

# CubaTimes

Published by the Cuba Resource Center, Inc.



Two Dollars



September-October, 1984

- **New Travel Crackdown**
- **Latest on the Economy**
- **Fashion**
- **Special: Science**

## Harassment by Subpoena: Travel Ban

by Jean Fraser

The Reagan Administration, buoyed by the Supreme court ruling in June to uphold the travel ban to Cuba, is acting as though it has a mandate to prevent the free flow of information and ideas.

The conflict arose in late August when Marazul Tours, a small New York-based travel agency which handles some travel to Cuba, received two subpoenas from the U.S. Treasury Department. The first subpoena asked for records, including names and addresses, of all persons who have traveled to Cuba since April 1982. The second asked for similar information relating to a six-day legal seminar a group of U.S. lawyers will be attending in Havana starting September 16.

The conference, in which over 300 Cuban jurists will participate, will survey the development of the Cuban legal system over the past 25 years. United States jurists will also visit courts and law collectives and meet with Cuban jurists, legislators and legal scholars.

As of this writing the first subpoena has been postponed until September 21, 1984. Marazul, threatened with losing its license if the names were not handed over, turned over 5,000 names of Cuban-Americans who traveled to Cuba to visit relatives and Cubans visiting relatives in the U.S. and returning to Cuba. They did not turn over all the names of individuals who visited Cuba since April 1982; no names of North Americans who visited Cuba were handed over. According to Harold A. Mayerson, legal adviser for Marazul, the government is not only interested in names of individuals, but also the names of organizations, universities, or anyone who sponsors trips to Cuba.



Marazul, though a small agency, handles most special interest tours to Cuba and Mayerson believes this is the reason the government went after them.

### Government Intimidation

Mayerson and Michael Ratner, a leader of the legal seminar trip and staff attorney for the Center for Constitutional rights, were subsequently subpoenaed and requested to turn over all information they had about the upcoming lawyers' trip. After a series of intense negotiations and the threat of a lawsuit by the American Civil Liberties Union and the National Lawyers Guild, the government agreed to retract its request for the mailing list used to distribute the promotional brochure for the conference.

Mayerson said: "The government is attempting to rule by terror: their sole purpose was intimidation—they can get the names of anyone traveling to Cuba from the Federal Aviation  
(continued on page 3)

## TO OUR READERS

As we go to press for this issue, the U.S. government has undertaken a new crackdown on travel to Cuba. This time it is aimed at the small number of Americans who are eligible to travel under the government's own regulations. The U.S. Treasury Department has subpoenaed the records of Marazul Tours, Inc. in order to obtain the names and addresses of all individuals who have visited Cuba since April 1982. In a second subpoena, they also asked for the names of a list of lawyers invited to a legal seminar in Cuba. Threats of a lawsuit by civil liberties organizations to block the subpoenas and anti-government press coverage have apparently resulted in the government's dropping of the subpoena of the list of lawyers and a temporary postponement of the subpoena of names of other travelers. Further details on what has happened to date are contained in Jean Fraser's cover story.

The Treasury Department claims that it has no reason to believe that the vast majority of journalists, researchers and other professionals who have visited Cuba since the imposi-

tion of the travel ban were not fully authorized under the regulations. It says it is conducting an investigation just to make sure that no unauthorized travel is taking place under the guise of professional research. However, it is clear that investigation by subpoena and reporting of names to the government can only be intended to intimidate potential travelers to Cuba.

The Cuba Resource Center and other organizations that sponsor trips to Cuba will not be intimidated. We will continue to organize trips for those who fall within the government's travel regulations. The next such trip will be a Women's Studies Research Trip, planned for January 4-13, 1985. The cost is \$775 from Miami, including airfare, seven nights in Havana and two nights on the Isle of Youth, all meals, transportation within Cuba and a full program of research visits and interviews. For further information, write to the Cuba Resource Center, 11 John Street, Room 506, New York, N.Y. 10038.

## CONTENTS SEPTEMBER • OCTOBER 1984 VOL. 4 NO. 6

- |  |  |
|--|--|
| <p>1 Harassment by Subpoena: Travel Ban<br/><i>by Jean Fraser</i></p> <p>3 Impressions of Cuba: The Olympics, the Economy and Politics<br/><i>by Arthur MacEwan and Andrew Zimbalist</i></p> | <p>7 Newsbriefs</p> <p>9 Cuba's Fashion Debut<br/><i>by Stephanie Rugoff</i></p> <p>10 Cuba's Great Leap<br/><i>by Bob Ubell</i></p> |
|--|--|



Contributors to this issue: Jean Fraser is an editor of CUBATIMES. Arthur MacEwan and Andrew Zimbalist are professors and chairpersons of the Departments of Economics at, respectively, the University of Massachusetts-Boston and Smith College. MacEwan is the author of *Revolution and Economic Development in Cuba*. Zimbalist's most recent book, co-authored with Howard Sherman, is *Comparing Economic Systems: A Political-Economic Approach*. Stephanie Rugoff is a teacher in New York City and a graduate of the Fashion Institute of Technology. Bob Ubell is the founding publisher of *BioTechnology* and head of Robert Ubell Associates, a science publishing firm.

CUBATIMES Editorial Committee: Harriet Alonso, Margaret Bald (production editor), Madelin Boyer, David Bragin (art director), Jean Fraser, Bob Greenberg, Kitty Stewart. Layout assistance: Jonathan Calvert. Correspondent: Elaine Fuller. Typesetting: Your Type. Printing: Faculty Press.

CUBATIMES is indexed in the Alternative Press Index and in the Left Index. CUBATIMES subscribes to Information Services on Latin America (ISLA) clipping service on Cuba and the Caribbean.

CUBATIMES is published six times a year by the Cuba Resource Center, Inc., a not-for-profit, tax-exempt corporation. One-year subscription: \$12 for individuals, \$24 for institutions; two year subscription: \$22 for individuals, \$44 for institutions. For overseas subscriptions, please add \$4/sub for surface mail or \$7/sub for airmail. Make checks payable to Cuba Resource Center, Inc., 11 John Street, Room 506, New York, N.Y. 10038. Copyright © 1984 by Cuba Resource Center, Inc. The opinions expressed in the pages of CUBATIMES are those of the authors and not necessarily those of the publisher. The Cuba Resource Center reserves the right to edit all articles and letters for publication.



(continued from page 1)

Authority." Though the government has retracted its request, Mayerson does not believe this is the end. "I don't believe they have closed the books on this; they will analyze the situation more carefully," before making another move.

At this stage it is not clear whether the government will pursue the names of U.S. citizens who have traveled to Cuba or those heading to Cuba for the conference. However, the American Civil Liberties Union and the Center for Constitutional Rights are prepared to go into court to prevent disclosure in the event the names are demanded.

Debra Evenson, a representative of the U.S. lawyers and legal scholars who will travel to Cuba to attend the conference, said, "Many lawyers and other professionals with an interest in Cuba have traveled legally and openly to Cuba since the institution of travel restrictions by the Reagan Administration in 1982. Our attendance at the legal conference and pre-conference program is similarly in compliance with Treasury Department regulations, which permit travel to Cuba for professional research and other similar activities." She added that equally important, "our attendance is a legitimate exercise of every citizen's First Amendment right to freedom of inquiry."

### Press Reacts

The press reacted swiftly to the news of the subpoenas. There was full coverage by *The New York Times* and the *Washington Post* published strong editorial which read in part, "If you lived through the 1950's all of this may have begun to sound familiar. In those days the government used to deny passports to individuals because of their political beliefs, a practice struck down by the Supreme Court. Though general travel bans such as the one that applies to Cuba have been sustained by the courts, they are bad policy and can lead to the kind of intrusive list-making we now see." The editorial further stated, "When the government starts compiling dossiers on who travels where and whether the traveler's reasons for doing so are approved, beware."

Dennis O'Connell, Director of the Treasury Department's Foreign Assets Control office had no comment on the adjournment of the subpoenas and would give no indication if further action would be taken at a later time. However, in a September 17 letter to the editor of the *New York Times*, John M. Walker, Jr., Assistant Treasury Secretary for Enforcement and Operations, wrote, "The Treasury Department has initiated an inquiry directed at a single travel agency, Marazul Tours, Inc., to determine whether its activities in organizing, promoting and conducting group tours are consistent with the Treasury's Cuban assets control regulations . . . the Treasury's Office of Foreign Assets control, which administers the regulations, has no reason to believe that the vast majority of journalists, researchers and other professionals who have visited Cuba in recent years were not fully authorized by a general license in the regulations. The truth is that no sweeping investigation of individual travelers is either under way or contemplated. We are concerned that authorized categories not be distorted by travel agencies such as Marazul and it is this concern, among others, that prompted the current request for documents and other information from Marazul."

According to Francisco Aruca, President of Marazul Tours, of the approximate 13,000 people who have visited Cuba through his agency, only 2,000 were U.S. residents going to Cuba for reasons other than to visit relatives—substantially less than 800 professionals a year. If the intent of the government in restricting travel to Cuba is, as they say, to cut off the flow of dollars that might be used to finance communist adventures abroad, there is little to worry about with such a small number of visitors a year to Cuba.

The current ruling prohibits any travel to Cuba except those going to visit close relatives, conduct professional research, engage in official visits or report the news. A violation of the travel ban is treated seriously. It carries a fine of \$50,000 and a prison sentence of up to 6-10 years. These penalties apply to travelers as well as to those arranging the trips. ■

## ECONOMY

### Impressions of Cuba: the Olympics, the Economy, and Politics

by Arthur MacEwan and Andrew Zimbalist

When the official Cuban Olympic Committee announced that Cuba, along with its Socialist Bloc allies, would not take part in the Los Angeles games, news that appeared on the fifth day of our brief visit to Cuba, it was almost a non-event.

Among our small group of U.S. economists, someone had expressed hope earlier that, with their great love of sports, the Cubans might distance themselves from the Soviets on the question of going to the Olympics. It was a faint hope, and our first few days in Havana had shown us repeatedly what we already knew—the Reagan Administration has so thoroughly closed the door on any positive relations with Cuba that the government in Havana has had no room to maneuver.

The mood in Cuba about the Reagan Administration was captured in a joke going the rounds in Havana. "Ronald Reagan must be my new military commander," one Cuban friend told us. "For each time he speaks, it is necessary for me to report to my reserve unit!" There is, understandably, an intense concern about the November elections. We had gone to Cuba for a week-long set of seminars on the U.S. economy, concerning a range of issues from current macro-economic policy to the changing role of U.S.-based multinationals. While the Cuban economists in the seminars had many analytic questions and comments, often the discussion returned to: what does all this mean for the November elections?

Cuba's stake in whether or not Ronald Reagan is reelected is immediate and extensive. Most obvious is the issue of war and peace. The Cubans share intensely in the world's fear of nuclear war and have a particularly strong concern for events in Central America. In addition, the Reagan Administration's 1981 proposal of a naval blockade against the island has not

been forgotten. In early May of this year, the Administration's national security advisor, once again without supplying any public evidence, declared that Cuba was pushing for a major offensive by the guerrillas in El Salvador. As the Administration, having failed in its efforts to obtain a modification of the War Powers Act, openly searches for ways to circumvent that restraint on its actions, Cubans count themselves among the potential targets.

We managed to use our recent week's visit to gather some casual observations, more statistical information, and the views of several Cuban economists and officials. We were not at all restricted in what areas we could visit. Public buses, taxis or our feet took us wherever we had the time, energy and interest to visit, including the older and more run-down parts of Havana.

## Economy in Good Shape

We are quite confident in stating that by any reasonable standard the Cuban economy is in good shape. "Good shape" does not mean that there are no serious problems. Many consumer goods—especially electronic equipment and consumer durables—remain in short supply. Cuban planners openly complain about their inability to correct certain imbalances and about continuing problems of poor quality, both with tangible goods and especially with services. There continues to be a severe housing shortage, the subject of many complaints, jokes and the rather funny recent movie, "Se Permuta." The country remains heavily dependent on sugar exports to earn foreign exchange; with the current price of sugar 30 percent below that in 1981 (in terms of purchasing power), Cuba has had to reschedule its debt to Western banks. (While Cuba's debt problems should not be trivialized, they do not present difficulties of the sort faced by such countries as Brazil, Mexico and Argentina. On a per capita basis Cuba's hard currency debt is less than one-third that of Brazil's and less than one-sixth that of Chile's. More significantly, it is decreasing rather than increasing. Furthermore, Cuba's debt problems have not involved any flight of capital to Swiss bank accounts, nor has their solution imposed conditions of forced austerity, reduced living standards or unemployment on the Cuban people.)

None of these facts, however, alters our basic appraisal. The "good shape" of the Cuban economy remains evident in many indicators. One of the most casual indicators, visible from any of Havana's many high rise buildings, is the activity of the city's busy harbor.

Another readily visible indicator of the country's economic well-being is the appearance of people. The variety and quality of people's clothing belie any notion of a nation suffering from either serious general shortages or lack of diversity.

Between us we have visited Cuba on six prior occasions during the 60's, 70's and 80's, and, while things have not appeared bleak to us in the past, we could nonetheless compile a long list of positive changes on this short visit. For example:

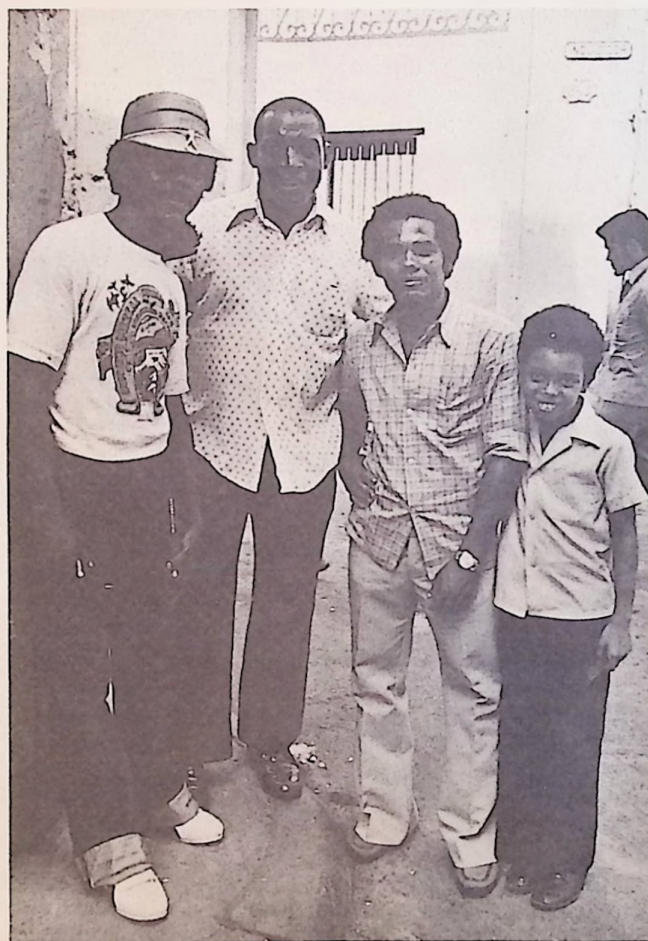
- Stores of all kinds appear to be well stocked, certainly much better stocked than in earlier years.
- The lines that were such an obvious sign of distribution difficulties in the past are not gone, but they are not nearly so frequent.
- The long blocks of unpainted housing in Havana are showing some signs of change. A few homes in old Havana

are being painted and repaired. The change is not dramatic, but a process is in motion.

- In addition to regular stores, Cuba has developed state operated "parallel markets," supplying a variety of goods at prices higher than in the regular stores. The one we visited in Havana handled fruits and vegetables.

- There are, in addition, peasant markets, similar to the "parallel markets" but operated by peasants themselves, not the state.

Long ago we both learned to be wary of reports based on brief visits—in the case of Cuba or any other country for that matter. We do think, however, that even on such a brief visit as our May trip to Havana one can see enough to dismiss those who periodically declare the Cuban economy to be in a shambles. Our appraisal that the Cuban economy is in good shape is also based on our study of the available statistical evidence.



*The variety and quality of people's clothing belie any notion of a nation suffering from either serious general shortages or lack of diversity.*

The Cuban economy has grown (in constant prices) at an estimated annual rate of 4.4 percent over the last 25 years—5.7 percent yearly from 1971 to 1980, and roughly 6 percent yearly from 1981 to 1983. With population growth rates around 1.5 percent per annum, considerably below the Latin

American average, this economic growth translates into significant per capita gains. In 1983 itself the Cuban economy grew by 5.2 percent in real terms while Latin American economies as a group shrank by 3.3 percent. In 1982 and 1983 Cuba experienced a hard currency balance of trade surplus, surpassing the targets set at its Club of Paris debt renegotiations. Cuba's programs of export diversification and import substitution are beginning to reduce her dependency on sugar—the share of sugar in the value of total Cuban exports fell from 90 percent in 1975 to 62 percent on average during 1977-81. In 1983, the value of non-sugar exports rose 60 percent.

Overall, in 1970, 95 percent of consumer spending was on rationed goods while in 1980 this share was approximately 30 percent. Since 1980 this proportion has continued to fall as the parallel market has grown over ten times, in terms of sales. The annual production of housing by state enterprises has doubled since 1981, equalling 30,000 units in 1983. Separately, the private sector completed a record 70,000 units in 1983. Per capita calorie and protein consumption has continued to increase and is equalled in Latin America only by Argentina (in proteins) and Venezuela (in calories). Cuba's ratio of population per physician fell to 524 in 1983, approximately the U.S. ratio and lowest in Latin America. Cuba's literacy, longevity and mortality rates are the most favorable in Latin America. This list of accomplishments could be readily extended.

### Social Successes?

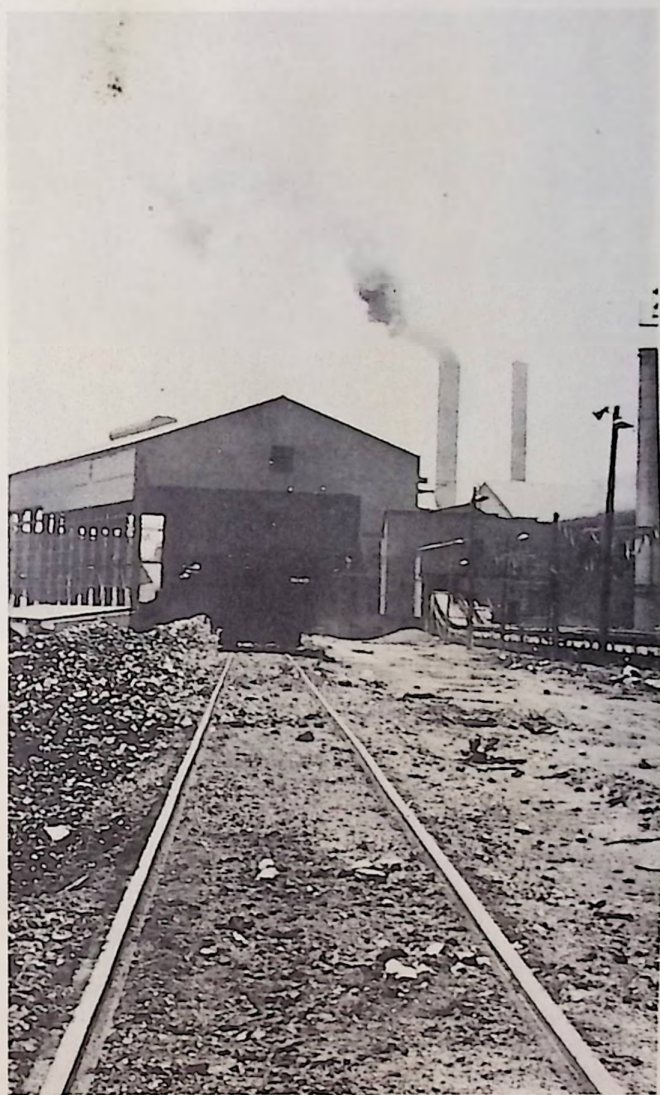
What of the "social successes" of the Cuban revolution? Education and health care continue, it seems, to be paramount priorities. Of course, one can carp at the Cubans in these areas: How do heavy smoking and relatively reckless driving square with the country's major emphasis on public health? Positive campaigns have been initiated in both these areas, but the full extent of their impact is not clear. Also, while the provision of day care services grows, it has not kept pace with the rapid entrance of women into the work force; it appears that many Cuban families must rely on the extended family for care of children, and women all too frequently continue to work a "double shift."

Women have made significant strides in their economic position. They comprise nearly 40 percent of the labor force (up from around 25 percent ten years ago) and job segregation by gender is breaking down. Women seem to be entering many high prestige, high paying professions in large numbers. We were told that over 70 percent of law students today are female and over half the economists at our host institute, the Center for the Study of the World Economy, are female.

However, the totality of Cuba's social progress is perhaps best seen in the far reaching social equality that has been established and maintained over the years of the revolution. Much of this equality was established in the early years, with land reform, programs of full employment, general provision of free medical care and education, and other programs that amounted to a substantial transfer of income from the wealthy to the poor. The principle of equality has also been firmly embedded in the wage structure that has evolved over the years, with the great majority of Cubans receiving basic wages between 100 and 450 pesos a month.

But what of the Soviet aid? Are Cuban economic successes simply a tribute to Soviet rubles rather than an indication of the effectiveness of what the Cubans themselves have been doing these past 25 years?

There is no doubt that Soviet aid—in stable sugar prices, cheap petroleum, soft loans, etc.—has been very important to



Cuba. But if we are to deny the Cubans and their social system credit for the economic accomplishments because of this aid, then we must also give them tremendous credit for those same accomplishments in light of the U.S. blockade. It is probably impossible to quantify accurately either the benefits of the aid or the costs of the blockade. Crude estimates, however, suggest that both figures are in the same order of magnitude; the roughly \$10 billion plus that the Cubans are said to owe to the Soviets is approximately balanced by the burdens of the blockade over the years.

Even if Cuba's relation with the Soviets does not detract from the country's economic and social success, the relation is still one that cannot be ignored by those of us who find so much to favor in Cuba and so much to disfavor in the



*Cuba remains heavily dependent on sugar exports to earn foreign exchange.*

U.S.S.R. As a Cuban friend remarked to one of us many years ago, whatever faults the Soviets have, they have been consistent and strong in their support for the Cuban revolution.

### **Cuba and the Olympics**

Under these conditions, could one expect that the Cubans would have come to Los Angeles after the Soviets announced their intentions not to participate in this year's Olympics? Whether or not they welcome their alliance with the Soviets, Cuban leaders have been given very little choice by U.S. policy over the years. What's more, in the recent period, the Reagan Administration has pushed anti-communist bellicosity as strongly against the Cubans as against the Soviets, giving the former their own direct reasons for staying away from the games.

Our Cuban friends were in clear agreement with the decision to withdraw from the Olympics. On the economic front, the games, in their view, have been unconscionably commercialized. The lodging and boarding costs for their large Olympic team would have been more than double that for previous games and they were for the first time required to pay their full bill in advance. They were denied their request to fly a Cuban airlines charter directly from Havana to Los Angeles; thus, forcing them to travel through other countries on a commercial airliner and further raising their costs.

On the political front, the Cubans perceive that right-wing, anti-Communist groups in the U.S. have been allowed (if not encouraged) to run wild: filling billboards in Los Angeles

with denunciations of Communism and exhortations of defection, along with phone numbers for assistance; planning leaflets and media ads with similar content and purpose; preparing some 500 homes to receive defectors; threatening violence, among other things. The Cubans claim to have made appeals without effect to the Olympic Committee to deal with these problems.

Based on previous experience, it is unlikely the Cubans were worried about actual defections. Nevertheless, even if one supports the desires of certain athletes from the socialist bloc to defect to the West, it hardly seems appropriate to use the Olympics as the vehicle to promote this activity. The Olympic Games, after all, are supposed to be beyond politics. When the Administration and the U.S. press accused the Soviets of bringing politics into the Los Angeles games solely in retaliation for Carter's politicization of the 1980 Moscow games, they were ignoring the prior political actions taken by U.S. groups in connection with the 1984 games.

Thus on the question of the Olympics, as on many other matters, it is unrealistic to see Cuban actions only in terms of their relation with the Soviet Union. Built on its own indigenous strength, the Cuban revolution came to power beholden only to the Cuban people. One of the fundamental lessons to draw out of the country's economic strength is that the leadership's political strength remains firmly intact. On the one hand, that political strength has been a basis for economic success. On the other hand, economic success has been a basis for political strength. In domestic and foreign affairs—ranging from the Olympics to Angola and Central America—it is a political strength that is most likely to endure. ■

## NEWS BRIEFS

### Sports Industry Scores

21 years after the U.S. blockade forced it into producing its own baseballs, the Cuban sports industry is flourishing. The industry exports boxing and baseball equipment along with electronic scoreboards for basketball and volleyball, as well as plastic products such as chess pieces and protective helmets. Cuba now sells sporting goods to 20 countries.

### Omega 7 Bail Jumper

Jose Ignacio Gonzalez, a Miami businessman suspected of being a major figure in Omega 7, has apparently left the United States. He had agreed to assist a federal investigation of the anti-Castro group, but seems to have changed his mind. He has recently been charged with bail-jumping... six weeks after he had been discovered missing. Stephen Glass, attorney for Gonzalez said, "I think the F.B.I. and the government authorities were more than lenient to wait this long. But they did so because they needed his testimony."

### Cuban- Argentine Agreement

As part of an \$800,000 agreement, Argentina has started delivery of \$320,000 worth of railroad equipment to Cuba. The first shipment includes 103 assembled railroad cars. The equipment was produced by a factory owned by the Cordova provincial government. The Cordova factory and another factory like it in Brazil are the only ones of their kind in Latin America.

### Churches Support Liberation

In a final declaration of their meeting in Havana, members of Christian Churches in Cuba and of Black Churches in the United States stated, "that God requires from us participation in the struggle for liberation. There is one God, one Church, and one struggle for justice and peace."

### Sickle Cell Confronted

The first research in the field of genetic diseases by the Advanced Technology Program of the Ministry of Health has focused itself on the problem of sickle-cell anemia. 14 years after the initial research, the Program has been using knowledge derived from that research in an attempt to prevent sickle-cell by utilizing pre-natal testing and genetic counseling. The Program also attempts to identify carriers and the diseased among newborns so that they can provide the education and medical care required.

### \$200 Million For Varadero

Cuba's resort beach at Varadero will receive \$200 from the governments of West Germany and Spain. The money will be used to build nine new hotel complexes with a 1000 new rooms on the beach. They will also be building a new airport and four roads which will ease the traffic into and out of Varadero.

### Marlin Contest Winners

The 34th Ernest Hemingway International Marlin Fishing Tournament was held off the coast of Havana June 5-10. The winner in the team competition was Joaquin Martinez, on the Cuban team Aquiles, who was presented the Hemingway Old Man and the Sea Trophy by the vice-president of the National Institute of Tourism (INTUR). Robert Van Vuuren, a Dutchman, won the INTUR trophy for the highest scorer with one specimen when he landed a marlin. The competition included 20 boats from 8 countries, which were manned by 51 contenders.

## NEWS BRIEFS

### Food Production Up

During the years 1965 to 1983, the value of food production in Cuba increased by an average annual rate of 5%. This represents a 240% increase. The highest levels of growth have been in the dairy industry, rice cultivation and the production of wheat flour.

### Ancient Cuban Gatherers

Between 2000 and 5000 years ago, the inhabitants of Guanahacabibes Peninsula on the extreme western tip of Cuba were rugged in nature, according to a new type of archeological study. The people were of medium height and had characteristics typical of American Indians. They lived in primitive gathering communities. This information has been collected by a group of Cuban archeologists who have been using a new approach in studying such communities. Instead of using the traditional approach of studying specific objects found in an area, the group has been using a method based on census-taking. By taking census of small and large archeological remains, the archeologists determined that the general patterns of active socio-cultural adaptation could be established.

### Childrens' Circus Set Up

After a professional circus performed in Baragua, Cielo de Avila, Lester Suarez and some of his young friends decided to imitate what they had seen. With the help of parents, a circus with equipment and scenery was set up. They are now giving regular performances. The children's circus includes a mistress of ceremonies, tightrope walkers, magicians, balancing acts and, of course, clowns.

### New Health Plan

Basic industry and the Ministry of Health will be implementing a plan of action which will contribute to the continuing adoption and application of adequate steps to maintain the health of workers and to prevent occupational diseases. The plan calls for a guarantee that safety and health regulations will be observed in all new construction, as well as other work projects. It also calls for a continuation of safeguards regarding the adequate choice of jobs available to working women based on physical and physiological factors.

### Radio Marti Update

Jorge Mas Canosa, the Cuban-American nominated by President Reagan as chairman of Radio Marti vowed that despite his anti-Castro feelings, he would see to it that objective information would be beamed to Cuba. He told the Senate Foreign Relations Committee during a nomination hearing that Radio Marti broadcasts would not be geared to overthrowing the Castro government. Despite some questions about his finances, anti-Communist political activities, and contributions to conservative candidates, Canosa was thought to have a good chance at winning Senate confirmation.

### Giron Vets Seek Benefits

Brigade members of almost 2000 men, who took part in the 1961 Bay of Pigs invasion, plan to ask the U.S. government for regular veteran's benefits. An aide to U.S. Senator Paula Hawkins said that she did not see why the veterans should not receive benefits since they had been trained by the U.S. government.

### Belafonte Films in Cuba

U.S. singer and actor, Harry Belafonte, was in Cuba for the filming of "Drums Across the Sea", a documentary on the history of Cuban music. The film will document Cuban music from its African origin and its links with Afro-American music.



## Cuba's Fashion Debut

by Stephanie Rugoff

From May 28 through June 1 Cuba held its first international fashion show and convention—Cubamoda 84. Attending were close to 300 people from Europe east and west, Latin America, the Caribbean and Asia. Thirteen of these visitors hailed from the United States—11 journalists and two designers. Although U.S. firms are barred by the blockade from trade with Cuba, representatives of 147 manufacturers from some 30 other countries came to investigate buying and selling, as well as manufacturing, in Cuba. By the end of the convention, it was reported that negotiations with 40 of these firms had been concluded.

Cubamoda was sponsored by CONTEX, S.A., a privately-owned company which is Cuba's largest manufacturer of men's, women's and children's wear for export. It also handles various fashion-related articles such as jewelry and accessories. CONTEX is a subsidiary of CIMEX, a Panamanian holding company with \$150 million in capital whose president is the dynamic Cachita Abrantes who fought along with Fidel Castro in the Rebel Army as a young girl.

CONTEX exports products to such countries as Canada, Panama, Mexico, Spain, Mozambique, Cameroon, Ethiopia, Angola, Kuwait and the European socialist countries. Cuba has a tradition of skilled textile workers, particularly in embroidery and macrame handwork. CONTEX officials said their country is ready to compete with Hong Kong, South Korea and Taiwan in the world market and, through Cubamoda, hopes to increase sales. According to U.S. newspaper reports, the lines seen at Cubamoda are not intended in the short run for domestic Cuban consumption but rather for the external market as a means for gaining much needed foreign exchange (hard currency). In the long run, they will have an effect on determining internal Cuban style.

The convention, foreseen as an annual event, cost CIMEX \$500,000. Other than the Americans and the foreign press people, the majority of those attending were guests of CONTEX. Next year, Abrantes says, the cost shouldn't be so staggering because everyone will have to pay his or her own way.

Foreign exhibitors presenting clothing, jewelry, fabrics and cosmetics at Cubamoda included such stars of the fashion world as Givenchy, Balenciaga, Nina Ricci, Cacharel and Lancome. Keynote speakers and guests of honor were Paco Rabanne and Emilio Pucci, the world-renowned designers. There was also a meeting of hairdressers.

Two of the new Cuban designers showing their work were Raf Cobian and Marta Veronica. Cobian's romantic gauze, linen and cotton creations were enhanced with delicate lace and crochet work which translated the classic guayabera into appealing feminine dresses, suits and elaborate evening gowns. Marta Veronica turned out maritime looks, tropical muslin tunics, crop tops, full-circle skirts, zippered jumpsuits and snap-front romper style playsuits. (Cobian was asked by Paco Rabanne to bring his collection to Paris in October.)

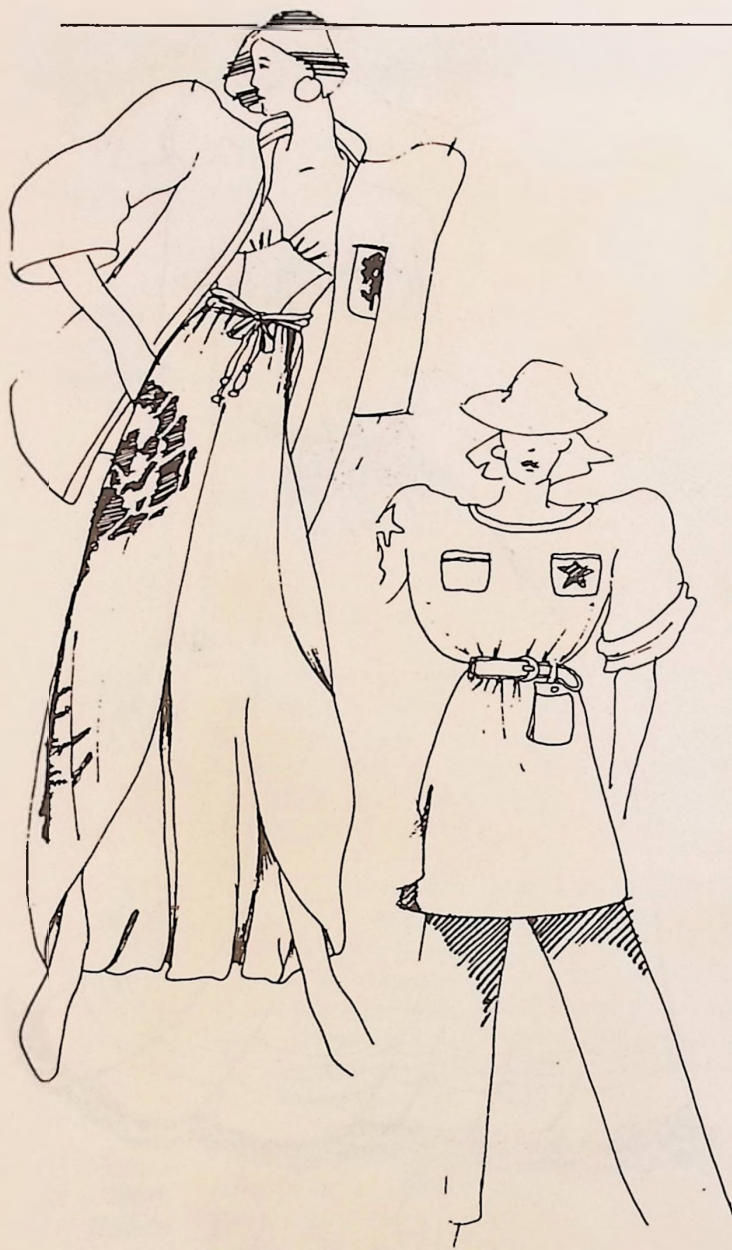


### Safari Look Popular

The favorite of the U.S. contingent was the "Campo" line, khaki clothing with a safari/military look accessorized with black lace-up boots or flat canvas sandals, aviator sunglasses, knapsacks, animal print scarves, straw pith helmets and Indiana Jones-type slouchy hats.

Also introduced at Cubamoda was the "Alicia Alonso" fragrance in an art nouveau style frosted glass bottle selling for \$40 for six ounces of eau de toilette.

Marie-Louise Pierson, a French fashion consultant and former model at Chanel helped train the Cuban models, mostly students, in the shoulder-forward stance popular now in New York shows. The models also viewed tapes of U.S.



cable T.V. fashion shows and rehearsed three hours a day for a month. Rogelio Paris, a Cuban film director choreographed the show.

The U.S. press gave the Cuban fashions generally favorable reviews. Beverly Gilmore of the *Staten Island Advance* wrote that the Americans agreed Cuban fashion was better than they had expected. Catherine Hipp, a New York designer, thought the fashions would go over well in J.C. Penney, while Tavy Stone of the *Detroit News* said, "This would walk right out of the showrooms in New York. It's good mass market fashion." Rea Lubar, writing in the *New York Daily News* remarked that the Campo line matched the best of Anne Klein II's military separates. However, Karyn Sneed of Fort Lauderdale's *News/Sun-Sentinel* felt that many of the Cuban styles "seemed cloned from American and European sportswear designers. For instance, the crop tops, gathered paper-bag waists and drop-waist pants looked like those from the American Willi Smith."

Some foreign representatives were also quoted in the press. Paco Rabanne said, "The Cuban fashions in this show are most interesting. Fantastic, I'd say." Martin Amado, a representative of Lancome, Cacharel and Laroche stated, "We have links with CONTEX, CUBALSE AND COMINTUR. We give technical courses for their salespeople. We found Cuban fashions stupendous." Joseph Geoffroy of Balenciaga said, "We are very happy to establish ties with CONTEX without middlemen. This commercial opening is very important. Cuban fashion is very youthful and their presentation is very interesting. A very beautiful show." Emilo Pucci felt "there are some very positive elements here. There is tremendous energy in this country. But like in all beginnings, there are mistakes."

Cachita Abrantes summed up CONTEX's evaluation. "Cubamoda is no culmination. We know we will have deficiencies and shortcomings and that we have a long way to go. But we hope this will be a starting place." ■



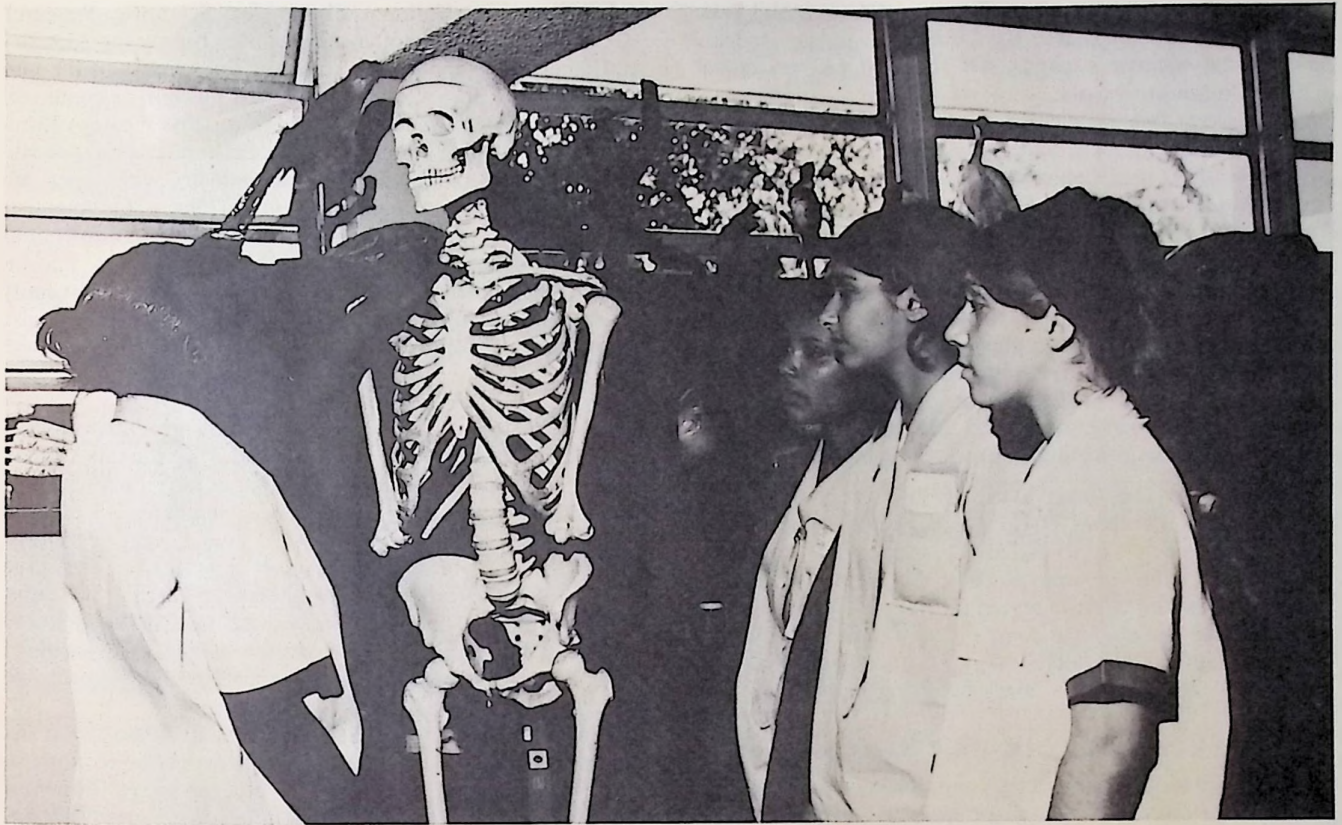
## FEATURE

### Cuba's Great Leap

by Bob Ubell

Cuba's leap into 20th century science and engineering in only one generation has hurtled the island in most fields far beyond its Latin American neighbors. And in some applied areas—for example, sugarcane by-product research—Cuba has jumped to world leadership. Donald K. Luke, editor of the respected journal, *Sugar y Azucar*, says "The Cubans have the motivation and are now leading the pack."

Cubans admit that not all the paths they have taken from underdevelopment have led to success. But they point with pride to those roads which took them to high ground—including health care, cattle breeding and, significantly for their economy, sugarcane research. Their new push into more sophisticated terrain—computers, interferon, tissue culture and biotechnology—is not aimed at achieving "world class" results, as Eric Holtzman of Columbia University notes. Rather, "the primary value of basic research in Cuba is not that they are going to make major breakthroughs. It gives them a chance to familiarize themselves with the world literature and then to apply their knowledge to concrete problems."



*Science education is emphasized in Cuba's school system.*

Science in Cuba is not yet 25 years old. Modern research began only after the guerrilla army marched into Havana in 1959. Before the "triumph of the revolution," those seeking advanced degrees in science and engineering had to leave the country to study in the United States or in Europe. There were no graduate science programs. Others could earn medical degrees at Havana University, founded in 1728.

The new government, committed to rapid development, started almost immediately to build science and technology with few human and material resources and even less experience. "Cuba's level of scientific knowledge and experience has jumped immensely in the last ten years," Holtzman continues. "They surprise you all the time with how much they know. Their steady progress is amazing." Holtzman, a cell biologist, has collaborated with Cuban scientists since 1971 and reported on their work in 1979.

Cubans recognized early that science cannot be created without a critical mass of educated people. Soon after the revolution, in 1961, the government launched its acclaimed "literacy campaign," sending thousands of schoolchildren into the countryside to teach people how to read and write. Cuba now claims literacy rates far surpassing most of Latin America and the rest of the underdeveloped world.

By 1962 the government had reorganized higher education and its Academy of Sciences. Until the mid-1970's, Cuba pushed thousands of young people through the universities and medical schools. "We were looking for large numbers," confessed one university official. "We created our first wave

of professionals without taking into account their scientific level."

"In the early days, we really had no professors," admitted Ernesto Mario Bravo, a biochemist at the University of Havana who, together with other trained scientists, created a "cadre" of student teachers. "At night, after their daytime studies, we would train several dozen of the most brilliant third-year students how to teach second-year students. Without this system, it would have been impossible." Now, says Bravo proudly, members of these cadres "are directors, heads of laboratories."

Fidel Castro's slogan hangs prominently in many laboratories: "The future of our country must of necessity be the future of men of science." Castro's support for science and technology cannot be underestimated. He and his inner circle, mostly university trained, recognized the key role that advanced research was to play, even at first when most of the country's energies went into keeping body and soul together.

Scientific degrees, modelled on the Soviet system, were first awarded in Cuba in 1976, with the creation of the Ministry of Higher Education. By the end of 1980, the ministry reported that there were more than 200,000 students with a teaching population of just over 10,000 at 39 universities. Before the revolution, there were just three universities in the country. A new campus in Oriente province brings the present total to 40.

Today at the School of Biology at the University of Havana, nearly 2,500 students are offered classical biology programs. About 100 come from abroad, largely from other

Latin American countries, but also from Western And East-ern Europe. Tuition is free for Cuban and foreign students alike; some receive stipends. Of the 179 teachers at the school, 26 are professors.

The biology faculty operates the soon-to-be-completed national Botanical Garden, under construction 16 years. A 600 hectare facility, near Lenin Park on the outskirts of Havana, the garden is, according to a U.S. botanist, "One of the most impressive I have seen. It rivals Harvard's." The school also administers the Center for Marine Research on the coast and runs Cuba's Anthropological Museum.

Some novel experiments on cholesterol and studies on aquaculture, among others, appear to be going on at a moderately advanced level. Laboratories display a few modest pieces of equipment; exceptions are a new isotope facility with Japanese instrumentation and a student laboratory fitted out with monitors, recent gifts from Hungary.

According to vice-dean Marie Oliva Suarez, applied research represents about 40-45 percent of the school's activities. Research on so-called "fundamentally oriented" problems accounts for some 50 percent of their work; 5 to 10 percent is devoted to basic research. In Cuban terms, applied problems are those near to commercial or pilot-scale production. Fundamentally oriented work covers research on those areas for which a solution does not appear immediate.

### National Center for Scientific Research

Students and faculty working on problems requiring high-powered instruments often go outside the university to affiliated centers elsewhere, notably Cuba's principal biomed-

ical facility, the National Center for Scientific Research (CENIC). CENIC and other laboratories run by the Ministry of Higher Education appear to act as links between the universities and industry. Apart from their mission as centers of excellence, modelled largely on high quality Western European and U.S.-style laboratories, they also offer graduate students advanced training and provide industry with expert advice. The high-prestige centers capture Cuba's star scientists doing the most sophisticated work, leaving the universities with less elevated research tasks. Apparently aware that investigations in the schools need strengthening, the University of Havana's biology faculty, for example, plans to increase the number of full-time research positions from the present 20.

"Basic research for Cuba is a seeding ground to enable their scientists to talk to others abroad," comments Columbia's Holtzman. "They are not aiming at high-prestige, low-productivity work as is often done elsewhere." Holtzman praises their approach: "They've aimed very carefully, planned very carefully to develop a scientific enterprise which is not intended to ape world class research," but rather to focus on the country's immediate needs. Juan Kouri, CENIC's director, agrees. "Research at the center is multi-disciplinary, covering both basic and applied research. Its main objective is to solve Cuba's problems."

But not all Cuban scientists are pleased. Some argue that intensive, direct studies aimed at specific economic aims can backfire, closing-off serendipitous routes to the fulfillment of the island's needs. A few campaign for more support for fundamental work.

## THE REVIEW OF RADICAL POLITICAL ECONOMICS

Proudly Announces The

FIFTH SPECIAL ISSUE ON

## THE POLITICAL ECONOMY OF WOMEN

with articles on

Working Women in Troy, NY, 1860-1890 (*Carole Turbin*)  
*Chinese Urban Working Women (Marlyn Dalsimer/Laurie Nisonoff)*  
 Women in the Marketplace: Petty Commerce in Peru (*Florence Babb*)  
 Involuntary Unpaid Labor Outside the Household & Women Workers (*Nona Glazer*)  
 Gender & Class Formation: Female Clerical Workers (*Heidi Gottfried/David Fasenfest*)

A New Look at the History of Household Workers (*Bettina Berch*)  
 Subordination & Sexual Control (*Gita Sen*)  
 Political Economy of Sexuality (*Rhonda Gottlieb*)  
 The Real Dualism of Sex & Class (*Susan Himmelweit*)  
 Plus poetry and reviews by Joan Hoffman, Mary Castro, Nancy Breen, Lourdes Beneria, and Natalie Sokoloff.  
 Photography by Laurie Nisonoff, Josely Carvalho, Colleen McKay, and Niki Berg.

VOL. 16 NO. 1

\$9.50

URPE

### NEW MEMBERSHIP AND SUBSCRIPTION RATES

MEMBER and SUBSCRIBER .....  \$40

[and nonmember, please specify] U.S. and Canada

FOREIGN .....  \$45

Members are entitled to the following:

- Review of Radical Political Economics
- Newsletter
- Voting Rights
- Be part of a national network—receive and communicate through URPE mailings.

NEW MEMBERS .....  \$20 for the first year

SUBSCRIBERS — NONMEMBERS .....  \$60

Libraries and Institutions [U.S. and Canada]:

FOREIGN .....  \$65

**\$40 PER MEMBER IS THE PROJECTED AVERAGE COST PER MEMBER TO RUN URPE'S ACTIVITIES.**

We recognize that some members are unable to pay this much, but it does cost us this much per member to continue to operate. We ask that you pay as much as you can afford. The minimum rate for a low-income member is \$25. We actively encourage those who can afford to pay more than \$40 to do so since some other members must pay less.

### CONTRIBUTOR

I wish to enclose a contribution of

\$5                       \$10                       \$25  
 \$50                       \$100                       More, if possible

URPE is a nonprofit, tax exempt organization. Your donations are tax deductible.

Name \_\_\_\_\_  
 Address \_\_\_\_\_  
 City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Send to URPE, 155 West 23rd St., 12th Floor, New York, New York 10011

Cubans acknowledge that investments in research are a strain on the country's limited resources. Nevertheless, Foreign Minister Rafael said, "We have decided that no financial obstacle will interfere with our program in science and technology. This means we must continue to postpone consumption."

A high-ranking official in the Ministry of Higher Education, however, contended that basic research is still a "luxury" the country can ill afford. Significantly, Cuba's current five-year objectives for science and technology place "the greatest emphasis on applied research and development projects—irrespective of guided and other basic research. . . ." Created in 1965 as a springboard to propel research into modern fields, CENIC is housed in futuristic structures with sweeping stone columns in the manicured suburbs of Havana. It runs four main branches—biomedicine, chemistry, bioengineering and electronics. Under the wing of the Ministry of Higher Education, with links to the universities, Cuba's top research center started life with merely a dozen scientists, at first based in laboratories in the vacated homes of the wealthy Cubans who fled the country in the wake of the revolution.

---

### *The embargo has presented Cuba with unexpected benefits.*

---

"The first thing we had to do was to organize ourselves as scientists," Kouri said. "We had nothing here." Kouri indicated that, in addition to help from a handful of U.S. scientists, among them Roy John of New York University's Medical Center and Holtzman, they received assistance from others, particularly Soviet experts, but also Western and Eastern European researchers. Continuing to rely on advice from abroad, at CENIC and elsewhere, the Cubans show a remarkable knack for selecting the world's top authorities. They have a nose for the best.

"A new institution takes about ten years to develop, to train people, to get apparatus, and to have enough technicians with skills to repair and maintain equipment," Kouri remarked. Adds Foreign Minister Rafael, "Even at the first stage of the revolution we made investments without really understanding or having an appreciation of science and technology. And now we have CENIC, which may be a model for other investments in science."

CENIC has a staff of one thousand, 350 of whom are professionals. Approximately 100-150 students do advanced work there, returning to their home universities to earn their degrees. Some 50-60 staff members from other institutions also participate in research. "We need more biologists, more chemists, more engineers," pleaded Kouri in near-perfect, American-accented English. He stressed that he was expressing his own views, not national policy. Kouri, educated in Cuba, also studied at CNRS in France. Many scientists at CENIC and at other Cuban laboratories have been trained abroad, mostly in France, Belgium, Canada, Scandinavia and other Western European countries. Of course, many have studied in Eastern Europe, largely in the Soviet Union. Most scientists speak respectable English. English is the second language after Spanish in Cuba's secondary schools. Russian has just been introduced at a fairly modest level.

Most recently, the center has turned to sugarcane tissue culture and cell fusion, monoclonal antibody work on alpha fetoprotein and, among other things, is working with Roy John on electrical activity of the brain. Kouri reported that molecular and cell biologists at CENIC are now "reforming" to create a coordinated biotechnology group.

Cuba produces more than 100,000 tons of yeast per year, largely for animal feed, so scientists at CENIC are working on ways to improve and nutritionally enrich its essential amino acids.

Visiting CENIC and other recently opened centers, observers from abroad are struck by the lavish architecture—miles of polished local marble, landscaped grounds and, most surprising, unusually well-equipped laboratories. Expensive, up-to-the-minute instrumentation comes from the United Kingdom, France and Scandinavia, with Japanese apparatus dominating. Surprisingly, little or none is from the Soviet Union: "You can see where all their foreign currency is going," lamented one disgruntled Canadian businessman hoping to sell Cuba some nonscientific equipment. CENIC, one of the most well-endowed centers, operates some quite high-powered tools, a microprobe scanning electron microscope, for instance—mostly from Japan.

At CENIC and elsewhere, confronted with a vast amount of foreign-made apparatus, scientists are forced to devise novel repair and maintenance procedures. Contracts with manufacturers abroad usually call for Cuban technicians to go to the supplier for extensive training, even as far away as Japan. Often, spare parts are purchased together with instruments. So CENIC's electronics department manufactures its own routine machines, including a handsomely packaged pH meter which they also make for sale to other laboratories. They also assemble an EEG monitor, two of which have already been sold to Mexico. In-house training of technical support personnel, without foreign aid, is said to be quite rigorous.

### **Impact of embargo**

The U.S. embargo has had a serious and damaging effect on the progress of Cuban science, requiring laboratories to

# AREITO

**Una revista necesaria**

A diez años de su primer número, *Areito* continúa la tradición martiana en defensa y afirmación de los valores que sostienen nuestra cubanía y nuestra solidaridad con los pueblos de América.

Suscríbete ahora a *Areito* y recibirás el número especial dedicado a su décimo aniversario. En próximos números leerás sobre el nuevo cine latinoamericano; política, cultura y sociedad en la República Dominicana; y la problemática de la mujer en Cuba, Nicaragua, Puerto Rico y otros países de Latinoamérica . . .

Contamos con tu apoyo.  
Suscripciones: Individuos \$12 • En el extranjero \$18  
Instituciones \$20 • En el extranjero \$30

Publicación trimestral del  
Círculo de Cultura Cubana, Inc.  
GPO Box 2174, New York, New York 10116

hunt elsewhere for reagents and equipment that could easily and cheaply be shipped from the United States, just 90 miles away. Forced to purchase materials from places far away from Cuba, scientists experience long delays and unwelcome additional shipping costs. Most troubling is the lack of current literature. While some libraries appear fairly up to date, other shelves look bare.

Yet the embargo has presented Cuba with unexpected benefits. It would never have developed its own highly organized and apparently efficient technical services, had it not been compelled. Since restriction enzymes, for example, produced principally in the United States, are unavailable, Cubans purify them themselves and, at an animal health facility, they make their own immunoassay kits. They have also built their own tissue-culture and virus collections. While much of this is tedious and unproductive, Cubans acknowledge that some good experience is gained along the way and, most welcome, they earn a degree of independence.

Recognizing that poor access to the literature presents a serious roadblock, they claim to be taking extraordinary measures. By 1985-86, a new Central Library for Science and Technology will open with a stock of 7,000 periodicals and 10,000 books, selected from the world literature to match Cuba's research interests. A satellite link with the Soviet information retrieval system is soon to be hooked-up.

## THE FOURTH WORLD A Geography of Indigenous Struggles

*"What defines Fourth World people? They are distinguished by their utilization of the land as a common resource base, their cultural attachment to place (and the unifying force of that attachment), their fundamentally ecological view, their inherently flexible systems of economy and exchange, their adaptiveness to change (when they can control the rate of change), and dependence on cooperative systems of enterprise, extended kinship systems, and reciprocity. Place, to them, is something much more than a commodity, and it is that attachment to place as other than a commodity which is at the root of the exploitation of Fourth Worlders by others: those who commodify land have found it extraordinarily easy to seize it from those who do not . . ."*

— From the introduction to the issue

**American Indians, the Orang Asli of Malaysia, Bedouin, Tuareg, Miskito Indians, and Tribal Development, 64 pp., all in:**

*Antipode: A Radical Journal of Geography*,  
Volume 16, Number 2, 1984

Single copies: \$5.00. Subscriptions for 1984—  
special introductory rate of \$10.00 (includes Volume  
16, No. 3 — *Women and Environment*)

*Antipode*, P.O. Box 339, West Side Station,  
Worcester, MA 01602, USA. (Make checks out to  
*Antipode*.)

Cuba's science policymakers applaud CENIC's achievements; they have wisely used the center as a base from which to launch other such groups. Rather than appealing to other institutions at, notably, the Cuban Academy of Sciences, planners have turned to productive and innovative CENIC scientists to spin off new laboratories elsewhere.

One of the most recent is the new Center for Biological Research, also in Havana's suburbs, not far from CENIC. Much smaller, with a staff of 50, the unit was opened in January 1982. Mission-oriented, much like fledgling biotechnology

---

---

***By 1985, Cuba expects to have more than 17,000 scientists and engineers and 12,500 technical personnel, out of an estimated 10.6 million people.***

---

---

firms in capitalist countries, it produces human leukocyte alpha interferon, using methods devised by Kari Cantell of the Central Public Health Laboratory in Helsinki. Cantell assisted in organizing research at the Cuban center. In association with hospitals and medical teams, the group runs clinical trials. According to research vice-director Luis Herrera, one study in which alpha interferon was administered to patients suffering from dengue fever during a 1981 epidemic "stopped the complications" associated with the disease, especially in children, when the antiviral agent was used in the first days of onset.

Herrera, in his early 30's, represents the best of Cuba's young scientists. He was awarded Cuba's highest honour, Hero of Labor, for his achievements. He and others like him, teenagers when the new government took power, now occupy high-level positions. What's more, Herrera, who is black, is not unique; other blacks hold key posts.

An autonomous laboratory, the center falls completely outside the university system, the academy and other research umbrellas. It was created by an entirely new Cuban institution, the "Biological Front," a high-level policy-making body, formed two years ago. Designed to speed up focused research, the front offers new laboratories direct support from the government, short-circuiting bureaucratic restrictions. Doubtless, bureaucracy has held up progress in Cuba, as it does everywhere, particularly in socialist states. To Cuba's credit, it has devised inventive techniques—the Biological Front being the latest one—to cut through red tape.

The other major installation recently spun off from CENIC is a sprawling complex in the countryside, less than an hour's drive from Havana. The National Center for Animal and Plant Health (Centro Nacional de Sanidad Agropecuaria) is set in the midst of vast farms where test crops are under cultivation. Laboratories and animal research hospitals work on three main objectives—to attack diseases of cattle, pigs and poultry, to breed animals and to study diseases of Cuba's primary crops: sugarcane, tobacco and citrus fruits. CENIC was responsible for these lines before the new agricultural facility was created.

Oddly, Cuba's top research groups are not under academy administration. They are run, instead, by the Ministry of

Higher Education or autonomously under the new Biological Front. Cubans, unlike their Soviet friends, have chosen to put their research eggs into different baskets. In the Soviet Union, conservative academy institutes dominate research. But even in the Soviet Union, strict reliance on the academy is no longer the rule and newer, more innovative laboratories are emerging outside. When asked why a foreign science delegation was not shown even a single academy institute, an academy official smiled, "we have shown you our best."

Undoubtedly, Cuba's experience in quickly establishing a science enterprise from scratch has had much to do with this trend. After training skilled cadres in the universities, it must have seemed right to link the new research centers to the schools.

### In U.S. Shadow

It is also important that the island lies in the cultural shadow of the United States. In the streets of Havana, jeans, jogging shoes and T-shirts are ubiquitous. The Cubans are no less fashion conscious in their laboratories. Castro is said to have urged Cubans to study U.S. textbooks, insisting that they are the best. While it may be surprising for visitors to find such evidence of U.S. penetration in a socialist country, Cubans do not appear troubled. Rather, they welcome contact, seeking unofficial exchanges with U.S. scientists despite the official embargo.

Against this pattern, it is puzzling to discover that the highest level of Cuban science policy is in the hands of the academy. But when one finds that its current president is the man responsible for setting up CENIC, things fall into place. Wilfredo Torres, a hematologist whose main research has been in sickle-cell anemia, headed CENIC for twelve years from its inception. Rewarded for innovative administration, he now shepherds Cuba's entire science establishment. Torres not only runs the academy, but he is responsible for the direction and implementation of all research. His rank is equivalent to minister of state. Torres reports directly to Jose R. Fernandez, Minister of Education and vice president of the Council of Ministers.

The Cuban academy dates back to 1861, but it was not until the 1960's that the new government reformed its structure. When Torres was appointed president in 1976, it was again reorganized. And as late as 1980, when all science-pol-

icy bodies were merged under its umbrella, it assumed its present form. Medicine, however, is run by a separate authority, the Ministry of Public Health (Minsap).

Of the 120 scientific, industrial and medical research institutes in the country, the academy operates 22. Cuban observers acknowledge that many of the academy's research facilities are largely inactive or working at a modest levels. They represent past legacies or the notion that each major discipline should have its own institute.

The academy employs approximately 1,000 research workers, or less than 10 percent of the total number of scientists and engineers in the country. The academy also runs key national services, including the weather bureau, eight museums, three zoos and an aquarium, presumably accounting for a large share of its professional staff. Official figures show that in 1980, when the Cuban population stood at 9.9 million, there were 11,400 researchers and 9,100 technicians. By 1985, Cuba expects to have more than 17,000 scientists and engineers and 12,500 technical personnel out of an estimated 10.6 million people.

The academy's principal function is as the country's highest-level science planning authority, especially since Torres took command. The Superior Scientific Council, composed of 77 distinguished elected scientists from the academy's institutes and others from the Ministry of Higher Education, industry and elsewhere, is one of two advisory bodies. A smaller, and very likely the more powerful advisory group, is the administrative council, whose members are nominated by Torres and approved by Cuba's Council of Ministers. What's more, Torres relies on a team of close personal advisers—Eduardo Muzo, an M.D., Gisela Alonzo, a chemist and plant physiologist, and Jose Carlos Garcia, a veterinarian.

Cuba's research priorities are set by these groups, in collaboration with government and Communist Party officials, who determine the main lines of work and allocate funds. Large investment decisions are made by the government's Central Board, the National Bank and the State Committee for Statistics.

Government officials outside the academy's policy-making bodies keep a close watch on research. Fidel Castro, like other chiefs of state, maintains a circle of personal advisers, including those who keep an eye on science. Castro's son, a nuclear physicist, is said to be one of them. Investigative commissions spawned by the national Assembly and the



Enter my \_\_\_\_\_ year subscription to **CUBATIMES**. Six issues per year for \$12 (individuals), \$24 (institutions); two years for \$22 (individuals), \$44 (institutions). For overseas subscriptions, please add \$4/sub for surface mail or \$7 for airmail.

Name \_\_\_\_\_

Address \_\_\_\_\_ Zip \_\_\_\_\_

**Note:** payment must accompany all orders. Make checks payable to Cuba Resource Center, Inc. Prices include postage and handling Bulk rates on request.

Total Amount  
Enclosed

Send to: Cuba Resource Center, 11 John Street, Rm 506, New York, NY 10038

Communist Party also monitor research. The party's current five-year guidelines set out 17 priorities for science and technology, another eight goals for the "protection of the environment and natural resources" and hundreds of targets for industrial research and development.

One notable objective seeks to push forward the young computer industry now being developed by the autonomous National Institute for Automatic Systems and Computer Techniques. Headed by Daniel Legra, the institute is run inventively as a series of self-supporting "enterprises" selling services and equipment. Its mission is the total management of Cuba's computer network and the production, servicing and commercialization of computers for domestic and export sale.

As part of COMECON's computer system—in which each county is responsible for manufacturing a different piece of equipment for all members—Cuba produces a sophisticated alphanumeric, semigraphic display unit. Designed especially for use with minicomputers, the units, assembled largely with Soviet components, went into production last year. In 1970, Cuba introduced its first mini. The Cubans are developing a "mega-mini" and now on the market is their third generation mini offering 64K bits with two bits per word. Foreign Minister Rafael remarked slyly, "Our friends in socialist countries counselled us not to invade this area. But we said we are tropical people and we are quick."

Obviously, Cuba is not going places without a little help from its friends. There is no doubt that the Soviet Union pours millions into the country. Russian tankers berthed in Havana harbor are the most visible evidence. But in 1980 Cuba claims to have invested about \$78 million of its own in research and development, about one percent of its national budget. This is a modest figure in comparison with most industrialized nations, but handsome for a developing country of Cuba's size. Little additional support comes from international agencies or Western European and Canadian research foundations. In 1980, only \$3.6 million came from outside sources, but grants from abroad are on the rise.

Cuba is not the Japan of the Caribbean. But in the 1980's the skill and organization required to move the island into high-technology does not take crippling investments of capital and labor. Bioengineering and digital computers do not come close to requiring what was needed in the 19th century to build Germany's chemical industry or install steel mills in the United States. Cuba possesses some key resources to enter the high-tech world—the wit to have trained a highly skilled population, the will to organize itself and the wisdom to choose the right targets. Fortuitously for Cuba, its entrance into advanced science and technology seems to have come at just the right moment. ■

*(This article was reprinted from the magazine Nature, Vol. 302, April 28, 1983.)*

## SUBSCRIBE NOW

In these times, demand CUBATIMES, the magazine published by the Cuba Resource Center. It is timely—published six times a year, with expanded news coverage, news and views of U.S.-Cuba relations, Cuba's role in the Caribbean and Latin America, and foreign policy.

Get the facts. Discover the real Cuba through the pages of CUBATIMES, with thoughtful analyses for

the general public, students and scholars alike. Read about health, science, economics, daily life, personalities, the arts and more.

Subscribe today by filling out the order form on the other side of this page. A one-year subscription: \$12 (individuals) or \$24 (institutions); two years for \$22 (individuals); \$44 (institutions).

Cuba Resource Center, Inc.  
11 John Street, Room 506  
New York, NY 10038

Non-Profit Org.  
U.S. Postage  
PAID  
Permit 9177  
New York, NY

ANGELO D'ANGELO  
172 COVENTRY RD  
STATEN ISLAND NY 10304