

GEORGIA

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with a visit to Chechen refugee border towns

Friday, December 17-- Saturday December 25, 1999

Visit #16

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## Current and Planned Projects in Georgia

1. MBA school started one year ago by Georgia State University. About 40 students, will graduate in one year.
2. National Information Learning Centre
3. Partnership for Peace Information Management System (PIMS) network
3. Schools of Public Health, Nursing and Allied Health

Friday, December 17

Out of Atlanta at 1:40 p.m., out of JFK in New York at 6 p.m. Uneventful nine hour flight to Moscow. When the plane took off in New York, leaving U.S. soil, a wonderful feeling of being severed from the challenges of life at Emory, and getting ready to take up some very different ones in Tbilisi. Our projects--planned, operational, and fantasy--are listed on previous page. I will stay until Thursday, and return to Moscow then two days before going to Atlanta on Saturday December 25th. I want to get back before Y2K becomes a potential issue. After the 25th every plane going out of Moscow is packed with U.S. citizens escaping Y2K.

Saturday, December 18

Moscow at 11 a.m. dreary, one day post-snowfall, temperature 23° F, gusty wind. Struck again by how every single car is caked with mud. Met by my friend Levan Vasadze's wife, Nino, and his driver Sergei Markovich. Drove along the expressways with the behemoth concrete apartment buildings, fruits of the promise that "every worker shall have a place to live." We immediately went to Vnukovo airport, one of the huge domestic airports, for a 3 p.m. flight to Tbilisi. Old granite building, huge barren spaces inside. Usual unsmiling customs officials. There must be 400 aircraft sitting on the field, of every variety and shape. About 50% Aeroflot, the rest names I don't recognize or anonymous.

Air Georgia flight to Tbilisi. Old Russian aircraft, similar to Lockheed tristar. Icy cold inside, rattled greatly on takeoff. Nice Georgian stewardess, sweet red Georgian wine ("Stalin's favorite").

Arrived 6:30 p.m. (20 hours after leaving Atlanta) to be met by a flock of Georgian friends. Weather like Atlanta--about 40°. Dinner at "The Titanic," just opened. Elegant furnishings and china contrasted sharply with a rowdy group of young Georgians dancing to loud music. Clearly having identity problems. To Betsy's hotel, where the generator was humming. Electricity about three hours a day. Everyone says they had it 24 hours a day up until the parliamentary elections one month ago, then virtually the next day the electricity stopped. Makes you wonder about the basic intelligence and common sense of the politicians.

Sunday, December 19

Up at 9:30 a.m. (12:30 a.m. Atlanta time) to a beautiful day: sunny, about 55°, quiet Sunday morning sounds of dogs barking, a few cars on the road. Breakfast with a lawyer from Almaty, Kazakstan. A young man who got his law degree there then a masters from the University of Connecticut two years ago. Reminds me of how all the young Englishmen went to 'the continent' for polish after graduating Oxford or Cambridge, and the travels of American physicians to France and Germany from 1830 onwards. I encounter many young people of the former Soviet Union who have or are going to the U.S. for advanced degrees. I asked the lawyer how Tbilisi compared with Almaty. Both have old former Communist boss with relative political stability. Kazakstan has natural resources such as gas and oil that Georgia doesn't have. Energy situation there better, streets cleaner. He said Tbilisi had unusual and strikingly beautiful architecture for the former Soviet Union. He said Georgia was extremely wealthy in the old Soviet Union, and

he had been struck by how all the cars here are ancient Ladas (like Fiats). Only wealthy people could afford them in the past, and Georgians had many of them while places like Almaty had almost none. But now? All the cars in Almaty are new foreign cars, while the Georgians still have the very old formerly expensive Ladas. (Archil says this is bull; there are as many problems in Kazakstan as in Georgia.)

Archil Kobaladze, who is the head of our partnership office here, and Zviad Kirtava, who is director of our National Information Learning Centre (NILC) here came by. We discussed the economic situation. An example: the staff of the Ministry of Health haven't been paid for seven months (and they make less than \$100 a month). The NILC generator also provides electricity to the National Management Center of the Ministry of Health, and they haven't been able even to contribute their \$300 share to the fuel bill. Inability to collect taxes, graft, no natural resources, inefficient and disorganized (by Western standards) government. An U.S. company has taken over the distribution of electricity, not the generation. The populace is saying this reflects poorly upon the U.S. A curious part of this problem is the U.S. through the Agency for International Development has given about \$100 million since 1992 for electricity. And no basic change. I have waxed profane upon this subject in a previous report:

To a meeting at the Metechi Hotel called by US AID to discuss ideas for funding the next three years. The money has been allocated by Congress, somewhere around \$3 to \$4 million for Georgia. Around the table was about thirty representatives of the nongovernmental organizations in Tbilisi. The question put forth was: if you had only one thing to do for Georgia, what would it be? The answers were predictable; the rule of law; human rights; education; macroeconomics; root out corruption. I kept my peace until I felt I had to speak. I said there was an old house with a well a few hundred yards from where we were meeting. Near the bottom of the well was a tunnel that reached a small room under the house. In the room, during the early 1900s, was a hand-operated printing press upon which the communists had printed much of the propaganda used to convince the Georgians and others to support the Communist revolution. I said the actual printing press was in the house and all of them should go see it. I asked then the question: what would the communists in 1900 have said in answer to the question "what do you want?" The answer: a printing press and paper. In a similar vein, I said, my answer to the question now was simple: electricity. With electricity one can heat homes, feed hungry bellies, teach children, print informative materials about the rule of law and macroeconomics, provide working hospitals, etc. And, I said, every winter there is no electricity for about 50% of the time. A Georgian woman enthusiastically supported my comments. Then the leader rapidly sought other answers, passing by the suggestion about electricity. That is not what they were about, of course. Electricity is dealt with in another part of the AID labyrinth. The need for the primacy of the electricity problem is so evident I don't understand why everyone doesn't think so. At least part of the reason is that a few areas in Tbilisi are supplied with electricity virtually all the time: where the members of parliament and other important people live. They don't go into the hospitals and see no patients except one or two who have brought their own small portable stoves. They don't see the cold operating rooms, the absolute inability to give any sort of care. They don't see the cold classrooms where

students won't go. I asked one of the Georgian medical students what he did about studying in his one-room apartment during the winter. "I don't," he said. "I have to stay in bed all the time to keep warm."

A particular problem is our need to get space for the NILC and our partnership activities that will remain ours as long as we use it. The Ministry of Health is rich with a gigantic number of buildings, and sometime within the next six months the space in them will be either given to organizations of the Ministry (and the NILC counts as such) or sold off. We now have about 6,000 or so square feet. With Avto Jorbenadze as the Minister, we have no fear about having it taken away. But--a big but--there are presidential elections in six months, and most observers think that even if Shevardnadze is reelected (and he undoubtedly will be) he will probably change his cabinet totally. So we need to secure our space now. We will have some discussions about it during the next few days.

To the NILC and telnet to Emory, taking care of email. Long and somewhat contentious discussion amongst the three of us (Archil, Zviad and me) about our stand about a new hospital. The Ministry of Health is planning to renovate an old hospital and make it into a "multiprofile" hospital. Archil maintains we need a critical care hospital. The World Bank feels the money should be put into rural primary care. By the end of the next two or three years about thirty Georgians will have finished various residencies, largely with us. I maintain they will never come back to Georgia until they can practice medicine as they have learned it in the West. And that they are collectively an absolutely priceless gift to Georgian medicine. I know I am right that they won't come back. I wouldn't. The medicine practiced around here is the U.S. in the 1950's. And this is principally due to lack of technology. I would like to see as a beginning a general hospital of about 150 or so beds, building into a larger hospital. It would be the center of clinical medical education. We will discuss this further during this visit with a variety of people.

About two weeks ago I had a meeting in Washington with the new Assistant Secretary of State for educational and cultural affairs--the Fullbrights plus the formerly named United States Information Agency (USIA). He is the close friend of a good friend with whom we have done business in Georgia. He and I agreed that our partnership would come to Washington in January or February and present an "information sharing partnership" proposal between Atlanta and Tbilisi, or Georgia to Georgia. I am attaching as Appendix A the concept paper I wrote about this idea. A major part of this visit is to get agreement about what we will present. We discussed this at some length, and I have summarized our evolving ideas at the beginning of this report.

A visit to Megacom to get my cellular phone activated. They have a new deal. You buy "cards" for either 25 or 50 lari (1 lari = \$0.50 about). The card has a code that you punch into the phone. You can use this amount of time, then the phone goes dead, and you punch in the code from another card. Georgian has consistently been ahead of us in cellular technology and techniques and I suspect this will come soon to the U.S.

Lunch at a Mexican restaurant. Extremely good. Hundreds of new restaurants around town. When I first came here in 1992 there were only two or three, and they were quite poor.

Back to Betsy's for a two hour nap as a genuflection to jet lag. Then a supra with the Vasadzēs,

Zhgentis and Archil. Levan Vasadze lived with me two years while getting his Emory MBA and now his cousin Beso lives with me while working on his. One of the family is a practitioner of "urotherapy," whereby a patient drinks some of his or her own urine as therapy. He has just come back from the International Urotherapy Conference in Germany. The epitome of alternative medicine.

To bed, to awaken at 3 a.m. with jet lag. Silence so thick you could cut it. A two hour time period that occurs 2-3 days on these visits, the bane of crossing nine time zones. Nothing to do but lie awake and think. Inescapable.

Monday, December 20

Breakfast with George Keshlava. He was a member of the very first group of students to spend six months at Emory on our junior clerkships, back in 1993 or so. Took him some time to decide to pass the USMLE exams and come to the us, but he did so last year and is now trying very hard to get a residency this next year. An uphill struggle. During breakfast Aka Lekiasvili's father dropped by, to pick up a letter from Aka to him, and to worry together with me about what was going to happen to Aka. He was one of our PGY II residents, quite successful, who one month ago suddenly announced he "didn't feel comfortable" being a physician any more, and abruptly quit in the middle of the year--in spite of intense entreaties by me. His father, like me, is very concerned, and hasn't told the mother yet. Aka also spent six months with us in about 1995, and I have grown to know and like his family quite a lot. His father was president of the wine grower's union in Soviet Georgia. Then Giorgi Katsitadze came for coffee. Giorgi is one of our current interns, on vacation here for one week. I had wondered why he wanted to see me, figuring he saw more than enough of me in Atlanta, and by all rights should be avoiding me. Turns out he wanted to inform me proudly that he had given his girl friend a diamond engagement ring the day before, and wanted me to meet her. She is a second year medical student with four years to go, and they are beginning to think about how to integrate their marriage with Giorgi's six more years of training in pediatrics in the U.S. No good choices: stay in Tbilisi four years more than pass USMLE and try to get a residency in U.S.; come to U.S., go to college, then apply to U.S. medical school; or come to U.S. and do something else. We agreed we would do some thinking and discussion during the next few months.

Archil and I met with Ramaz Khurodze, the rector of Georgian Technical University, the equivalent in size and curricula with Georgia Tech in Atlanta. His son Levan spent six months in Atlanta going to Georgia State University MBA school as a visiting student for one semester, and undoubtedly will return to complete his studies. His other son David is a manager of the Chevron Oil Company in Georgia. Both are charming and very bright.

I have been trying to connect Ramaz with Teddy Püttgen of Georgia Tech, who is president of the Georgia Tech satellite at Metz, France (Georgia Tech Lorraine). Ramaz, Teddy and I met in Lorraine two years ago, and agreed upon the next step: to develop a strategic plan "for the ACTIVE ENGAGEMENT OF HIGHER EDUCATION AND APPLIED RESEARCH in the LONG RANGE ECONOMIC DEVELOPMENT of the INFORMATICS, ELECTRICAL ENERGY AND TELECOMMUNICATION SECTORS of GEORGIA." I quote from it:

Sustainable development of the country at this time requires the sustained development of three key sectors: electric energy generation, distribution and end-use; telecommunications; and

informatics. Since Georgia does not have any significant raw energy sources other than hydroelectric power, economic development is likely to primarily come from the manufacturing and service sectors of the economy. The availability of reliable and high quality electric energy supply is a necessity for such economic development. The strategic location of Georgia at the crossroads between Europe and Asia provides strong opportunities for trade and commerce which can be leveraged only through the availability of modern and reliable telecommunication and informatics infrastructure.

I have been trying resolutely since then to get the three of us together in Tbilisi, and hope there would be the birth of many collaborative efforts between the two universities. Ramaz gave me a letter of invitation to Teddy, agreeing for me to take our plan and hunt for funding. This will require a careful analysis of energy, telecommunications and information technology in Georgia leading to a strategic plan. This will probably cost about \$300,000 and that sort of money for planning is hard to come by. I will be taking the plan to Washington in January to scout for funding. Ramaz informed me of two interesting developments on the information technology front. A fiber optic cable is being laid from Frankfurt to Shanghai, the old "Silk Route," and it will run through Georgia. The date for completion is March. Second, Sisco, the router company, is joining with Chevron Oil Company, which has extensive interests in the Caucasus (pipeline from Baku, Azerbaijan, to Supsa terminal in Georgia), are together going to put \$10 million into developing information technology in Georgia.

We talked about our PIMS joint project, which will have the hardware for a 2 megabyte LAN connecting seven institutions in place by the end of January. (PIMS is the Partnership for Peace Information Management System group, which works out of the Pentagon. They and we have joined forces to develop certain aspects of information technology in tandem with our educational efforts in Georgia.)

Talk then turned to the fervid desire of Archil and me to establish an acute care hospital in Tbilisi. Ramaz suggested we write one of the major companies he deals with that has many interests in Georgia, and inquire if they would be interested in sponsoring such a hospital. I wrote the following letter, which Ramaz is taking to their president:

Mr. Khurodze has kindly agreed to convey to you a concept that I wish to propose for your consideration: there is a compelling need for a modern U.S. type acute care hospital in Tbilisi. There are two major reasons to develop such a hospital, which does not now exist in the Caucasus region:

First, mortality and morbidity from disorders eminently susceptible to amelioration by modern medical care, such as cardiovascular disease, trauma, and infectious diseases, have exponentially increased in the Newly Independent States in the last decade.

Second, the lack of a state of the art critical care hospital is lethally impairing the ability of the region to attract and hold healthcare providers trained in modern medicine, and crippling any attempts at modern medical education. My associates and I and our institutions in Atlanta (Emory University; Georgia State University; Georgia Tech University) have been working in healthcare in Georgia since August, 1992. We now have twenty-eight young physicians from the

country of Georgia in residency training in various specialties of medicine at Emory University School of Medicine. Within the next one to five years these physicians, superbly trained in modern medicine, will be ready to return and be leaders of medicine in Georgia. They will not return to Georgia if the resources to practice modern medicine are not available to them. Georgia will lose a golden opportunity to propel its healthcare into the modern era, if these young physicians do not return.

The proposed hospital would have 100-200 beds, and have as its centerpiece the aggressive treatment of cardiovascular disease, especially the interventional treatment of heart attacks, and acute trauma, areas which are in desperate need of attention. All other specialties would be present such as the subspecialties of internal medicine and all the specialties of surgery. A contiguous professional building would house the physicians attached to the hospital. The hospital would be the backbone of medical education and postgraduate training in the country. Care would be given to patients from the Caucasus region, especially including workers of the developing industries in Georgia, such as the oil industry. The availability of such modern care will enhance the attraction of industry to Georgia.

The Ministry of Health has indicated support of such a hospital, and has said it would donate land located in a suitable place. We feel the financial plan and support for the hospital should cover a five year period, given the economy in Georgia at present. The facility should be built from the ground up, and not be a renovated building.

The next steps in this project would happen concurrently, and would include:

- development of a rough estimate of cost of building and equipment
- formation of a business plan
- planning the scope of services
- determining need for development of outreach services, e.g., along pipelines
- exploring the fashioning of various options for plans for offering healthcare

I would be delighted to discuss this concept further.

Sincerely,

I estimate the entire project would be in the neighborhood of \$100 million, perhaps a bit less. We'll keep our fingers crossed, expecting nothing.

A visit to the National Informational Learning Centre (NILC) to telnet to Emory and answer email. Then a "power" lunch with Roin Metrevelli (rector of Tbilisi State University, the

University of Georgia equivalent), Temur Khurodze (provost of TSU; brother of Ramaz), Archil, Ramaz Khurodze and myself. Discussed our various projects, the economy in Georgia, corruption in Georgia, the Russian elections that occurred yesterday. Then Temuri took us to the University and we visited their geography and map making department. They showed us impressive topographical maps on the computer developed from satellite data, using software developed by an Atlanta company, ERDAS. One of the potential projects we will set up with the PIMS partnership is teaching the Georgian military how to handle civilian disasters. Accurate topographical maps will be a necessity, and we had been discussing where to get them. Archil and I were impressed by their work. I will get in touch with ERDAS.

Back to the NILC where I met with Alex Aladashvili. Alex is a physician who visited with us two months at Emory, then worked with us in a failed attempt to establish a Western medical school at Tbilisi State University. He now has a small cardiac cath lab where he does coronary angioplasty, including the placement of stents. The only one in Tbilisi. He has no cardiac surgery backup, which frightens Archil and me. He chooses his cases carefully, has now done over a hundred without complications, but one will occur sooner or later. We discussed the plans for the new hospital and the letter seeking support.

Three intern applicants came by to see me, and I am Kamkhadze. She is a cardiologist in Kaspi, and wants to work with John Merlino at Crawford Long. I have met her each time the last three visits, and have had concerns about her ability to benefit from the time with John. The last visit we agreed she would work with Kakha Poposhvili for one day a week until I returned. Kakha is a very bright young cardiologist who spent several months working with John some years ago. She has done this, and Kakha tells me he has serious reservations about her ability to benefit. I suggest to her that she work for two months with Kakha, and not go to the U.S. She obdurately opposes this. I ask Kakha why to persist: "She is the only cardiologist in a large area of Georgia." I then suggest she spend two months working every day with him, and go to Atlanta for one month. A long discussion about the fact her hospital will not pay her to study with Kakha. I am obdurate. We agree to meet again in two days.

Archil has discovered I do not have a small pocket flashlight, for negotiating stairs at night without electricity (and for using the bathroom), so we bought one. His other constant concern about me is that I don't wear my overcoat all the time, as the Tbilisians do. The temperature is in the 40's F, and I maintain they simply have a Pavlovian fixation about the necessity to wear an overcoat in winter.

To dinner at the home of Levan Kacharava and his mother Eliko. I have known them since my second visit here. The older brother, Andro, was a resident with us and now is a cardiology fellow in Galveston. Levan is about 28, and is an entrepreneur, Western style. When I first met him, age 22 or so, he was a struggling artist. Now he owns two banks, a huge oil transportation company, a soft drink factory, the garbage disposal company of Tbilisi, and God only knows what else. He and his friend have offices in five cities in four countries. A guest tonight was Michele, a senior officer of the Bundesbank. She spent 23 years in Washington working for the World Bank. She remarked upon the difference between people in the U.S. and Europeans: the U.S. has a "dynamism" completely lacking in Europe. Work is fun, and pursued aggressively. Similar comments to me have been made by many people who have spent time in both cultures. Apparently there is a vast difference. Her bank is working with Levan to buy new insulated

tanker cars for mazout (spelling?), the crude oil used in many places instead of more highly refined fuel. Levan explained in the winter time the mazout becomes so thick in the ancient Georgian tanker cars that it is almost impossible to unload.

Tuesday, December 21

Breakfast with Levan Bakanidze. Levan spent six months with us several years ago as a student and now is a resident in the cancer institute here. Bright, ambitious for himself and his institute. He and I have met on several occasions about how to help them. A month ago I met Dr. Federico Welsch, the International Affairs Director of the National Cancer Institute at Bethesda, in an effort to strike up a relationship between the two institutes. He remarked they had two Georgians a few years ago who had spent some months at the NCI but had no English ability-- total waste of everyone's time. This has led the NCI to be reluctant. Dr. Welsch agreed he would consider going to Tbilisi with me in May, 2000, but I am not optimistic. What I need to do is to find an oncologic surgery department in the U.S. that will adopt the cancer institute here and figure out all the ways they can collaborate. I am working on this with Jack Coleman, formerly of Emory, now chair of oncologic surgery at the University of Indiana. Bill Eley, of our hematology-oncology division, went to Tbilisi and Kutaisi in October, and met with the National Disease Control Center here in Tbilisi. They are working together to establish a cancer registry.

Zviad Kirtava of the NILC came in while Levan and I were having breakfast, as usual full of suggestions and ideas. He proposed he work with Levan to set up a Web Page for the Cancer Institute. He also spoke about one of the projects we are trying to get off the ground in Tbilisi: training secondary school teachers in how to teach students to transition to a democratic society. Jeff Mirel, chair of the Education Department at Emory, has had experience with this in Tbilisi. I quote from Jeff's proposal:

One of the best ways for facilitating social change is to alter the way teachers are educated. This is particularly true in Georgia and other countries of the former Soviet Union that are trying to make the transition from a Communist dictatorship to democracy and a free market economy. Most of the teachers currently working in these countries were trained under the Soviet system, a fact that makes them unlikely prospects for preparing their students to become accountable, engaged and informed citizens in fledgling democracies. Producing new teachers knowledgeable about democracy and free markets and committed to the values that underlie these forms of social organization must begin with preparing a new generation of teacher educators. The goal of this program is to prepare a group of highly trained teacher educators who will serve as change agents within the Ministry of Education and major teacher education institutions in Georgia. The operating theory behind the proposed program proposed is:

- 🍏 Teachers are vital agents for attitude formation among future citizens,
- 🍏 Teachers themselves acquire attitudes, knowledge, and skills during the formal period of their training,
- 🍏 Therefore, developing pro-democracy attitudes, inculcating democratic ideas

and knowledge, and providing pro-democracy experiences among people who "train teachers" is a vital and efficient way of promoting the development of pro-democracy attitudes and behaviors in future citizens.

Zviad pointed out there were actually three institutions involved with secondary school teachers:

1. The Institute of Pedagogics, which produces secondary school teachers.
2. The Teachers Postgraduate Quality Institute: in charge of continuing education for secondary school teachers, especially rural ones. They have to go to the Institute for refresher courses every five years. A similar requirement and institute was in place for physicians during the Soviet years. In fact, the Postgraduate Medical Institute is being revitalized now.
3. Tbilisi State University: special topics are taught here, such as philology, history etc.

Our plans for secondary school teachers need to take into account these three areas. I will pass this information along to Jeff. Zviad also pointed out our desires to establish a public health school needed to take into account a political minefield, involving the Ministry of Health, the "CDC" of Georgia, the Informatics Center, and the Disaster Control Institute.

Zviad has begun working with UMCOR in Tbilisi in a very useful fashion. Kakha Popashvili, a cardiologist who spent two months with John Merlino of Crawford Long Hospital of Emory, has been giving workshops, designed like a journal club, on cardiology. Ten to twelve people prepare lectures, and UMCOR pays for overheads, publication and lunch. Two day courses, which have become very popular. Zviad, Kakha and UMCOR want to expand these subspecialty workshops in Tbilisi, and begin giving similar ones for primary care practitioners in rural areas and other parts of Georgia. Here is his plan for the workshops, as relayed to me a year ago during my visit:

- Valvular heart disease
  - Beta-blockers in heart failure
  - Basic cardiac electrophysiology
  - Mechanisms of arrhythmias and anti-arrhythmic drugs
  - Ventricular arrhythmias
  - Atrial fibrillation and flutter
  - Antithrombotic treatment of myocardial infarction etc.

Some topics that would be covered in the seminar on valvular heart disease:

- Hemodynamic overload and left ventricular hypertrophy
- Prevention of rheumatic fever and bacterial endocarditis
- Echocardiographic evaluation of valvular heart disease
- Aortic stenosis
- Mitral stenosis

- Surgical treatment of aortic and mitral stenoses
- Aortic regurgitation
- Mitral regurgitation
- Vasodilator therapy of aortic and mitral regurgitation

It is apparent from the content why these are so popular. Expanding these, both in Tbilisi and other places, and adding a primary care component, will be outstanding. I encouraged the two of them to continue with their plans to expand. We will ask for funding from several sources for this, concentrating on preparing a place in the NILC for them.

I went with Zviad and Kakha to Parliament, to meet the physician who heads up the Health Committee of Parliament, a close friend of Kakha's. Dodo Shelia, the Deputy Mayor of Kutaisi, a friend and supporter of longstanding, was there and is also on the committee. We talked at some length about the health problems. We all agree that getting a western type modern acute care general hospital was a high priority. I told him of our efforts to get sponsorship of such a hospital.

A meeting with Minister of Communications Sergo Esakia, an engineer who was appointed just before my visit here in May. We talked about the PIMS project. He has put together an innovative, for Georgia, program of setting up a corporation that has western companies and Georgia owning shares: Telecom Georgia. This will give Georgia desperately needed financial and technological support for developing the communications infrastructure. Ericsson and Metromedia are involved in this project, I gather. ISDN lines are being installed in Tbilisi for the first time.

Minister Esakia invited Archil and me to go with him to the Chechen refugee camps on the border between Georgia and Chechnya. I was surprised, and totally delighted. Agreed to do so on Thursday.

To UMCOR, meeting Jim Cox, the director for Georgia, and Gogi Gedevanishvili, a young physician who is their medical director. He is the one who has been working with Zviad and Kakha on the workshops. They have four primary care health projects: training; medicines; supplies; laboratories at outpatient clinics. UMCOR wishes to work with the NILC, Kakha and Zviad to expand the training of physicians and other practitioners. It has three large purposes in Georgia: primary health care (polyclinics); information dissemination; and the humanitarian donation of medicine.

Back to the NILC where Zviad, Archil and I were interviewed for television.

A visit with Amiran Gamrelidze, the first deputy minister of health. He told me how Avto Jorbenadze, the Minister, had just had the Ministry of Social Welfare added to his portfolio. This turns out to be a really big addition, since it includes all of welfare, veterans and disabled people.

We talked about prosthetics. For a number of years the International Committee of the Red Cross has had three centers in Georgia (with one in Abkhazia) to produce prostheses for the approximately 10,000 amputees. Produce about 300 or so a year, cheap, last one to two years,

and doesn't begin to meet the need. For two years we have been trying to find about \$100,000 to set up a CAD CAM production facility in Tbilisi, modeled after the technology in the U.S., and in use at the Atlanta VA Hospital. We attempted to get a grant for a Rehabilitation Engineering Research Center from the U.S., but did not succeed. I quote from our proposal:

	Tbilisi	Abkhazia
Patient sample	626	201
Under 20 years of age	5%	10%
20 to 65 years of age	77%	80%
Over 65 years of age	18%	10%
Female	12%	7%
Civilian	82%	99%
Above the knee	50%	30%
Double amputees	12%	7%
Land mine victim	25%	58%

Statistics on Prosthetic Needs in Georgia

This information is representative of the approximately 5,000 land mine amputee survivors in Georgia outside of Abkhazia. There are still many land mines in Western Georgia, and they are producing new victims. The situation in Abkhazia has calmed down considerably in the last two years, with the aid of the United Nations. We view it as entirely possible that these additional survivors may become potential subjects in the study.

During the final decade of the Soviet period about 2000 prostheses were produced, all of them at no charge to the user. These were of very low quality and made predominantly of wood, with some use of leather and steel. The devices were heavy, inconvenient and had many problems with the socket. The elderly and young found them almost impossible to use. The average time of exchange for a new one was four years, with many episodes of mending in between.

The International Committee of the Red Cross (ICRC) established prosthetic factories in Tbilisi and Abkhazia shortly after independence. In 1996 there were 223 prostheses fitted in Tbilisi. This number has been consistent each year and falls far short of the need. They are lightweight, made of cheap materials and produce much dissatisfaction on the part of the users.

The Partnership, in an effort to increase the production, obtained the prosthetic factory of Fitzsimmons Army Hospital, when it was closed, through the good offices of a member of Congress. This factory was set up adjacent to the ICRC factory, in order for the two to work together. We estimated that even so the

maximum number of prostheses that can be produced per year will be 500, given that each technician can produce only one to one and one-half per week. We have been exploring the possibility of CAD CAM technology as a way of getting around this conundrum.

The workers of the International Red Cross like Tbilisi a lot, and have been resistant to leaving. They were supposed to leave two years ago, but in the absence of any other prosthetic production plans, Georgia has kept them on. We have been working hard to come up with about \$100,000 for the CAD CAM project, which can produce about 20-25 prostheses a day, and ultimately could supply the entire Caucasus area. Mark Geil of Georgia Tech, who has been to Tbilisi, has come up with a proposal that we are taking to Washington. I quote from it:

The current ICRC facility produces approximately seven prostheses per week. Waiting lists are often years long. Capacity will be rapidly increased with the implementation of CAD/CAM technology in the manufacture of prostheses and orthoses. A digitizer will be used to obtain the desired shape of the limb of brace, and a CAM mill will produce the device automatically.

#### Physiotherapy

Because of the Soviet structure of separate, highly-focused health care facilities, physiotherapy (PT) is currently viewed as a separate clinical provision. PT must be considered a required addition to patient care. Either PT facilities should be centralized with the Prosthetics and Orthotics facility, or administrative steps should be taken to insure that patients receive physical therapy after a new device is provided.

#### Training for Clinicians Elsewhere

The improved prosthetics and orthotics program in Tbilisi should serve as a role model for the Caucasus region. In that regard, the program should be able to replicate itself elsewhere in Georgia and the region. Training for personnel is the first essential step in such a program exportation. Training should be organized for new prosthetists, orthotists, technicians, and physiotherapists. Eventually, specific guidelines should be drawn up for certification of these health care providers.

I am intent on setting this up in Tbilisi.

Amiran also updated us on the new hospital being planned (for many years without anything concrete!) by the Ministry and the World Bank. It will have about 200 beds: perinatal; surgery; medicine; orthopedics; pediatrics; neurosurgery; and ENT. No dialysis, cardiovascular surgery. They plan to start construction in March, and hope to have it completed in one year. I will believe this when I see it. The plan to have such a hospital actually began with our first visit in August, 1992. Nothing has happened yet.

Dinner with Paata Kervalishvili, his wife, two sons and his in-laws. Paata is Shevardnadze's science advisor. He was the youngest director of the Institute of Physics of the Soviet Union in its history. About fifty. His son Giorgi, age 17, spent the last five months with Mark Williams

of our department, myself and John Merlino and his family. We got him into the Atlanta International School, but that didn't work out, so Giorgi is now back in Tbilisi. Bright, but something just didn't click between him and the U.S. high school educational system. But, he had a good time, and clearly is vastly changed for the experience. A good supra.

David Arveladze, graduate of medical school who works in the AIDS Institute and hopes to get into U.S. residency, took me to a Starbucks style coffee house. First I had seen in Tbilisi, and I thought was designed in a more appealing fashion than the ones in the U.S. I bought some excellent dark roasted coffee. In the past I have been bringing my own coffee to Tbilisi, being a confirmed addict, but I see this is no longer necessary.

Wednesday, December 22

After breakfast went and saw the father of one of our residents, Nick Chitaia. His father is about 52, a pediatric nephrologist, who had a myocardial infarction 19 days ago. He was given streptokinase, but his EKGs continued to show injury, and an ECHO shows significant anterior wall and septal dysfunction. He will now have a cardiac cath by Alex Aladashvili, with percutaneous angioplasty if indicated. Problem, as I've noted before, is there is no surgical back-up in case there are problems during the angioplasty. Ideally he would have had a cath on admission, which hopefully would have preserved myocardial function. Cases like his illustrate the crucial need for a general hospital that includes a full cardiology center.

A visit to the U.S. Embassy and Victoria Sloan. She is the head of USIA at the Embassy, and is a favorite of mine. We talked about our proposals (see beginning) that we will be taking to Washington in January. I briefed her in some detail about them. She made a number of suggestions of individuals who might be interested. E.g., Jonathan Cebra, who heads up a program for university partnerships. She spoke at length and with intensity about the corruption in Georgia, at a level much higher than I had encountered in an official of the Embassy previously. She said there was much concern about corruption in Georgia. Not reached the status of a "rogue state," such as the Ukraine, but it was nearing that status. Said that the U.S. had concluded there had to be U.S. oversight of taxpayer funds that were used for Georgia, and they were tightening this up considerably. Also some insightful comments about culture:

My comment was that the two signal events of modern Western civilization--the Protestant Reformation and laissez faire economics--are not part of the culture in the NIS, and that we are trying to graft the dynamism (as you rightly called it) that still emanates from these events onto societies that don't have much of a place for it (we've got muscles in places where they don't get places). Which is how I've come to understand, as many of my Georgian contacts do, why the study of English language is so important. It begins a dynamic in the minds of those who study it because the language is saturated with the concepts we're trying to get across. We all know that our contacts who do speak English well have a much firmer comprehension of what we are talking about when it comes to economic reform and civic education, for example. It's not just a question of "knowing the literature" of democracy and the market. It's a question of cognition. In Georgian and in Russian, for example, you cannot translate the word "aggressive" or "challenge" to adequately convey what we mean when we talk

about "aggressive marketing" or "a challenging job opportunity." The latter is a small illustration of a large problem with respect to the issues that define our work here.

I sent this to my friend Jeff Mirel, head of the education division at Emory, and here are his comments:

Ken,

Victoria has offered very interesting (and I think, accurate) insight. However, there are some interesting historical exceptions most notably the Japanese who have been slow to learn English, have no background in Protestantism, and yet leaped from feudalism to capitalism in less than a century and seem to be doing fine in regards to democracy.

That said, I think the spread of English across the world will help promote both democracy and capitalism for the reasons Victoria mentioned. Jews and Muslims have long known the importance of teaching the sacred truths in the sacred language. Hebrew and Arabic are structured in ways that implicitly convey important ideas (for example, I read somewhere that in Hebrew the word for faith and certainty is the same, thus eliminating a philosophical tension between the two concepts that we have in English). It makes sense that English may do the same for capitalism and democracy (even as it may create problems for the deeply religious).

All this is a long-winded way of saying that any reform of the Georgian (or other post-Soviet country) education system must include lots of English education which, if Ukraine is an example, will quickly become a major growth area. Some of my more successful talks in Ukraine were really little more than long opportunities for students to practice asking and responding to questions in English. They quickly moved from questions about civic rights and responsibilities to the important stuff like, did I know Michael Jordan?

A visit to Parliament and the head of the Committee on Healthcare, a young physician. We talked at length about the need for an acute care hospital, and the problem with finding money to finance it. Then a somewhat stormy meeting with Archil, who had been opposed to the Parliament meeting. Maintained it could do no good, and had the potential of stirring up the pot.

A meeting with the Minister of Health, Avto Jorbenadze. Just had his ministry combined with another one, so it is now the Ministry of Health and Social Welfare. He was immersed in the problems of the new ministry: pensioners, disabled people. For the time being, at least, healthcare was out of his mind as he struggled to master his new fiefdom. He is coming to Washington, D.C., for a visit in February, and asked if I could be there.

To Archil's house for the birthday of his wife, Nona. Their daughter is married to a famous professional soccer star, and he, his wife and son three years old were there. They live in Holland, whose team he and his identical twin brother play for. Archil says the kid is so accustomed to cleanliness that when they take him to child care in Tbilisi he immediately starts cleaning the place. He also complains (age three!) about how dirty the streets in Tbilisi are, compared with Holland.

Thursday, December 23

Breakfast with Sandro Kvitashvili, a health administrator who spent time with us as an administrative intern at Grady. Says the Minister of Health is being funded at less than 35% of the budget that was approved by Parliament.

Off to the border of Chechnya with Minister of Communications Sergei Esakia. Originally scheduled to go in a helicopter, but apparently some sort of hostilities in the north made it necessary for it to be used by the military. The Minister's turf includes the postal service. Each of his post offices also distributes the pensions. So at Telavi, the capital of eastern Georgia, population around 9600, we visited the post office, which also includes the telephones. Visited the rooms with the switching equipment, which was probably installed about 1940. But there were two small computers, and from watching them I deduced they were also involved in the process. At the post office, there was a swirling horde of angry elderly pensioners, mostly women. They had received no pensions for three months. Each month they are supposed to get a check for \$6, and clearly it is important to their livelihood.

Then up north, about four hours from Tbilisi, to the border with Chechnya. The Caucasus mountains separate the two countries, with a very few passes that can be used to cross the border. Russia thinks large numbers of Chechens cross the border here, which is why they have bombed one of the Georgian towns next to the border, and have asked to put their own soldiers to guard the passes. This area of Georgia is called Pankisi. There are four or so small villages, the largest one with about 5,000 population: Diuisi, which is one we visited; Jokolo; Birkiani; and Omalo. Chechens have migrated into these villages over the last hundred years or so, and so they are populated by what might be called Chechen Georgians. This is one of the reasons why they are attractive to Chechens from Chechnya, in addition to them being one of the few places to which they can flee.

Diuisi has a population of 5,000 with about 4,000 refugees. It has dirt roads with large potholes filled with muddy water. Small shacks, decent fairly large houses about 30+ years old. Small groups of dispirited people standing around, looking at the activity, not talking to each other. The Minister says a lot of drug trafficking occurs, and this area is the source of drugs that go to the streets of Tbilisi. Gray, cold, windy overcast day. Contributed to the emotional ambience of lack of hope and difficult almost desperate conditions.

About 1500 or so of the refugees are children of secondary school age or younger. One physician, woman, age 40, graduate of Tbilisi State University, takes care of the village with one midwife and three pediatric nurses. The physician is a family practitioner. No pediatrician. She sees 30-60 patients a day. In general about 30% of all the refugees in the villages are children. The children: have not been vaccinated; a lot of them have scabies (100 in this village alone); much diarrhea and respiratory illnesses. The adults have: a lot of sexually transmitted diseases; coronary atherosclerosis; hypertension; and arthritis. Drugs are desperately needed, especially: pain killers; H-2 blockers; nitrates; beta blockers; digoxin; oral diuretics; ointments such as steroids and for burns (children). "Psychoneurology" is a big problem-- i.e., psychiatry. Common problems include: post-traumatic stress syndrome; sleep disturbances; headaches; and disturbed behavior. The physician feels severe need for dentists,

ob/gyn physicians, and for consultation specialists in psychoneurology, tuberculosis and dermatologists.

In addition to the Minister of Communication the Minister of Education and Minister for Refugees were present. A huge problem is education of the secondary school children. They speak only Chechen and Russian. The Georgian school system abolished Russian language classes shortly after the breakup in 1992, and also doesn't have any Russian textbooks. But the children cannot be integrated into the Georgian classes. Much discussion about what to do. Finally decided to get the Russian materials and set up separate classes.

Left at the end of the day, and halfway down at Tsivi, in the middle of the mountains, we had a supra at a beautiful small resort. Mediko, the mayor of Telavi, was there. A lady of about 65+, who has been the mayor and a force in Georgian politics since the early sixties. A favorite of President Shevardnadze. Blunt, outspoken, charming, a take no prisoners verbally type. All men plus her around the table. I gave a toast where, bearing in mind her verbal skills, I said it was to "a rose among thorns, an expensive French perfume among bad odors, a philosopher among lesser thinkers, etc."

Back to Tbilisi after a physically and emotionally exhausting day.

Friday, December 24

Up and packed, breakfast with friends, uneventful flight to Moscow and Levan Vasadze for the evening.

Saturday, December 25

Seven a.m. flight to Zurich, then to Atlanta. Empty planes. I had to fly then, since beginning the next day, Dec. 26, every flight was filled and had long waiting lists. Everyone from the west getting out before Y2K.