ryone. Any method of production and consumption, to be truly sustainable, must enrich and protect Mother Earth.

No to Climate Smart Agriculture! Yes to land reform and agroecology! For people’s food sovereignty! Globalize the struggle, globalize hope!

Note
For more information, see “Clever Name, Losing Game: How Climate Smart Agriculture Is Sowing Confusion in the Food Movement,” a report in which ActionAid International says: “while the name may be clever, ‘Climate Smart Agriculture’ includes some perversely stupid practices that are bad for the climate.”

Thinking Economically

The Birth of Revolutionary Medicine in Cuba
by Don Fitz

Within five years of Cuba’s 1959 revolution half of the country’s 6000 doctors had left. But conversely, while many professionals forsook their homeland for the comforts of Miami, 3000 doctors chose to stay. Why did they remain? More important, with twice as many patients per doctor, how did they face the daunting task of transforming medicine? Simultaneous with providing care, their goals included …

• expanding medical care to rural Cuba;
• increasing medical education to replace doctors who left;
• making care preventive, community-oriented, and focused on tropical diseases; and,
• redesigning a fractured and non-cohesive health system.

Exploring changes during this period requires examining sources available in Cuba as well as oral histories of Cuban physicians who lived during the revolution.

Cuban doctors abandon their patients

Before 1959, Cuba experienced three medical revolutions. The first medical revolution (1790–1830) occurred in the context of brutality against slaves. An early “safety device” was use of a machete by an overseer to cut off a slave’s hand that was caught in a roller. Such events were not uncommon amongst those forced to work 20 hours per day. [1]

This revolution was led by Tomás Romay y Chacón (1764–1849) who introduced smallpox vaccination to Cuba, promoted public sanitation and advocated medical treatment for slaves. Romay provided Cuban practitioners with an intellectual orientation as an alternative to blindly following Spanish traditions.

The Second Medical Revolution (1898–1922) followed a wave of Cuban doctors deserting their patients. Doctors fled the countryside during Cuba’s two wars for independence (1868–1878 & 1895–1898). Disease ravaged the island. Of the 200,000 troops Spain sent to Cuba during the second war, 704 died in battle, 8164 died of wounds, and 53,000 perished from disease, the most virulent killer being yellow fever, which claimed 13,000 lives.

Though Carlos J. Finlay, leader of the Second Medical Revolution, had discovered the transmission of yellow fever by 1881, his research was ridiculed by medical professionals in Cuba, Spain and the US. His findings were not implemented until 1900. A year later Cuba was free of the disease. Along with discovery of the mosquito vectors for malaria and yellow fever, the second medical revolution was known for its emphasis on microbiology and immunology.

The third medical revolution (1925–1945) was characterized less by new discoveries than heightened awareness. A cleavage within the medical community sharpened as it became increasingly clear that resolution of Cuba’s medical problems necessitated focusing on needs of the rural population, preventive medicine with cheap or free services, and application of new knowledge of tropical medicine and parasitology. [2]

The first physicians’ organization appeared in 1925: the Cuban Medical Federation (FMC). This was the same year as the founding of the Cuban Confederation of Workers and the Cuban Communist Party (which used the name Popular Socialist Party, CCP or PSP). [3]

Within four years, the FMC saw the formation of two internal political parties: Renovación, which pushed for higher physician wages and better university training, and Unión Federativa (UF), which represented doctors in larger private medical organizations. In 1932 Renovación split into Reformista and Ala Izquierda (Left Wing).

By 1938, the FMC platform called for “pharmaceutical controls, workers’ accident protection, a
minimum wage scale for physicians, prohibition of multiple positions, institutionalization of the sanitary career, improved hospitals, school health, sanitary provisions for the poor...[and] a physicians’ retirement plan.” [4] Though its program reflected views of *Ala Izquierda*, the FMC organization remained under control of the more conservative UF. Increased factionalism was reflected by the creation of a more leftist party, *Acción Inmediata* (AcIn) and a right wing party, *Ortodoxos*, who called for dropping the demand that doctors not hold multiple positions (which made some rich and others under- or unemployed). [5]

Divisiveness among doctors intensified. AcIn won leadership of the Havana Medical College in 1941. This leftist victory was reversed when 1000 doctors came to vote in 1942. But during that year, AcIn won national leadership in the FMC, and in 1943 they won again in the Havana Medical College. PSP (CCP) members held leadership positions in the FMC from 1943 until the 1959 revolution.

In 1951, doctors repeated calls for better organization of hospitals, minimum salaries, regulation of specialties, and modern medical standards. Though demands for better working conditions permeated the period, it was a deep concern for the lack of adequate rural health care that defined the third medical revolution.

The three medical revolutions saw mutualism grow from a minor footnote to a major chapter in Cuban health care. The first mutualist plan was offered 400 years before the revolution when, in 1559, a physician from Spain offered a plan for medical care in exchange for a regular fee. Over the centuries mutualism grew into contradictory subgroupings catering to Spanish immigrants, commercial associations or unionized workers. Cuban historians describe mutualism as “a form of self-financed assistance” whereby a monthly payment covered treatment, hospitalization and medications. [6]

Private fee-for-service care existed at the same time. A common complaint was that mutualist doctors would recommend private doctors for services not covered by the mutualist plan. Then the two physicians would split the fees.

Nevertheless, mutualist clinics provided a collective attitude to medical work which would become critical after the 1959 revolution. Alongside mutualism and fee-for-service care was the state medical system, which provided limited care to the poor. At the eve of the revolution, there were abundant, overlapping medical systems in the cities and negligence in rural Cuba. Of 456 health institutions during 1956, 42.8% were private or mutualist. Of these, 52% were in Havana.

### Transformation of medical care

Ten years after the revolution, Fidel Castro reflected on the enormity of health care problems that confronted Cuba in January, 1959:

The absence of a national public health plan; semi-official and private services that were better than those provided by the government; an orientation toward curative medicine; abandonment of rural and some urban areas; individual medicine; mercantilism; competition between private services; administrative centralization with a public unaware of treatments that could benefit them. [7]

In addition to Fidel’s observations, there were no reliable data on health indicators, an insufficient number of doctors and dentists being graduated, and severe underfunding of the few research facilities that existed. The pharmacy industry was 70% foreign controlled and created many products lacking in therapeutic value. Only 10% of children were covered by specialized pediatric care. Vaccination programs were unavailable. [8]

When he was 87 years old, Dr. José Gilberto Fleites Batista recalled the revolutionary epoch for Candace Wolf: “Before the Revolution, there were big hospitals only in the capital, in big cities, but not in rural areas, in the countryside and in the Sierra.” [9] The physician to inhabitants ratio was 1:248 in Havana and 1:2608 in the eastern provinces.

Medical education was theoretical with little hands-on experience. There were insufficient teaching hospitals and education was oriented to making money. Dr. Julio López Benítez completed his specialty in pediatric nephrology in 1960, shortly after Havana’s medical school reopened following the revolution.

He remembers that “Some were in medicine as a business. In Calixto-García Hospital, 300 professors charged their patients.” [10]

The principal health care task during the first five years of the revolution was creating services. In 1959, priority went to hospital construction. By 1963 the revolutionary government had established 122 rural centers and 42 rural hospitals with 1155 beds, 322 doctors and 49 dentists.

In order to accomplish the primary task, it was necessary to bring cohesion to the disjointed medical system. On January 22, 1960, Law 717 created the *Ministerio de Salud Pública* (MINSAP, Ministry of Public Health) and Law 723 established Rural Health Services. [11]

As MINSAP consolidated and extended state services it had an ambivalent attitude toward mutualism, which was based on privately owned services. Nevertheless, it would have been a serious blunder to attempt to abolish mutualist clinics during the upheavals following the revolution. Widespread mutu-

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**Divisiveness among doctors intensified.**

**At the eve of the revolution, there were abundant, overlapping medical systems in the cities and negligence in rural Cuba.**
alist services provided a cushion for the effects of doctors’ abandoning private practice as they left the island. This lessened the pressure on public services as they expanded and reorganized. As time went by, contradictions within mutualism intensified as its members realized that its services were inconsistent and free health care could be obtained by state clinics. Instead of attacking the system, MINSAP developed a 1963 report describing how to consolidate and rationalize mutualism.

Revolutionary changes cannot happen just because laws decree that they will. They require the type of mobilization campaigns that swept Cuba. The literacy campaign was the best known of the mobilization efforts. In 1953, 23.6% of Cuba was illiterate (41.7% in rural areas). In one year, 707,712 were taught to read and write. Within a few years, illiteracy was brought down to zero. These early campaigns occurred when Batista supporters still roamed the countryside. Dr. José Fleites recalls “Thousands of students went into the countryside to teach the people how to read and write. It was a beautiful campaign, but it came with a harsh price. The counterrevolutionaries assassinated some of these idealistic students.”

Thus, medical campaigns were an essential component of a much broader social transformation. In 1960, Law 723 required medical graduates to spend a year in rural service. By 1963, 1500 doctors and 50 dentists had done so. In February 1960 the first group of 357 doctors went to rural areas where there had previously been no doctors. Many had to stay in the homes of campesinos. They found people so much in need that initially they could provide only curative, rather than preventive, medicine. Determination for preventive medicine prevailed, and, by the end of 1960, doctors had given twice as many DPT vaccines (diphtheria, pertussis, tetanus) than had been provided during all of 1954–59.

The anti-malaria campaign began in 1961. The next year saw the first national campaign to vaccinate against polio, a clean water campaign, gastroenteritis control and a major program to improve staff training. There was even a rabies campaign for street dogs (perros callejeros).

New doctors, new education
The wave of revolutionary fervor sweeping through the island had a particular form in medical school. Batista had responded to protests by closing the University of Havana (including the medical school) in 1957–58. When it reopened in 1959, there was a new approach to education. Dr. Ezno Dueñas Gómez had a specialty in pediatric neonatology and was in the first class to graduate after the revolution. When he was 84 years old, he told me, “The culture of teaching changed. In the classical medical education before 1959, students could go to class if they felt like it and they received little practical experience. This is why they could skip class. After the revolution, students had to get to class for practical experience and go to rural areas.” [12]

Dr. Felipe Cárdenas González graduated in 1962 with a specialty in pediatric cardiac surgery. He observed a new way of recruiting students: “We created a new culture of revolutionary medicine. The professors of medicine who stayed went out looking for good students who could become doctors.” [13]

Inspired by free tuition, those from working class backgrounds were more numerous among new students. Once at medical school they found a plethora of revolutionary organizations. Incoming students were required to take classes focusing on rural and tropical medicine as well as preclinical sciences. For the first time, medical school taught biochemistry. Hospital internships were made a prerequisite for graduation. Before 1959, a short course on social medicine was offered in the last year, after students had already formed their clinical perspectives. After 1959 social medicine was included in each year’s curriculum.

It became clear that student and government involvement was reforming old systems of faculty control of education. On July 29, 1960 the medical faculty was evenly divided when it met to discuss the proposed Superior Governing Board for the university. A month later, in August 1960, only 19 professors remained in the medical school — the only one in Cuba. They formed the nucleus of young, competent doctors who took on monumental responsibilities to sustain medical training.

To accommodate more students, the number of teaching hospitals increased from 4 to 7 and new medical schools opened in Las Villas and Santiago de Cuba. Students and doctors adjusted to the strenuous demands of the revolution. “No one rested during those years,” Dr. Felipe Cárdenas reminisced. “We worked as hard as we needed to. I did guardia for 24 hours and then I did surgery and then I had to study and write a work-up for new students.”

MINSAP contracted for medical instructors from 26 countries: 120 arrived in 1964 and 92 in 1965. Most came from Argentina, Mexico, and Ecuador. Others were from Bulgaria, the Soviet Union, Czechoslovakia and Hungary.

During 1959–62, Cuba graduated 1497 doctors. From 1963–69, it averaged 498 graduates per year. This meant that at the end of 1963, five years after the revolution, the country still had roughly 1000 doctors fewer than the 6000 who practiced medicine in January 1959. Though the first five years of revolution had transformed the culture of medicine and provided care to those who had never received it, there was still not a better doctor to patient ratio.

“It was a beautiful campaign, but … counterrevolutionaries assassinated some of these idealistic students.”

“We created a new culture of revolutionary medicine.”
“Wherever the revolution needs me”

The new government, and particularly Fidel, obtained tremendous responses to calls for revolutionary commitments. Dr. José Fleites’ enthusiasm was born from dislike of the Batista regime:

I sympathized with the revolutionaries, but I lived outside of that. My world consisted of operating on my patients and taking care of my family.

The only time that the revolution and the operating room came together for me was when I hid a young man—a wounded revolutionary fighter who was running from Batista’s police. He arrived in the emergency room while I was an intern at the Calixto García Hospital and I hid him there from the police who would have tortured or killed him.

But I will tell you that the triumph of the Revolution was a great moment for all of us. [14]

Even before the government required rural medical service, a November 29, 1959 assembly of medical students pledged their willingness to go to provincial Cuba. Soon after Dr. Julio López graduated from medical school, “A friend asked me why doctors were being sent to Santiago when there were not enough in Havana and I said that there were even fewer in Santiago. We’re all Cubans.”

As Cuban society polarized, students were entering medical school with the expectation that they would be trained, not for personal gain, but according to the needs of society. Renouncing private practice, a popular comment by students was that they would go “wherever the revolution needs me.”

Eagerness to go to the countryside likewise caught fire with practicing physicians. Dr. José Fleites was profoundly affected by his chat with the new Minister of Health: “That minister knew me and he talked to me about going with them. They needed many physicians to go to various places in the Sierra Maestra, to provide care for the peasants. And I said ‘Yes, I will go!’”

Dr. López observed that “Fidel had a huge influence after the literacy campaign. He asked for people to study medicine and many who answered the call were teenagers.” One of those teenagers was Dr. Oscar Mena Hector, who spoke to me when he was 62. He heard Fidel’s call when he was in middle school. He took the science entrance exams for medical school when he was 14 years old. He did not pass them; but, he did in 1970 and became a doctor in 1976. [15]

Medical campaigns in rural Cuba deeply affected those who participated. Dr. Fleites “…will always remember the particular case of a dehydrated little boy. We gave him intravenous infusions because he had diarrhea. I remember that boy well because he would have died of dehydration if we hadn’t been there.”

Medical internationalism

Cuba’s medical system interacted with other countries in many ways. As early as April 1961, Cuba signed a cooperation agreement with Czechoslovakia. The next year it sent technicians to Bulgaria to study preventive medicine. East Germany made an agreement in 1964 to send orthopedic supplies.

Cuba also sent doctors abroad. In March 1960, only 15 months after the revolution, an earthquake hit Chile and Cuba sent a small number of doctors for a brief period. The next year Cuba sent arms to Algerians fighting for independence from France. The boat returned with 76 injured Algerians and 20 child refugees.

A 1963 medical brigade to Algeria had 55 Cubans, including 29 doctors. There were 43 men and 12 women. Details of this mission were not widely known until Hedelberto López Blanch published Secret Stories of Cuban Doctors, a collection of oral histories of Cuban medical workers serving in Africa in the 1960s and 1970s. [16]

One of the doctors going to Algeria was Sara Perelló. Perelló who was 84 years old when interviewed by López. She had just graduated with a specialty in pediatrics. Her mother heard Fidel saying that the flight of doctors to France left Algerians even worse off than Cubans: “There are 4 million more Algerians than Cubans but they have only a third of the doctors we do.” [17]

After her mother came home and told her that she needed to help them, Dr. Perelló went to MIN-SAP to volunteer. She was worried that her mother was very old and had Parkinsons. Her mother responded that Sara’s sister and husband would help her as would the government. “Now the thing to do is go forward and don’t worry about your mother who will be well taken care of.” [18]

When Dr. Pablo Resik Habib was 76 years old, he told López that he was chosen to head the Algerian mission largely because of his Arabian heritage. He had worked as an anesthesiologist, first in a hospital and then in a mutualist clinic. He left his three month old daughter in the care of his wife, who supported international efforts.

Brigade members were promised a small stipend, with their salaries going to their families. Dr. Resik described the precarious plunge into Cuba’s first international mission: “We found ourselves in an Arabic country, Muslim, with habits, customs and cultures very different from ours.” [19]

Dr. Zoila Italia Suárez would have completed her pediatric specialty; but, due to Batista’s closure of the university, her graduation was delayed until 1960. She went immediately to Granma province for her rural services.

Her recruitment to the Algerian brigade personified the transition from campaigns to end the rural/urban dichotomy within Cuba to medical internationalism. Willingness to leave Havana for rural Cuba easily transferred to a willingness to leave Cuba to help meet medical needs in Africa.

...five years after the revolution, the country still had roughly 1000 doctors fewer than the 6000 who practiced medicine in January 1959.
Dr. Italia emphasized that language was her main problem. During treatment she would have one translator for Arabic to French and a second for French to Spanish. When one woman brought in a child but spoke a form of Arabic that the translator not understand, the mother took her hand and put it on her son’s abdomen. Upon feeling a tumor she sent him to the hospital immediately. She learned to diagnose based on where the mother touched the child or if she sneezed or coughed.

The mission taught staff valuable medical experiences. Dr. Italia witnessed “many sicknesses that were rare or non-existent in Cuba. I saw a lot of tuberculosis, malnutrition, malaria, parasitic diseases and bacterial infections … In Constantina, a military hospital was completely empty because the French doctors had left.”[20]

Ernesto “Che” Guevara left a deep mark on this formative mission. Dr. Italia recalled that “Che visited us when we had only been in Algeria a month. He asked if we were having any difficulties and how we were able to interact with patients without knowing their language. Che only spent a few hours with us; but, we were distributed in various provinces and he went throughout the country.”[21]

“One afternoon we were told that Che would meet us the next morning at 7 am,” Dr. Perelló reminisced. “We didn’t think that would happen because no one travels at night in Algeria. But when we arrived at the government house on April 13, 1963, Che was waiting for us at the door.” Che impressed her as serious to the point of being ascetic: “Che told us to forget the greenery and palm trees of Cuba and dedicate ourselves to our work.”[22]

Algerian experiences left Cubans with stories that would inspire medical students for decades. Dr. Resik emphasized, “I received much more from this mission than I gave to it … I am proud to have been one of the pioneers of this enormous example that the small Island of the Caribbean has given to the world.”[23]

The 3000 who left

Many Cuban doctors had no desire to go to the provinces, much less to the Algerian desert. Two large waves of doctors left Cuba. The first accompanied the huge changes in health care delivery during the first couple of years. Many were owners of private clinics, directors of mutualist centers and those with a high income private practice. The second wave was provoked by the April 1961 Bay of Pigs invasion and the October 1962 missile crisis. Dr. López pointed out that, “In William Soler Hospital there were 59 doctors. In one day in February 1961, 26 left. This was a month or so before the Bay of Pigs. They must have known that it would happen and left before.”

Many departed with the advent of rural service which would take them to locations lacking in the comforts of Havana. Dr. Cárdenas thought that “It was similar to Brazil where many doctors do not want to go to areas where they are most needed.” He added, “Most of the doctors who left were not rich but identified with them.”

The literacy, medical and other campaigns that engulfed Cuba’s poor, working, and farming classes were an affront to middle class life styles. It went beyond the disruption of medical school — when Batista closed the university during 1957–58 there was no great exodus of medical faculty. Dr. Dueñas suggested, “They knew that doors were open to them in the US. Many doctors went to Miami not because they were counterrevolutionaries but because they could have so many things in the US.”

I asked four doctors (López, Cárdenas, Dueñas and Mena) if the difference between those who left and stayed was older vs. younger and they all replied “No” — age had nothing to do with it. They also agreed that it was not possible to know how a doctor would react to the revolution by his wealth. “Roberto Guerra was a well-known rich surgeon,” Dr. Dueñas pointed out. “He was very charismatic, with no children but a movie star lover. He was the first to give up his private practice and donated his clinic to the revolution so that it could be used for teaching.

“Dr. José Resno Albara renounced his millions of dollars and helped found the new revolutionary medicine,” Dr. López added. “Some doctors supported the revolution after it happened but some had been revolutionaries.”

While it would be an overstatement to imply that there was no relationship between pre- and post-revolutionary attitudes of doctors, it would likewise be an overstatement to suggest that actions before 1959 could always predict what a doctor would do once Batista was out. There were certainly some who were enthralled by the July 26 Movement who became dismayed once they saw it actually implementing its ideas rather than abandoning them as did so many Latin American revolutionaries who gained power. Contrariwise, many remained aloof from the struggle, perhaps believing that Cuba could never have a genuine transformation, who threw themselves into it once they saw it happening. The contrast between doctors who stayed and those who left was whether they were enraptured or repulsed by the changes unfolding before their eyes.

Race in the time of medical revolution

African lineage tends to be higher among rural Cubans and those living in the eastern part of the island, which is closer to Haiti and where Santiago de Cuba is the largest city. It is hard to overstate the
importance of the 1959 revolution, which ushered in the most significant changes in the lives of black Cubans since the abolition of slavery.

Calls to serve in rural areas and eastern provinces were synonymous with appeals to fight structural racism. That lies behind Dr. López’ volunteering for service: “I was doing genetic research as a pediatrician when they told me that children were dying in Santiago and that I needed to get there; so I went to Santiago in the early 60s for a three month rotation.”

The central contradiction facing revolutionary medicine was how to do much, much more with much, much less while conceptualizing much, much deeper. Writing 20 years after the revolution, Roberto Capote Mir summarized early accomplishments as creating a unified health system; increasing hospital beds and health care facilities, especially in rural and eastern Cuba; increasing every category of health care worker; and, attaining “active participa-

tion by the masses in the solution of health care problems.” [25] Of the many organizations created at the time, by far the most important for medicine was the Committees for Defense of the Revolution (CDRs), which were organized in 1960 to guard against counterrevolution. CDRs participated in multiple health campaigns, and, after 1962, were responsible for polio immunization.

In a different political climate, doctors became different people. “When I started my medical career,” Dr. López shared, “I thought that if a child died of hunger it was not my problem as a doctor. But now I understand that it is my problem.”

Dr. Cárdenas was no less affected:

At the beginning people were for or against the revolution in a very theoretical way, but I became married to the revolution. There was a vaccination campaign in Realengo 18 (in Guantánamo). Patients had to come by foot and a woman brought a child who had gastroenteritis. His father had to walk for three hours every day to see him and I told him he could stay home because his son could leave in two days. The father would not leave because he said four other sons had died. This changed my life forever.

As physicians began to act as medical “cadre” they perceived themselves as embedded in a broader political agenda. A medical school graduate “could not fail to see his own efforts as only one part of a set of health-related measures: land reform, new roads, improved agricultural methods, schools, literacy programs, improved diet, and an end to seasonal unemployment…” [26]

Understanding of the need to serve the underserved assumed the role of a theory which guided the direction of medicine in Cuba. As Karl Marx realized, “theory becomes a material force when it grips the masses.” [27] The desire of isolated physicians to provide free care to the multitude of impoverished Cubans could not more change medicine-as-an-entity than could isolated communes halt the current austerity drive of the 1%. Just as futile would be a government attempting to create a new medical system by decrees that were isolated from the mood of the country. But, in a country where thousands of doctors had struggled for decades to create equitable health care, a revolutionary government which reflected that awareness could unite those struggles and reshape medicine.

The consciousness of the 3000 who stayed became a material force in the production of Cuban health care. That consciousness was as much a material force as the manufacture of pharmaceuticals or the construction of hospitals. Medicine was affected by that consciousness at least as much as Cuban dentists was affected by the newly-developed high-speed drills that Fidel required as ransom from the
US for the return of captured mercenaries after the Bay of Pigs invasion.

Unanswered was whether this new medical consciousness would be powerful enough to overcome new challenges. The need for basic services was so severe that meeting it meant building physical facilities and focusing on specific illnesses and health problems. The relationship of health care institutions to communities served remained pretty much the same. Though the municipal polyclinic begun in 1962 offered a new orientation, the crisis atmosphere interfered with expanding this paradigm shift. [28]

The question remained: Once the delivery of services improved, would the medical field be able to conceptualize fundamental changes in the way health care was delivered?

A dark cloud weighed heavily on medicine: Infant mortality increased during the first few years of the revolution. [29] It is likely that a portion of the increase was due to better statistics. Some infant deaths which would not have been tabulated before 1959 were recorded after the revolution. The revolution was doing everything humanly possible to provide vaccinations and other pediatric services, but

The consciousness of the 3000 who stayed became a material force in the production of Cuban health care.

the flight of doctors took its toll. Schools were working sleeplessly to increase every type of medical training and doctors were much better distributed throughout the island. Yet, at the end of 1963 there was still a lower doctor to population ratio than there had been in January, 1959. The question remained: Would new students be able to continue the intense pace and increase their numbers through the next years?

Though medical accomplishments were felt throughout the island, the trip of 55 medical staff to Algeria was not well publicized. Five years after the revolution, no one knew what its impact would be. Would it later be viewed as a waste of desperately needed resources? Or, would it be possible that experiences gained from the Algerian mission would combine with medical approaches still in an embryonic stage inside Cuba and that this marriage would transform Che’s dreams into a material force in the production of a new global medicine?

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Notes
5. There does not seem to be any connection with the national political party, Ortodoxos, which attracted Fidel Castro in 1947. See Peter G. Bourne, Fidel: A Biography of Fidel Castro (New York: Dodd, Mead & Company, 1986), 39, 53.
6. Ruiz, 10.
9. Candace Wolf, “The Zen of Healing: Two Surgeons Speak, Spoken Histories of Dr. José Gilberto Fleites Batista and Dr. Gilberto Fleites Gonzalez.” Havana, Cuba, January 2013. (unpublished manuscript). Dr. José Gilberto Fleites Batista was born on October 7, 1925.
10. Interview with Dr. Julio López Benítez (born in 1933), Havana, Cuba, December 26, 2013.
11. Roberto E. Capote Mir, “La evolución de los servicios de salud y la estructura socioeconómica en Cuba. 2a Parte: Período posrevolucionario” Instituto de Desarrollo de la Salud: (La Habana, 1979), 53; Ruiz, 29.
12. Interview with Dr. Enzo Dueñas Gómez (born in 1929), Havana, Cuba, December 26, 2013.
13. Interview with Dr. Felipe Cárdenas Gonzáles (born in 1935), Havana, Cuba, December 26, 2013.
16. Hedelberto López Blanch, Historias Secretas de Médicos Cubanos. (Centro Cultural de la Torriente Brau: La Habana, Cuba, 2005). Dr. Sara Perelló Perelló was born on April 15, 1920. Dr. Pablo Risk Habib was born on December 21, 1930. Dr. Zoila Italia Suárez was born on February 26, 1927, 9, 211.
17. Ibid, 9, 216.
18. Ibid, 223.
21. Ibid, 236.
22. Ibid, 224.
23. Ibid, 221.
24. Danielson, 120, italics in original.
25. Capote, 57.
29. Whiteford, 54; Castro, 42.