Science for Nicaragua Newsletter

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The Economic Crisis Takes its Toll on Universities: an Interview with Dr. Josefina Bonilla

Dr. Josefina Bonilla, head of the Department of Primary Health Care at the UNAN-Managua Medical School, spoke with SfN this March on the effects of Nicaragua's continuing economic crisis on higher education. Dr. Bonilla, who has worked extensively with SfN cooperants at the UNAN Medical School, is the principal investigator in a project at Tufts University entitled* Positive Deviance in Nutrition, *the Nicaraguan component of a four-country study jointly sponsored by UNICEF, Tufts, and (in Nicaragua) the UNAN.*

We've known for several years that an economic crisis was coming. We knew that an economy gets worse after several years of war, although you don't feel the effects right away. So at the end of 1988 the university authorities started to tell us that we were going to have to review all the structures in the university, in order to work in the most efficient way with fewer positions and offices. But none of the programs that were started after the revolution were going to be cut as such.

At the end of last year different departments began discussing in depth how effectively we've been working. By the beginning of this year a proposal was sent to the president of the university, to see if what the professors' union was proposing was the right way to work efficiently and without wasting as many resources as we were. Of course, we've always been working in very difficult conditions, but we had to find a way to make it even more efficient with fewer resources.

At my university, the UNAN-Managua, we used to have two vice rectors; now we have one. Several offices have been combined; for example, the office that used to be only for research for the whole university has been integrated with the staff that has been working on methodological advice for professors. Of course, these changes only affect programs that fit naturally together.

Were you involved in preparing this proposal?

Yes, especially at the Medical School. Since December we've had a lot of meetings with the different department heads at the Medical School, collecting proposals. By the end of this process, working in teams, we had three different proposals, and finally one of them was accepted by the president.

There were two kinds of meetings. I'm the head of the program that deals with sending medical students to work in the community, and as the head of that program I was asked by the Dean of the Medical School to attend all the institutional meetings. At the same time, the leader of the professors' union called another meeting to see what the whole group of professors really thought. So after that it was like a joint proposal, three proposals that were discussed by both the union and the institution. The professors' union leaders at the Medical School and other schools also attended the institutional meetings and more or less said what the rest of the faculty thought.

The most important thing was that we should try not to destroy any of the programs that we had already started. Right now our budget contains very few resources from the national government for research, but at the same time we're supposed to keep doing research! Several schools or departments were already in contact with organizations from outside the schools that were trying to help out with funding of research. This is the only way now we have to fund research. The most important function of the schools is to train teachers; research takes the second place in the budget. We said at the meetings that we cannot stop what we've been doing already for ten years. The idea is to do even better than before with fewer resources, which is very hard.

What proportion of resources for research came from the national budget?

I can't give you exact figures. Our material resources are very limited. At the medical school, most of the research is descriptive, surveys by students or professors, diagnosis of situations in communities, studies which don't require a lot of money. Another thing is that, even though research is being promoted, most students are not really trained to do it, so some of the budget allocated for research was not even used by the faculties. That's gone now.

Often, because we had direct connections with schools in other countries, we weren't using our own materials. For example, in the microbiology lab, we have an agreement with the University of Wisconsin, which provides all resources needed for the microbiological research being done there. This would be very expensive for us, even though we're not talking about anything very sophisticated. Now this kind of cooperation is our only option.

Of course, the crisis is going to affect the number of students going to different schools; conditions are so bad that many students will decide just to work instead of studying. The government has not cut scholarships for students coming from outside Managua. But there used to be stipends for poor students from Managua which paid them to study, especially students in the Medical School, who have to study day and night. These are not available any more. This is really bad in comparison with recent years, when all kinds of scholarships were available. There are also fewer books available for students.

You said that a number of staff positions have been eliminated; how is this possible when there weren't enough before? Also, how are departments managing to retain faculty, given that it's no longer possible to live on a university salary?

We're not having the same problems as other institutions of laying people off, especially in productive institutions. The universities have always had a crisis of human resources. Most of the time faculty stay only for a few years, and there are positions which no one takes, mostly because of the salaries. We've also always had a shortage of administrative staff.

The universities have been promoting graduate courses for professors, like language courses, or methodological courses, as an incentive

continued on p. 4

*UNAN = National Autonomous University of Nicaragua

The Second Olof Palme Seminar on Science and Technology

SfN recently obtained a copy of the final report on the seminar **"Olof Palme II:" . Organization and Adminstration of Science and Technology in Nicaragua**, *which took place last September in Managua. (A report on Olof Palme I was featured in the* SfN Newsletter, *Vol. I, No. 6.) The report is divided into sections discussing the problems of scientific research and technological development in Nicaragua in its various aspects, including questions of human resources and financing, the role of science and technology in the health, agricultural, educational, and industrial sectors, and administrative issues. Nicaragua is analyzed both as a typical Third World dependent economy and as a model for possible development away from dependence. Each section is followed by a series of recommendations to the office of the Presidency, the National Planning Council, and to other administrative bodies responsible for science and technology policy.*

Here we offer a translation of excerpts from the section on the Educational Sector. Please write to the Cambridge office of SftP for more information about "Olof Palme II."

In spite of... advances, we consider that elementary and secondary education represent the weakest links, conditioned by a combination of limitations deriving from external agression (among them the leading role of young people in defense)... The process of diversification of secondary education is tied to the development of technical education at different levels. Nevertheless, we still lack a program which motivates young people to study technological specialties. It is necessary to create mechanisms that will permit us to reach a balance among technical education, the high school diploma, and the university...

The administration, structure, and functioning [of the university] have followed a traditional pattern. At this time, given the historical conditions in which our country is living, it is urgent to bring about substantial transformations which will allow the universities to reach better levels of development. It is at this point that the need for university autonomy arises, as an instrument which will permit it to plan its scientific responsibility, its structure, and its organizational base.

In 1986, of 1111 Nicaraguan professors ... there were 23 with Ph.D.'s and 120 (10.8%) with master's degrees. The average age of professors was 32 years, the average teaching experience 6 years. Among them, 579 had never taken a scientific or technical course. In spite of various efforts made by the educational sector over the years, we find ourselves today in a situation which we must overcome: taking an empirical approach....

At present, research has been defined as an essential part of higher education, for professors as well as students. If this is true, it is necessary to go about creating a spirit of research starting in the earliest grades, using methods and subject matter which motivate a creative attitude toward knowledge.

Every year the University "Jornadas" of Scientific Development [*National university science fairs, Ed.*] have been held, and have been extended to include the participation of the professors themselves, who describe their scientific and research work. Nevertheless, in these last years the Jornadas have been transformed into activities of a formal nature, framed by the fulfillment of annual plans. This points up the need to reorient them toward the goals of scientific-technical development for which they were created....

In terms of university research we note several positive results:

✸ The formation of the Center for Research on Aquatic Resources at UNAN-Managua, dedicated to Limnology;

✸ The formation of the Department of Technological Research and Orientation (DINOT) at UNI, concerned with alternative sources of energy;

✸ The creation of the National Solid-State Physics Laboratory at UNAN-Managua;

✸ The sustained development of medical, phytochemical, and food research at UNAN-León;

✸ The creation of the programs of solar measurement, ecological research, and rural development at the UCA;

✸ The continuation of various research activities at the ISCA.

Nevertheless, in spite of these advances, we can point to the following limitations:

1. If research is now defined as an essential part of the university, why have professors not been provided favorable conditions, and why are they assigned a teaching load which in reality limits their research, leading to a loss of interest and motivation for the latter?

2. The underutilization of qualified teachers, in assigning them administrative and bureaucratic tasks, as well as activities whose programmatic contents are not appropriate for the level of specialization attained.

Overall, it is considered fundamental and necessary that the central authorities carry out an appraisal of the role of education, and of the university in particular, in the revolutionary process, aimed at the situation of an economy of survival in which our country presently lives.

UNI Mobilization for Hurricane Relief

from the Gaceta UNI (National Engineering Unviersity), Dec. 15, 1988

The press in the United States has largely forgotten Hurricane Joan. Not the Nicaraguans. A recent United Nations report estimates that the storm destroyed 10% of the country's accumulated capital stock and caused production losses equivalent to 40% of 1988 gross domestic product, and concludes that "Nicaragua does not have the capacity to attend, simultaneously and by itself, to both the requirements of reconstruction and the long-term efforts required to achieve sustained development and improve the living conditions of its population." (A full copy of the report, LC/G.1544, 2 December 1988, is available from ECLAC, 1735 I St. NW, Washington, DC 20006.) The following report from the UNI is typical of the remarkable efforts which succeeded in keeping the population, if not the economic infrastructure, largely intact.

The contribution of the UNI [*to the relief effort, Ed.*]... began the very moment the [hurricane] passed, and continued afterwards. The first day of aid was carried out on both campuses during the hurricane. Its objective was the evacuation of inhabitants of the poorest barrios near the university. The campuses provided them shelter, as well as food and medical attention for two days. During this period, university brigades also went to other barrios to offer assistance.

In the central UNI campus the brigade, which numbered 72 people (35 students, 20 professors, and 17 administrators), worked under the orders of the Civil Defense general staff, consisting of all mass political and civic organizations. This brigade took care of 173 people in the barrio "Jonathan González." Two brigades were formed in the RUPAP campus: one of 72 members, which offered assistance in seven barrios, and a second, comprising 25 people, which remained in the campus, attending to 250 adults and children from five barrios. In charge was Bayardo Larios Palacios, Dean of the Faculty of Basic Sciences.

As soon as the hurricane ended, a brigade of eight professors and twenty students headed over to the UNAN-Managua, to help with refugees from the Atlantic Coast. A few days later, 17 university workers left with the Pancasán Battalion for Region V, one of the most severely affected. They will remain for about six months on the road to Rama, undertaking tasks of defense and production.

News from Managua

Four New SfN Instructors Arrive

Joining SfN this semester are computer scientist *Eric Brenner*, solar engineer *Barbara Francis*, and anthropologist *Suzanne Baker*, all of whom will be teaching at the National Engineering University (Baker will be teaching English courses), and chemist *Leslie Nader*, who will be teaching at the National Autonomous University in León, our first instructor at that institution. More about their work will appear in the next issue of the newsletter.

SfN to Begin News Service

Biochemist and former journalist David Kattenburg, now teaching pharmacology with us at UNAN-Managua, is making plans to start a new information service, called NICALINE. It will be distributed by electronic or traditional mail every two weeks, and will contain information about Nicaragua not otherwise available. The purpose is to provide an alternative to the prevailing disinformation about Central America. NICALINE will be available for free to interested subscribers. To subscribe, write the SfN Berkeley chapter (3217 College Avenue Berkeley, CA 94705). Peacenet subscribers can send messages to David at cdp!si!sfn.

Sistemas Industriales: Electronic Communication with Nicaragua

Late last year we received the following message from Ward Larkin, the systems analyst who helped set up our electronic mail linkage with Nicaragua. Please contact SfN in Cambridge or Berkeley if you are interested in working with the project Ward describes.

Sistemas Industriales, the cooperative with which I work, is developing microcomputer based software specifically designed to meet the needs of the third world. Currently, we are marketing an Inventory Control Package geared to a third world economy; it is designed to take best advantage of inventory on hand and to relieve dependency upon any specific manufacturer or supplier.

Our databases cross-reference parts by their manufactured part number and their physical specifications. This allows a person to order a part by manufactured part number or by physical specification. For example, suppose a farmer breaks a specialized bolt on a John Deere tractor. The farmer goes to the parts warehouse to get a replacement and knows only that the number of the broken part is (let's say) XX157. Our program will be able to find out whether or not any of those parts are in the warehouse, and what the physical specifications are: 5" long 1/2" steel bolt with hexagonal head and chromium coated. Then the warehouse operator can ask, "What specifications are important to you?" and the answer would probably be "length, width and strength." There is no concern about the head size, the chromium coating, nor the metal it's made of as long as it's strong enough. The warehouse operator can then query the program to find all parts that are 5" long and 1/2" wide. The farmer doesn't care who made the part, nor does our program. Our project is exactly "Science for the People".

Our plans are to enhance this program to be able to work in a multiuser multisite environment. Now it is single site, single user. We also want to implement a complete planning and control system that will attach to the inventory control system, and another plan is to implement materials usage planning systems.

Our biggest problem is that we don't have sufficient technical skills to be able to do this quickly and effectively. This is our reason for getting involved in electronic mail. We hope to be able to find people with the necessary skills and the eagerness to be involved in this type of project in the United States and Western Europe, and we will interface and work together by Email. The Email will allow people to be actively involved without the costly expense of coming to Nicaragua for a few weeks, or a few months.

We are sure that there are people in the U.S. who would like to be involved with Nicaraguan Solidarity in this way. All we have to do is "meet" each other.

- Ward Larkin

Announcements

Integrated Pest Management Positions The Nicaragua IPM project announces two positions for IPM specialists: one with specific training in plant pathology, one in weed science. Available immediately, two year renewable contract, based in Managua, salary based on experience. Responsibilities include: design and validation of IPM programs; organization of and teaching in training activities; technical assistance and extension; supervision of graduate student resesarch. In addition, the plant pathologist will coordinate the pest diagnostic services and the weed scientist the training and information transfer activities of the project. Requirements: Ph.D.; fluency in both Spanish and English; experience in tropical agriculture, preferably in Central America; broad background in research, teaching/training, and technology transfer or production desirable. Send c.v., post-secondary transcripts, cover letter and arrange for three letters of recommendation to arrive no later than May 15. Send to IPM Project, Apartado 843-2050, San José, Costa Rica (Attn: Dr. Peter Rosset).

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This issue was produced by Michael Harris, Eric Entemann, and Gary Keenan.

SfN chapters:
897 Main St., Cambridge, MA 02139 (617)-547-0370
3217 College Ave., Berkeley, CA 94705 (415)-652-6361
c/o Miriam Struck, 9311 Sudbury Rd., Silver Spring, MD 20901 (for literature donations)
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Josefina Bonilla, *continued from p. 1*

to stay on the faculty. If you were working somewhere else you wouldn't have time to take these courses, which in any case are only for faculty.

It's still hard, especially for people with large families. So even full-time faculty are often allowed to work somewhere else for a few hours during the week. For example, professors at the medical school might work as doctors in large factories.

Some professors are attracted by projects connected with universities in other countries that would provide them with more advanced training. Research is one of the real attractions. Also, the universities administer scholarships to study in other countries, which are open only to professors.

Isn't it true that, in practice, the wage is not sufficient, which means that people have to support themselves some other way?

This is a national problem, and all state institutions have the same problem. In some factories, the workers can make more money than some professionals, depending on how productive the factory is in a given month. But the purchasing power of salaries at state institutions has been declining unbelievably, especially since the hurricane. This can create a lot of political problems. People can't stand a survival economy for a long time.

Maybe 70% of doctors have private patients in addition to working at state hospitals. A single private visit to the doctor might cost a week's salary. Even doctors will be having problems, because patients don't have money any more. A lot of professionals are leaving, and since last year that has increased.

There are some economic subsidies. For example, the workers' union, which represents workers other than faculty, has had a garden at the university for two years. Any worker who wants to can use that land. Some workers have been growing vegetables there, taking care of them at night and on weekends. They even sell them pretty cheaply to the others.

The university also gives a certain amount of beans, rice, and sugar every month to every worker, faculty included. The price is deducted from your paycheck, and the amount you pay depends on your salary. For the lowest salaries it's almost free. So if several people in a family work in state institutions—this subsidy is only at state institutions—they'll at least have the basics for a month, sometimes even a little extra.

You mentioned that some people make much more in the private sector than in the universities.

Well, we do have some multinationals, like Standard Oil, and I guess people who work there make a lot of money. I know one engineer who had a chance to work there and make five times as much as in his state job, plus a car and so on. There are a lot of private factories, but some professionals will only work in this kind of factory if they just can't survive with what they have. The environment is less socially involved. You know workers are very active in Nicaragua. I wouldn't say that there is political repression at the private factories, but the people who work there tend to be right-wing, and if you don't agree with that, you won't like to work there just because you can make more money. The right-wing unions are mostly concentrated in this kind of factory.

There may be even hidden repression from the factory owner, which you have to accept, even though you have a higher salary. At least in the university, you feel free to propose whatever you want, to have an opinion, which is also important.

Are you saying that people's political motivations are so strong that in order to work under conditions in which they have more freedom of expression they would accept a salary five times lower than in the private sector?

I would say so. I know a lot of people who could be working outside the university. Sometimes we ask ourselves, why are they staying here, if they could move? I have a friend, a doctor, who travels from Masaya every day, which is expensive, and he's still teaching. I remember predicting that he would stay and work at the hospital in Masaya, but it looks like he really enjoys what he's doing, training medical students in a clinic in Managua; he feels like he's transmitting certain values. Maybe he feels that, if he leaves, it would take a while to find someone to take his place.

Of course everyone complains about the situation, that's what you hear every day, in the streets and the offices, any time a group is talking they're saying, "Did you see how expensive beans are..." I know I could find a way of making a lot more money, as a doctor. But I'm very involved, politically speaking, that's my motivation. I'm amazed at the people who are less apparently involved, who stay there and look happy, working. Those are some of the people I admire the most. It's different when you're already organized, and you can discuss and analyze the situation with other people, you have more strength. But there are a lot of people who are not active, and there they are, often doing a lot more than some politically involved people in terms of real work. Maybe it's a way of really supporting the revolution.

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