínguez, *To Make a World Safe for Revolution: Cuban Foreign Policy* (Cambridge, Mass.: Harvard University Press, forthcoming). Also *Cuba in Africa*, edited by Carmelo Mesa-Lago and June S. Belkin (Pittsburgh: University of Pittsburgh Press, 1982); and *Cuba in the World*, edited by Cole Blasier and Carmelo Mesa-Lago (Pittsburgh: University of Pittsburgh Press, 1979).
8. República de Cuba, *Constitución*, Artículo 12, pp. 18–20.
9. Foucault's analysis of Velázquez's painting, "Las Meninas," suggests an interesting parallel with Cuba's actions in the international sphere. The real subjects of the painting are not Princess Margarita and her various attendants in the foreground but the two sovereigns, King Philip IV and his wife Mariana, whose reflections are seen only in the mirror in the background of the scene. Although they are only visible in a small reflection, all forward-gazing eyes of the painting's subjects are turned toward them. Thus although they are not part of the group of models, the royal couple are nonetheless the focal point of the painting within the painting as well as the ones for whom the painting was created. Cuba's actions in the world arena can be perceived in the same manner: very much influenced by the United States and often staged for the benefit of the United States, even though the United States may be elided from the scene. See Michel Foucault, *The Order of Things: An Archaeology of the Human Sciences* (New York: Vintage Books, 1973), 3–16.
10. For an instructive interpretation of symbolism in Japanese domestic politics, see David E. Apter and Nagayo Sawa, *Against the State: Politics and Social Protest in Japan* (Cambridge, Mass.: Harvard University Press, 1984).
11. Pierre Bourdieu, *Outline of a Theory of Practice* (Cambridge: Cambridge University Press, 1987), 177, 180.
12. Ibid., 181.
13. Norman Hicks and Paul Streeten, "Indicators of Development: The Search for a Basic Needs Yardstick," *World Development* 7 (1979):578–79.
14. Although Cuban criteria have not been clearly enunciated as a whole, the ones listed were culled from various official statements made over the years since the topic was first mentioned publicly. The 1987 statements allude only to the infant mortality rate and life expectancy at birth.
15. Dr. Halfdan Mahler, "Discurso pronunciado en la sesión inaugural de la conferencia

'Salud para Todos: 25 años de experiencia cubana,'" Havana, 3–9 July 1983; Dr. Carlysle Guerra de Macedo, "Discurso pronunciado en la sesión inaugural de la conferencia 'Salud para Todos.'" See also articles in *The Physiologist* 22, no. 1 (Feb.1979):9–11; *The Physiologist* 22, no.6 (Dec. 1979):15–17; *Nursing Mirror* (Surrey, England) 153, no. 20 (11 Nov. 1981):36–38; *Journal of the Medical Association of Georgia* 68 (Feb. 1979):99–100; *Pediatric Nursing* 6, no. 5 (Sept.–Oct. 1980):51–53; *Science* 200, no. 4347 (16 June 1978):1246–49; *The Western Journal of Medicine* 132 (Mar. 1980):265–71; *Obstetrics and Gynecology* 49, no. 6 (June 1977):709–14; and the *Canadian Medical Association Journal* 111 (2 Nov. 1974):991–1002.

16. Congress of the United States, Joint Economic Committee, 97th Congress, 2nd Session, *Cuba Faces the Economic Realities of the 1980s* (Washington, D.C.: U.S. Government Printing Office, hereafter USGPO, 1982), p. 5.
17. Prerevolutionary Cuba had urban private health services that were well-developed but unevenly distributed. Health indices were relatively good, but its statistics were neither complete nor reliable. Maldistribution of health resources was acute, with Havana siphoning off most personnel and monies, and rural areas doing without. Malnutrition, parasites, and other diseases of poverty afflicted the majority of rural Cubans. Sanitation facilities and potable water were scarce everywhere, even in the capital. After the Revolution, half the Cuban doctors fled, most of them to the United States. See Ross Danielson, *Cuban Medicine* (New Brunswick, N.J.: Transaction Books, 1979); Agrupación Católica Universitaria, "Encuesta de trabajadores rurales, 1956–1957," *Economía y Desarrollo* 12 (July–Aug. 1972):188–213; Pan American Sanitary Bureau, *Summary of Four-Year Reports on Health Conditions in the Americas, 1953–1956*, Scientific Publication no. 40 (Washington, D.C.: Pan American Sanitary Bureau, 1958); and Pan American Health Organization, *Health Conditions in the Americas, 1957–1960*, Scientific Publication no. 64 (Washington, D.C.: PAHO, 1962).
18. *Granma Weekly Review*, 24 Feb. 1985, suppl. p. 3.
19. *Granma Weekly Review*, 11 Mar. 1984, p. 4.
20. National Center for Health Statistics, *Vital Statistics of the United States, 1982*, vol. 2, sec. 6, Life Tables, DHHS Publication no. (PHS) 85–1104 of the Public Health Services (Washington, D.C.: USGPO, 1985), p. 6; and *Granma Weekly Review* 24 Feb. 1985, suppl. p. 3.
21. *Granma Weekly Review*, 16 Feb. 1986, suppl. p. 4.
22. "Rise in Infant Mortality Rate," *Cuba Update* 7, nos. 1–2 (Winter–Spring 1986):7.
23. *Granma*, 23 Jan. 1987, p. 1; and *Granma Weekly Review*, 31 Jan. 1988, p. 9.
24. *Granma Weekly Review*, 25 Jan. 1987, p. 4.
25. U.S. Department of Commerce, Bureau of the Census, *Statistical Abstract of the United States 1987* (Washington, D.C.: USGPO, 1986), p. 58; and World Health Organization, *World Health Statistics Annual 1987* (Geneva: WHO, 1987), 80.
26. See Ruth Leger Sivard, *World Military and Social Expenditures, 1985* (Washington, D.C.: World Priorities, 1985), 39, 41.
27. República de Cuba, Ministerio de Salud Pública, *Informe Anual 1982* (Havana: MINSAP, 1983); and National Center for Health Statistics, *Vital Statistics 1982*.
28. On China's "barefoot doctors," see David M. Lampton, *Health, Conflict, and the Chinese Political System* (Ann Arbor: Center for Chinese Studies, University of Michigan, 1974). On Soviet feldshers, see Mark G. Field, *Soviet Socialized Medicine: An Introduction* (New York: Free Press, 1967). On paramedical personnel as doctor substitutes, see OMS-FNUI, *Atención primaria de salud: informe conjunto del Director General de la Organización Mundial de la Salud y del Director Ejecutivo del Fondo de las Naciones Unidas para la Infancia* (Geneva: World Health Organization, 1978), 34–37.
29. Republic of Cuba, Ministry of Public Health, *Annual Report 1986*, 18.
30. This conservative estimate is based on a population projection using the Latin American table in *Model Life Tables for Developing Countries*, Department of International Economic and Social Affairs Population Studies, no. 77 (New York: United Nations, 1982). This estimate uses 10 million as the population baseline in 1985 and the number of doctors in the year 2000 pegged at a conservative estimate of 65,000. A more optimistic calculation results in one doctor for every 190 inhabitants. This figure is calculated by taking the number of doctors in 1984 (20,545) plus 50,000 who

are to be trained by the year 2000, minus the 3267 doctors age 45 or over in 1979. For the population baseline, see *Granma Weekly Review*, 16 Sept. 1984, p. 3. For the number of doctors in 1984 and projected increase by the year 2000, see *Granma Weekly Review*, 18 Nov. 1984, p. 3; and for the number of doctors who were 45 and older in 1979, see *Revista Cubana de Administración de Salud* 8, no. 1 (Jan.–Mar. 1982):119.

31. Calculation based on 247 doctors per 100,000 population. See U.S. Department of Health and Human Services, Public Health Service, Human Resources Administration, Office of Graduate Medical Education, *Report of the Graduate Medical Education National Advisory Committee to the Secretary, Department of Health and Human Services*, vol. 2, DHHS Publication no. (HRA) 81–652 (Washington, D.C.: USGPO, 1981), table V.3, p. 274. This report is generally referred to as the GMENAC report.
32. *Granma Weekly Review*, 24 July 1983, p. 3.
33. *Granma Weekly Review*, 13 May 1984, p. 3; and *Granma*, 30 July 1986, p. 3. The dropout rate was close to 50 percent when the initial estimate was revised downward by 10,000. Since then the dropout rate has decreased. See *Granma Weekly Review*, 20 Sept. 1987, p. 5.
34. The Soviet Union, Czechoslovakia, and other Eastern bloc countries attempt to provide sabbaticals for their physicians, but often there are too few physicians to grant them sabbaticals when they are due. Personal communication from George A. Silver, M.D., Professor Emeritus of International Health, Yale School of Medicine, 24 Mar. 1986.
35. *Granma Weekly Review*, 24 July 1983, p. 3; and *Granma Weekly Review*, 27 May 1984, p. 4.
36. República de Cuba, *Public Health in Figures 1986*, 55; and Osvaldo Castro Miranda, "Recursos humanos en salud de Cuba," *Educación Médica y Salud* 20, no. 3 (1986): 376–77. This periodical is published in Washington, D.C., by the Pan American Health Organization.
37. Problems have arisen when some doctors have chosen not to live in the home-offices that were built for them. See *Granma*, 17 Jan. 1984; and *Granma Weekly Review*, 19 Apr. 1987, p. 10.
38. Lilliam Jiménez Fontao and Mayra Zaldívar Lores, "Experiencia del médico de la familia en un consultorio de Plaza de la Revolución," *Revista Cubana de Medicina General Integral* 3, no. 1 (1987):135; *Granma*, 26 May 1986, pp. 1–3; and *Granma Weekly Review*, 27 Oct. 1985, pp. 8–9.
39. *Granma Weekly Review*, 17 Oct. 1985, p. 8.
40. *Granma Weekly Review*, 9 Sept. 1988, p. 12; and *Granma*, 16 Oct. 1986, p. 1.
41. Organización Panamericana de la Salud, *Informe sobre medicina familiar* (Washington, D.C.: OPS, 1984).
42. *Informe del Gobierno de Cuba a la Organización Panamericana de la Salud sobre las condiciones de salud pública y los adelantos logrados en el intervalo transcurrido entre la XXI y XXII Conferencias Sanitarias Panamericanas, 1982–1986* (Washington, D.C.: PAHO, 1986), p. 2; *Granma*, 4 Jan. 1986, p. 2; and *Granma*, 30 Dec. 1986, p. 3. See also the following issues of *Granma Weekly Review*: 6 June 1982, p. 4; 16 Sept. 1984, p. 12; 24 Aug. 1986, p. 3; 26 Oct. 1986, p. 5; 18 Jan. 1987, p. 3; 10 May 1987, p. 12; and 24 May 1987, p. 3.
43. The first Cuban heart transplant was performed in December 1985, and by May 1987, twenty heart transplants had been performed. See *Granma*, 4 Jan. 1986, p. 2; *Granma*, 30 July 1986, p. 1; and *Granma Weekly Review*, 10 May 1987, p. 12. Yale–New Haven Hospital's record was mentioned on ABC News (New Haven), 8 Mar. 1986.
44. Based on my personal observations in various cities throughout Cuba in 1980 and 1981.
45. César Vieira, "PAHO/WHO Interoffice Memorandum HSP/84/242/88, 6 de abril de 1988," PAHO mimeo, p. 5.
46. See Robert Ubell, "Cuba's Great Leap," *Nature* (Great Britain) 302 (28 Apr. 1983):746; Jeffrey L. Fox, "Cuba Plans a Century of Biology," *American Society of Microbiology* 52, no. 5 (1986):243–48; and Marcel Roche, "Cuba: El Centro de Investigaciones Biológicas," *Interciencia* (Buenos Aires) 10, no. 6 (Nov.–Dec. 1985):299–300. On Cuba's plans to export interferon, see *Newswatch*, 17 Mar. 1986, pp. 3–4.

47. See the article by Jon Beckwith, Professor of Microbiology and Molecular Genetics at Harvard Medical School, entitled "Cuba Report: Science and Society Are Inseparable," *Science for the People* 17, no. 5 (Sept.–Oct. 1985):21. This journal is published in Cambridge, Mass.
48. For a fuller discussion of Cuba's medical research, see Julie M. Feinsilver, "Symbolic Politics and Health Policy: Cuba as a 'World Medical Power,'" Ph.D. diss., Yale University, expected 1989.
49. *Granma Weekly Review*, 10 July 1983, p. 10.
50. *New York Times*, 22 Jan. 1985, p. A–2.
51. *Granma Weekly Review*, 24 Feb. 1985, suppl. p. 3.
52. The figure for Cuba was calculated from an article describing 16,000 civilian internationalists in the *New York Times*, 22 Jan. 1985, p. A–2; and from the population estimate of ten million Cubans cited in *Granma Weekly Review*, 16 Sept. 1984, p. 3. The U.S. figures are calculated from AID and Peace Corps personnel figures of 1494 and 5200, respectively. The U.S. population figure as of 1982 was 232,309,000 according to Sivard, *World Military and Social Expenditures 1985*, p. 35. In 1982, AID had 1494 workers abroad, and the Peace Corps had 5200 volunteers. It should be noted, however, that AID primarily uses contractors or recipient government agencies for project implementation. See U.S. General Accounting Office, *Donor Approaches to Development Assistance: Implications for the United States*, GAO/ID–83–23 (Washington, D.C.: GAO, 1983), 13, 17, 19.
53. Calculation based on a total of 118,760 technicians, of which 23,075 are Cuban. See U.S. Department of State, *Soviet and East European Aid to the Third World, 1981* (Washington, D.C.: USGPO, 1983), 20.
54. Calculated from Sivard, *World Military and Social Expenditures, 1985*, 35.
55. Central Intelligence Agency, *Communist Aid to Non-Communist LDCs, 1979 and 1954–1979* (Washington, D.C.: CIA, 1980), 8.
56. Ibid., 21; and CIA, *Communist Aid to Non-Communist LDCs 1977* (Washington, D.C.: CIA, 1978), 9.
57. China sent some 8,000 medical workers abroad during that period. In 1986 China had about 1,000 doctors working in forty-one countries. See *China Daily*, 19 July 1986, p. 3 (reference provided by Deborah Davis-Friedman).
58. *Colaboración Internacional*, no. 2–86 (Apr.–June 1986):5–6.
59. Julio Díaz-Vázquez, "Cuba: colaboración económica y científico-técnica con países en vías de desarrollo de Africa, Asia, América Latina," *Economía y Desarrollo* 68 (May–June 1982):29.
60. The seven countries are Cape Verde, Angola, Equatorial Guinea, Guinea-Bissau, Ethiopia, São Tomé, and South Yemen. See Paul H. Grundy and Peter P. Budetti, "The Distribution and Supply of Cuban Medical Personnel in Third World Countries," *American Journal of Public Health* 70, no. 7 (July 1980):718.
61. *Verde Olivo* 23, no. 3 (21 Jan. 1982):18–19. This magazine of the Cuban Armed Forces is published in Havana.
62. *Granma Weekly Review*, 28 Oct. 1984, p. 9, cited in Domínguez, *To Make a World Safe for Revolution*.
63. "Country's Cooperation with Ethiopia Discussed," (article originally in Spanish in *Prisma Latinoamericano*, Jan. 1983, 24–26), published in English in *FBIS Latin American Report* no. 2661 (4 Apr. 1983):28. These reports are published by the National Technical Information Service in Springfield, Va.
64. Pamela S. Falk, "Cuba's Foreign and Domestic Policies, 1968–78: The Effect of International Commitments on Internal Development," Ph.D. diss., New York University, 1980, 242.
65. Domínguez, *To Make a World Safe for Revolution*.
66. *Colaboración Internacional*, no. 1–86 (Jan.–Mar. 1986):19.
67. *Granma Weekly Review*, 17 Aug. 1986, p. 10.
68. *Granma Weekly Review*, 6 Mar. 1988, p. 2.
69. *Granma Weekly Review*, 11 Nov. 1984, p. 10.
70. *Colaboración Internacional*, 1–86 (Jan.–Mar. 1986):27.

71. *Cuba Internacional*, no. 209 (Apr. 1987):53–54.
72. *Cuba Internacional*, no. 184 (Mar. 1985):41.
73. *Granma Weekly Review*, 28 Feb. 1982, p. 7; and *Granma*, 28 July 1982, p. 4.
74. *Granma Weekly Review*, 22 Oct. 1978, p. 9, cited in Falk, "Cuba's Foreign and Domestic Policies," p. 245.
75. *Cuba Internacional*, no. 215 (Nov. 1987):20–23.
76. *Granma Weekly Review*, 14 Oct. 1984, p. 5.
77. The report indicated that in 1977 the contingent in rural areas was considerably larger. See *Granma Weekly Review*, 28 Oct. 1984, p. 9.
78. "Guyana, Cuba Agree on Cooperation, Trade," FL281730 Bridgetown, Guyana, *CANA* radio broadcast in English, 2104 GMT, 26 Mar. 1983; in *FBIS Latin American Report*, no. 2666 (14 Apr. 1983):23.
79. *Granma Weekly Review*, 12 July 1987, p. 8; and *Granma Weekly Review*, 20 Sept. 1987, p. 5.
80. *Granma Weekly Review*, 11 Nov. 1984, p. 5.
81. *Granma Weekly Review*, 18 Nov. 1984, p. 3.
82. Statement by Sen. Charles Mathias, Jr., quoted in *Center for Peace and Conflict Studies, Detroit Council for World Affairs Newsletter*, Spring 1985, p. 2.
83. United States Information Agency, *U.S. Advisory Commission on Public Diplomacy: 1986 Report* (Washington, D.C.: USIA, 1986), p. 36.
84. Central Intelligence Agency, *Communist Aid Activities, 1979 and 1954–1979*, p. 11.
85. *New York Times*, 9 June 1985, p. 6.
86. Alfonso Mejía, Helena Pizurki, and Erica Royston, *Foreign Medical Graduates: The Case of the United States* (Lexington, Mass.: Lexington Books, 1980), p. 34.
87. *Granma Weekly Review*, 21 June 1987, p. 1.
88. See the following issues of *Granma Weekly Review*: 13 Apr. 1986, p. 3; 2 Nov. 1986, p. 11; and 25 May 1986, p. 1. See also "Medical Brigade Help Offered to Mexico," *FBIS Latin American Report* 6, no. 185 (24 Sept. 1985):Q1–2.
89. Díaz-Vázquez, "Cuba: colaboración económica," p. 43.
90. Personal conversations with various conference participants from a number of Latin American countries, and participant observation at meetings in Cuba, 1980–1981. This claim is substantiated by travel reports published in a variety of American medical journals. Prof. Jon Beckwith, Harvard Medical School, substantiated this claim regarding biotechnology and genetic engineering specialists who attended an international conference in Cuba in early 1986. Interview conducted 26 Sept. 1986 in Boston.
91. *Granma Weekly Review*, 22 June 1986, p. 4.
92. Danilo Salcedo y Eduardo Joly, *Informe de misión para determinar las necesidades de asistencia en materias de población* (New York: United Nations Family Planning Agency, 1979), 93. Dr. Halfdan Mahler commented that "cooperation should be triangular: Cuba-WHO and Mozambique and other countries." See *Granma*, 7 Aug. 1981, p. 8. Also, since 1979 Cuba has participated in the United Nations Development Program (UNDP) and the World Health Organization's International Program of Tropical Medicine, which granted Cuba more than half a million dollars for research and training programs. Because Cuba had already eradicated tropical diseases, this award can be interpreted as an instance of UNDP and WHO funding Cuba because of the multiplier effect. See *Granma Weekly Review*, 4 July 1982, pp. 12–13.
93. Kenneth Hill, "An Evaluation of Cuban Demographic Statistics, 1938–1980," in *Fertility Determinants in Cuba*, edited by Paula E. Hollerbach and Sergio Díaz-Briquets (Washington, D.C.: National Academy Press, 1983), cited in Sergio Díaz-Briquets, "How To Figure Out Cuba: Development, Ideology, and Mortality," *Caribbean Review* 15, no. 2 (Spring 1986):10. See also Sarah Santana, "Some Thoughts on Vital Statistics and Health Status in Cuba," in *Cuban Political Economy: Controversies in Cubanology*, edited by Andrew Zimbalist (Boulder, Colo.: Westview, 1988), 107–18; Carmelo Mesa-Lago, "Cuban Statistics Revisited," *Cuban Studies/Estudios Cubanos* 9, no. 2 (July 1979):61; and Vicente Navarro, "Health, Health Services, and Health Planning in Cuba," *International Journal of Health Services* 2, no. 3 (Aug. 1972):403. For a con-

trary view, see Nicholas Eberstadt (of the American Enterprise Institute), "Did Fidel Fudge the Figures? Literacy and Health: The Cuban Model," *Caribbean Review* 15, no. 2 (Spring 1986):5–7, 37–38.

94. Sarah Santana, "Thoughts on Vital Statistics," 114.
95. Ibid., 115.
96. C. Arden Miller, Elizabeth J. Coulter, Lisabeth B. Schorr, Amy Fine, and Sharon Adams-Taylor, "The World Economic Crisis and the Children: United States Case Study," *International Journal of Health Services* 15, no. 1 (1985):95–134, especially 123–32.
97. Recent austerity measures do not affect these programs. See *Granma*, 31 Dec. 1987, p. 1.
98. *Granma Weekly Review*, 4 Nov. 1984, suppl. pp. 3–4; and *Granma Weekly Review*, 25 Nov. 1984, p. 3.
99. *Granma Weekly Review*, 26 Oct. 1986, p. 3.
100. *Granma Weekly Review*, 25 Jan. 1987, p. 4.
101. United Nations, *Living Conditions in Developing Countries in the Mid-1980s: Supplement to the 1985 Report on the World Social Situation* (New York: United Nations, 1986), 11.
102. Interview with Dr. Roberto Capote Mir, a ranking Cuban physician and public health professor who is currently Regional Adviser for Health Systems and Hospital Administration at the Pan American Health Organization in Washington, D.C., 21 April 1987.
103. Paula E. Hollerbach, *Recent Trends in Fertility, Abortion, and Contraception in Cuba*, Center for Policy Studies Working Paper no. 61 (New York: Population Council, 1980), 1, 24.
104. World Heath Organization and UNICEF, *Atención primaria de salud* (Geneva and New York: WHO and UNICEF, 1978).
105. Susan Eckstein, "Structural and Ideological Bases of Cuba's Overseas Programs," *Politics and Society* 11 (1982):104–5; *Granma Weekly Review*, 12 Apr. 1987, p. 4; and *Granma Weekly Review*, 22 Nov. 1987, p. 4.
106. Thomas McKeown, "Determinants of Health," *Human Nature* (New York) 1, no. 4 (April 1978):60.
107. Ibid., 66.
108. Dr. Peter Bourne, Special Assistant to the President for Health Issues, *New Directions in International Health Cooperation* (Washington, D.C: U.S. White House, 1978), 47.
109. Fidel Castro, *Second Period of Sessions of the National Assembly*, 39.
110. *Bohemia*, 22 Dec. 1978, p. 46.
111. On estimated lower charges by Cubans, see Central Intelligence Agency, *Communist Aid Activities 1977*, p. 5. On charges to Libya and Iraq for doctors, see Helen Mathews Smith, "Castro's Medicine: An On-the-Scene Report," *M.D.* 27, no. 5 (May 1983):163.
112. *Granma Weekly Review*, 27 Feb. 1983, p. 9.
113. Angola paid for much of its civilian assistance from the early 1980s until 1984–85, when most aid reverted to a grant status until Angola could afford to pay again. See Domínguez, *To Make a World Safe for Revolution*.
114. See Carlos Martínez Salsamendi, "El papel de Cuba en el Tercer Mundo: América Central, El Caribe y Africa," in *Cuba y Estados Unidos: un debate para la convivencia*, compiled by Juan Gabriel Tokatlian (Buenos Aires: Grupo Editor Latinoamericano, 1984), 145; and Jorge I. Domínguez, personal communication, 24 June 1986. See also Domínguez, *To Make a World Safe for Revolution*.
115. See Susan Eckstein, "Comment: The Global Political Economy and Cuba's African Involvement," *Cuban Studies/Estudios Cubanos* 10, no. 2 (July 1980):90; and Eckstein, "Structural and Ideological Bases," 107.
116. Sergio Roca, "Economic Aspects of Cuban Involvement in Africa," *Cuban Studies/Estudios Cubanos* 10, no. 2 (July 1980):66.
117. Calculated from Carlos Martínez Salsamendi, "El papel de Cuba en el Tercer Mundo," 145; and from Grundy and Budetti, "The Distribution and Supply of Cuban Medical Personnel," 718.
118. *Cuba Internacional* 5–87, no. 210 (May 1987):52–57; *Granma Weekly Review*, 7 Feb. 1988,

p. 3; *Granma Weekly Review*, 28 Feb. 1988, p. 12; and *New York Times*, 29 May 1988, sec. 1, p. 4.
119. Smith, "Castro's Medicine," 155; and *Granma Weekly Review*, 25 May 1986, p. 8.
120. *Granma Weekly Review*, 1 Mar. 1987, p. 5; and 31 May 1987, p. 4.
121. *New York Times*, 29 May 1988, sec. l, p. 4.
122. *Jornal do Brasil*, article cited in *Center for Cuban Studies Newsletter*, Sept. 1986, p. 3.
123. *Granma Weekly Review*, 1 Feb 1987, p. 9.
124. *Granma Weekly Review*, 29 Nov. 1987, p. 3.
125. *Granma Weekly Review*, 10 Jan. 1988, p. 3.
126. *Granma Weekly Review*, 26 Apr. 1987, p. 1.
127. The cost of sugar production by Caribbean producers is estimated at an average 15 cents a pound and 12 cents a pound for the most efficient producers like Cuba. From 1981 through 1987, world sugar prices have been below 10 cents a pound. Average prices for 1986 and 1987 were less than 6 and 7 cents a pound respectively. See Scott B. MacDonald and F. Joseph Demetrius, "The Caribbean Sugar Crisis: Consequences and Challenges," *Journal of Interamerican Studies and World Affairs* 28, no. 1 (Spring 1986):35; *Wall Street Journal*, 20 Oct. 1986, p. 42; *Granma Weekly Review*, 25 Oct. 1987, p. 1; and *New York Times*, 26 July 1988, p. 42.
128. *Granma*, 29 July 1986, p. 4.
129. Cuba missed its 7 July 1986 interest payment and sought a deferment until the end of September 1986 due to its foreign exchange crisis. *Latin American Weekly Report*, 24 July 1986, p. 7.
130. *Granma Weekly Review*, 19 Apr. 1987, p. 10.
131. *Granma Weekly Review*, 21 Feb. 1988, p. 2.
132. *Latin America Regional Report: Caribbean*, 2 Oct. 1986, p. 2.
133. It has been estimated that between 1977 and 1980, Cuba's earnings from international contracts represented 6 to 18 percent of the island's hard-currency exports. See Susan Eckstein, "Cuban Internationalism," in *Cuba: Twenty-Five Years of Revolution, 1959–1984*, edited by Sandor Halebsky and John M. Kirk (New York: Praeger, 1985), 379–80.
134. *Bohemia*, 15 Sept. 1978, p. 39.
135. Central Intelligence Agency, *Communist Aid Activities, 1979 and 1954–1979*, iv, 11.
136. Central Intelligence Agency, *Communist Aid Activities, 1977*, p. 10.
137. John M. Donahue, *The Nicaraguan Revolution in Health* (South Hadley, Mass.: Bergin and Garvey, 1986); Organización Panamericana Sanitaria, "Cooperación técnica de la OPS/OMS: desarrollo de servicios de salud," internal document URU/DHS/010/P2, 16 Nov. 1987, pp. 20–22; *Novedades de Quintana Roo* (Cancún, Mexico), 13 May 1988, p. 44; and *New York Times*, 13 Mar. 1988, p. 8.
138. Interviews conducted in various Cuban cities in 1978, 1979, and 1980–1981. According to Jesús Escandell of the Central de Trabajadores Cubanos, the main demand of Cuban workers is housing. *Granma Weekly Review*, 17 May 1987, p. 3. Criticisms of the health system have been raised in *Boletín Especial* by Equipo de Opinión del Pueblo (Holguín), 1987.
139. For a fuller treatment of the trade-offs, see Feinsilver, "Symbolic Politics and Health Policy."
140. Stephen White, "Economic Performance and Communist Legitimacy," *World Politics* 38, no. 3 (Apr. 1986):463–64.
141. *Granma Weekly Review*, 18 Nov. 1984, p. 3. Castro mentioned education as the second service most highly valued by the people.
142. *Granma*, 16 Oct. 1986, p. 1.
143. *Granma Weekly Review*, 10 May 1987, p. 9.
144. *Granma Weekly Review*, 22 June 1986, p. 3.
145. Roca, "Economic Aspects," 70.
146. On primarily military but also civilian aid, Roca argues that the costs seem to outweigh the economic benefits; Pérez López indicates that the data are insufficient to make any definite claims; Eckstein and Pérez López both point out benefits that Roca failed to mention. See Roca, "Economic Aspects," 67–75; Jorge F. Pérez López, "Comments: Economic Costs and Benefits of African Involvement," *Cuban Studies/*

Estudios Cubanos 10, no. 2 (July 1980):80–84; and Eckstein, "Comment: The Global Political Economy," 85–90.
147. Domínguez, "Political and Military Limitations," 28.
148. For a fuller discussion of Soviet aid, see Feinsilver, "Symbolic Politics and Health Policy."

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