

F. A. S. PUBLIC INTEREST REPORT

Formerly the FAS Newsletter

SPECIAL ISSUE:

ISRAELI-ARAB CONFLICT - II

Vol. 31, No. 2

February, 1978

SCIENCE FOR PEACE IN THE MIDDLE EAST

In the search for a just and lasting Middle East peace, is there a role to play for American science? This was the question underlying two FAS trips to the Middle East — to Israel in August and to Egypt, Lebanon, Syria and Jordan in December. Our answer is that the time has come to begin rethinking U.S. aid to the Middle East and, in this rethinking, science does have a significant and relevant role to play.

Observe first that America is now providing almost two-thirds of all of its bilateral economic assistance to the four most centrally involved Middle East countries: Israel, Egypt, Jordan and Syria. Put another way, no other country in the world receives as much American aid as does any of these four confrontation states. This massive economic assistance is not justified on grounds of economic need. When the 67 countries to which the U.S. gives bilateral assistance are ranked in order of (per capita) poverty, even Egypt is only 26th, Jordan is 40th, Syria is 48th and Israel, the richest of all, is the last, or 67th. Moreover, Egypt, Jordan and Syria are the beneficiaries of their Arab brethren, who often provide three times as much aid as do we. (Syria gets, in addition, very substantial quantities of aid from the Soviet Union.)

We provide such relatively inappropriate quantities of economic aid for political reasons — to stabilize the three Arab regimes, to provide us with influence upon them, and to strengthen Israel's economy as an aspect of its defense. We do try to achieve developmental goals with the funds, but by pointedly labeling the aid as security supporting assistance, rather than as developmental assistance, our aid program legislation applies different and more flexible guidelines to the Middle East aid.

Using AID to Enhance Scientific Cooperation

The time seems to have come to reconsider the ways and means by which these funds can most effectively play the desired role in achieving peace. The emerging political situation now permits us to inquire whether development aid can go further than merely seeking to stabilize the particular governments separately. It permits us to inquire whether aid can be used to foster projects which require active or passive

cooperation between the states involved. Can regional development projects be discovered and designed which simultaneously increase the positive dividends of peace and reduce the likelihood of a return to conflict? Can such projects, by encouraging scientific cooperation, help solidify whatever new era of Arab-Israeli collaboration emerges from the peace negotiations.

The answer to these questions would seem to be "yes". First of all, the Jordanians and the Israelis have a host of possibilities for fruitful collaboration. They share the Jordan Valley, and the Gulf of Aqaba, both of which are key to the development of both nations. Whatever political solution applies to the West Bank and Gaza, both Jordan and Israel will have a common interest in the development of both areas. The Syrians and Egyptians have similar, if less dramatic, common interests with Israel stemming from their own common borders. And all of the four countries share such general scientific interests as those involved in desertification, desalinization, the search for appropriate energy technology, the search for resources, and so on.

If the states concerned were to become involved in relevant conferences, common projects, and joint institutes, science could help illuminate the promise of a collaborative peace. This is not the first area in which scientific collaboration has shown the way. Scientific exchange — and even the discussion by scientists of political questions — played a useful early role in the U.S.-Soviet confrontation. And scientific and medical exchange is helping improve U.S. relations with the People's Republic of China. We have ample reason to think that scientists, with their universal languages and common disciplines, can play similar roles elsewhere.

Furthermore, it can be argued that, in the context of peace, the encouragement of regional scientific cooperation ought to become a major developmental priority, quite apart from its political efficacy in encouraging the maintenance of peace. Consider that,

—Continued on page 2

— Reviewed and Approved by the FAS Council

CAN AMERICAN SCIENCE HELP KEEP THE MIDDLE EAST PEACE?

A Venice conference for Eastern European and Soviet scientists provided an opportunity for FAS to return to the Mideast, as promised in the November Report from Israel. The purpose was to review, from the Arab side, the prospect for a Middle East settlement in general, and

to uncover a role for American science and technology in that settlement, in particular. This February Report is the result, encompassing a trip to Egypt, Lebanon, Syria and Jordan in the period of the first Egyptian-Israeli talks following President Anwar el-Sadat's visit to Jerusalem.

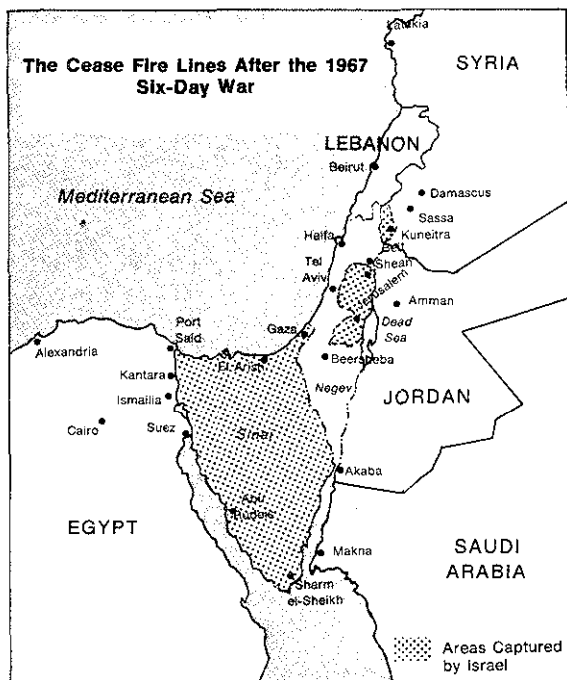
SOVIET AND EASTERN EUROPEAN DISSIDENT SCIENTISTS MEET — Pg. 11; NEXT MONTH — SOLAR ENERGY

Continued from page 1

in the long run, the U.S. could not justify the present oversized levels of support to these countries. Hence a transitional period between these levels and smaller ones must exist. What better goal for this transitional period than to encourage a regional critical mass of scientific and technological activity that, within reasonable limits, would be self-sustaining. All four of the countries involved pride themselves on high production of trained personnel. And precisely because these countries are wealthier than many U.S. recipients, the possibility exists of their reaching some kind of point of technological takeoff. Why not then seek to create the institutions, and patterns of scientific activity and exchange, that will keep Middle East scientists working productively on regional and national problems?

Finally, whatever it would make sense to do in the context of peace, it would seem to make sense to prepare, and even to foreshadow, during the peace negotiations themselves. What special efforts would the U.S. make, in terms of aid, if peace were forthcoming? How would we use our aid programs, and for how long, if peace broke out? These are questions whose answers the participants in the negotiations might find it encouraging to know. But without a high level Congressional or Executive injunction to design a "science for peace" program, AID is likely to pursue business as usual — and, indeed, to consider itself estopped from doing anything else.

In any case, whether or not our political authorities deem it useful to use science and technology as a lure, or dowry, for a final peace settlement, the U.S. should at least avoid the present danger that our planning will fall too far behind political developments. In the Middle East, this is a time for creative thinking about both the developmental and the political uses of regional scientific collaboration. □



ISRAEL CIRCUMNAVIGATED

Cairo at night, three days before its first Israeli-Egyptian conference, was sultry and lit with high-density sulphur lights. The authorities were friendly to Americans and protective of tourists: police note the destinations and arrivals of visitors as they get into cabs. The airport driver raced along, scattering people like chickens and raising dust.

The Cairo Hilton was canceling reservations steadily with the excuse "late arrival". The reservation slip I produced noted that the plane would arrive at 5:00; the clerk read it as requiring 5:00 arrival. That impossibility had been compounded by the plane's predictable lateness of two hours.

Appealing to the assistant manager produced a second

—Continued on page 3

FAS

Chairman: GEORGE W. RATHJENS

Vice Chairman: JEROME D. FRANK

Secretary: JOHN T. EDSALL

Treasurer: FRANK VON HIPPEL

Director: JEREMY J. STONE

The Federation of American Scientists is a unique, non-profit, civic organization, licensed to lobby in the public interest, and composed of 7,000 natural and social scientists and engineers who are concerned with problems of science and society. Democratically organized with an elected National Council of 26 members, FAS was first organized in 1946 as the Federation of Atomic Scientists and has functioned as a conscience of the scientific community for more than a quarter century.

SPONSORS (partial list)

- *Christian B. Anfinsen (Biochem.)
- *Kenneth J. Arrow (Economics)
- *Julius Axelrod (Biochemistry)
- *David Baltimore (Microbiology)
- *Leona Baumgartner (Pub. Health)
- *Paul Beeson (Medicine)
- *Hans A. Bethe (Physics)
- *Konrad Bloch (Chemistry)
- *Norman E. Borlaug (Wheat)
- *Anne Pitts Carter (Economics)
- *Owen Chamberlain (Physics)
- *Abram Chayes (Law)
- *Morris Cohen (Engineering)
- *Mildred Cohn (Biochemistry)
- *Leon N. Cooper (Physics)
- *Carl F. Cori (Biochemistry)
- *Paul B. Corneily (Medicine)
- *André Cournand (Medicine)
- *Max Delbruck (Biology)
- *Renato Dulbecco (Microbiology)
- *John T. Edsall (Biology)
- *Paul R. Ehrlich (Biology)
- *John F. Enders (Biochemistry)
- *Adrian Fisher (Law)
- *Paul J. Flory (Chemistry)
- *Jerome D. Frank (Psychology)
- *John Kenneth Galbraith (Econ.)
- *Richard L. Garwin (Physics)
- *Edward L. Ginzton (Engineering)
- *Donald A. Glaser (Physics-Biol.)
- *H. K. Hartline (Physiology)
- *Walter W. Heller (Economics)
- *Alfred D. Hershey (Biology)
- *Hudson Hoagland (Biology)
- *Robert W. Holley (Biochemistry)
- *Marc Kac (Mathematics)
- *Henry S. Kaplan (Medicine)
- *Carl Kaysen (Economics)
- *H. Gobind Khorana (Biochemistry)
- *George B. Kistiakowsky (Chem.)
- *Arthur Kornberg (Biochemistry)
- *Pol'karp Kusch (Physics)
- *Willis E. Lamb, Jr. (Physics)
- *Wassily W. Leontief (Economics)
- *Fritz Lipmann (Biochemistry)
- *S. E. Luria (Biology)
- *Roy Menninger (Psychiatry)
- *Robert Merton (Sociology)
- *Matthew S. Meselson (Biology)
- *Neal E. Miller (Psychology)
- *Hans J. Morgenthau (Pol. Science)
- *Philip Morrison (Physics)
- *Robert S. Mulliken (Chemistry)
- *Franklin A. Neva (Medicine)
- *Marshall Nirenberg (Biochem.)
- *Severo Ochoa (Biochemistry)
- *Charles E. Osgood (Psychology)
- *Linus Pauling (Chemistry)
- *George Polya (Mathematics)
- *Oscar Rice (Physical Chemistry)
- *Burton Richter (Physics)
- *David Riesman, Jr. (Sociology)
- *J. Robert Schrieffer (Physics)
- *Julian Schwinger (Physics)
- *Herbert Scoville, Jr. (Def. Policy)
- *Alice Kimball Smith (History)
- *Cyril S. Smith (Metallurgy)
- *Robert M. Solow (Economics)
- *William H. Stein (Chemistry)
- *Albert Szent-Györgyi (Biochem.)
- *Howard M. Temin (Microbiology)
- *James Tobin (Economics)
- *Charles H. Townes (Physics)
- *Harold C. Urey (Chemistry)
- *George Wald (Biology)
- *Myron E. Wegman (Medicine)
- *Victor F. Weisskopf (Physics)
- *Jerome B. Wiesner (Engineering)
- *Robert R. Wilson (Physics)
- *C. S. Wu (Physics)
- *Alfred Yankauer (Medicine)
- *Herbert F. York (Physics)

NATIONAL COUNCIL MEMBERS (elected)

- Victor Rabinowitch (World Devel.)
- Leonard Rodberg (Pol. Science)
- Arthur H. Rosenfeld (Physics)
- Carl Sagan (Astronomy)
- Joseph L. Sax (Environ. Law)
- William Shurcliff (Physics)
- George A. Silver (Medicine)
- Jeremy J. Stone (Mathematics)
- Frank von Hippel (Physics)
- Myron E. Wegman (Medicine)
- Alvin Weinberg (Physics)
- Robert H. Williams (Energy Policy)
- *Nobel Laureates

The FAS Public Interest Report is published monthly except July and August at 307 Mass. Ave., NE, Washington, D.C. 20002. Annual subscription \$20/year. Second class postage paid at Washington, D.C. Copyright © 1978 by the Federation of American Scientists.

Continued from page 2

shock — she was a woman. I probably owe my room to my surprise. Asked how long the Arab world had had women as assistant hotel managers, she responded, "Two years — I was the first". She noted that it was difficult for the hotel to get in touch with the airport (Cairo phones are notoriously out of order) and recommended that travel agents just put the airplane number without arrival time.

While I waited for her to secure a room, I watched the preparations for the wedding announced for "Manal and Ahmed". Waiting in various wings were 20 bridesmaids with lit candles, tambourinists, cymbalists, older women making exotic mouth sounds, and flower petal droppers. Such weddings occurred at the Hilton almost every night, the assistant manager said, concluding with reference to the expense: "We Egyptians are crazy . . ."

Al Ahram

The first stop on Monday morning was the famous Arab newspaper, *Al Ahram*, and its science editor Salah Galal. A key science figure in the developing world, Galal also edits *World Health* in its Arabic edition. He showed me the large number of Western science publications to which he subscribes and gave me advice and background.

Al Ahram was an even more interesting place to visit when Mohamed Hasamen Heikel was its managing editor. Heikel had been an extremely close confidant of Nasser and, for a time, of Sadat. His candid and interesting memoir, *The Road to Ramadan*, had excited my great interest. With his privileged access to the President of the State, *Al Ahram* had become semi-official and privileged. He had been called the Henry Kissinger of Egypt. Heikel had lost his influence by opposing the 1973 Suez crossing by Sadat and, worse, by describing the later Israeli encirclement of Egyptian forces as a vindication for his foreboding. Sadat, who considered the crossing a great moral and geographical victory, and who was popularly called the "Hero of the Crossing", considered it was a victory. This had led to a split.

Now Heikel was opposing Sadat's peace efforts and some thought the split more personal than ideological. The opposing newspaper was making a comeback. Heikel was living in grand style, writing for the foreign press, and hearing his words piped in, for example, via Libyan radio.

Later I went to Heikel's apartment to seek an interview. He lives in a building next to the Soviet Embassy, which is itself next to President Sadat's official offices. (I am no specialist on electronic eavesdropping but it strikes me as outrageous to permit the Soviet Embassy to be next door to the President's place of business.) Heikel greeted me and promised to arrange a time by messenger later — but did not.

Searching for political material in the bookstores, one sees the extent of self-censorship in Egypt. Even Heikel's *Road to Ramadan* is absent. But Sadat has emptied the concentration camps which Nasser had constructed and the atmosphere seems free.

At the moment it is joyous. Banners are proclaiming peace and supporting Sadat. At least ten people assure me that they are for peace, and hope and pray that the long struggle will be ended. Moreover, they say everyone agrees with them. One has the impression that Egypt has simply dropped out of the war. The one exception is a



Cairo Festooned for Peace

young translator who expresses some reservations and asks what will this mean for the Palestinians, and for their desire for a State?

Egyptian Academy of Sciences

At 3:00 I meet for two hours with the Vice President of the Egyptian Academy of Sciences, Mohammad B. Fayez, and the Director of its Science Policy Research Unit, Dr. Yousef Hussein. (The Academy President was extremely busy because the fourth annual meeting of the Academy impended and was to be attended that weekend by President Sadat.)

Dr. Fayez, an organic chemist, speaking as a private citizen, said he wanted a "fair and just peace," without victor or aggrieved party, and respecting the legitimate rights of the Palestinians who had, after all, lost their land not 3,000 years ago, but 30. Sadat had torn down a wall of suspicion and uncovered a longing for peace. Indeed, Egypt needed peace badly for 1,001 reasons which were everywhere evident in the needs of the people.

Egypt would also need security guarantees, since it was acting in ways that offended its main weapons supplier, the Soviets. The fact that the U.S. had followed, for so long, a course of animosity toward 100 million Arabs in favor of Israel had made Arabs wonder if evenhandedness would ever occur. But, fundamentally, Egypt was friendly to the West. And it had only turned to the Soviets out of desperation.

Here and elsewhere in the Arab world, I was struck by the uphill course the Russians have in maintaining influence. The poorest Arabs are the most religious and cannot abide the atheism of the Soviets. The middle class of entrepreneurial Arabs are completely opposed to socialistic measures. And the Western culture attracts like a magnet. Taken together, only overriding Arab needs, and desperate Arab situations, can hold Soviet-Arab alliances in place.

I asked about the problems science could treat. The Aswan Dam, which John Foster Dulles had refused to support, had been completed with Soviet help. It provided flood control of the Nile waters, assurance of adequate water supply the year round, and a great deal of electricity. But it had also held back the silt with which the Nile had fertilized Egypt. The land was now losing fertility, and chemical fertilizers were necessary.

The basic immediate problem is population growth. The forty million Egyptians will become 70 million by the

—Continued on page 4

Continued from page 3

year 2,000. The main medical problem is bilharziasis, also known as schistosomiasis, a parasitic debilitating disease that farmers get while walking in irrigation canals. Two out of every three Egyptians get this disease, which fills half the hospital beds in wards for internal medicine. Central agricultural pests are the leaf worm and the boll weevil, both of which attack what Egypt calls its "white gold" — cotton. Egypt received \$750,000,000 in bilateral aid for fiscal 1978. The total U.S. bilateral aid outside the Middle East is only \$1 billion and hence only somewhat more than Egypt gets by itself. This shows the extraordinary extent to which America is paying to secure peace. Egypt has now received about \$3.7 billion. (Israel has received about \$10 billion.) Egyptian per capita income is \$280 and life expectancy is 52 years, twenty years less than Americans.

There are ambitious gleam-in-the-eye projects to move the trapped silt into Western deserts; to link the Mediterranean to the Qattara Depression, so as to produce hydroelectric power from the 160-meter drop. These efforts are related to moving the peasant from the Nile to the desert interior of Egypt, which has few inhabitants but 90% of the land. This central development problem even has deep-seated psychological overtones. The symbiosis between the Nile peasant and the Nile is so fundamental that it is said that the peasant must see the Nile each day to remain content. But in order to spread away from the Nile, Egypt must improve its ability to locate and extract underground water so as to make possible cities in the desert.

Basically Egypt gets two-thirds of its GNP from agriculture and one-third from industry and would like to reverse those statistics through development. Underlying this shift is the necessity for much better training of Egyptian citizens and exchange of technological information.

Obviously, it is also important to stem the drain of military expenditures. In particular, Dr. Hussein emphasized the Egyptian desire to avoid a nuclear arms race and Egyptian interest in prohibiting production and use of nuclear weapons in the Mideast. Dr. Fayez emphasized Egyptian regret at the gap that had existed in political relations, and his "sincere hope" that there could be a "new era in our relationship with the United States".

The Middle Class View

In the evening a merchant who spotted me shopping in his store struck up a conversation. Pointing to a picture of Sadat, he said he had never had a picture of Nasser in his store. "It was Nasser's socialistic measures he resented. The fear that further such measures would arise had driven investment money out of Egypt. Sadat, by contrast, trusted in God, had relaxed the nationalization decrees and was going to cut military spending when peace came. The merchant deeply resented the "camel to Cadillac" rich Arabs who patronized the Egyptians and treated them like "microbes" (i.e. bugs), notwithstanding the 7,000 years of culture possessed by the Egyptians. It was outrageous, he felt, that these rich Saudis and Libyans then charged Egyptians about \$300 for each visa. Egypt could be as rich as they in 20 years if only there were peace. Especially, Egypt hated communists, of whom there were only 2 in the 360-member parliament.

Later in the evening, I went to the Kasr El Aini hospital



Egyptian Girls Weaving

and chatted late into the night with a 27-year-old intern on evening duty. The hospital looked like movie pictures of European hospitals in World War I. A ward with 18 cancer patients had a man quietly groaning while a cat scampered past bare walls.

Since Nasser's time, medical care has been free, and medical training has also, with the exception of books. There were seven medical schools and an oversupply of doctors. But simple things took a long time (like matching blood for compatibility). The intern was giving a transfusion to an anemic girl who refused to eat for psychological reasons. Her mother was caring for her. (For cases requiring private nursing, relatives were allowed to do what the hospital had not the staff to do.)

The Health Ministry

Next day, while waiting in the anteroom of the Minister of Health, I spoke with a cultured and obviously well-to-do old Egyptian woman whose career had been spent teaching English. She characterized Egyptians as generous, hospitable, goodhearted and trusting, as well as hard-working. Education was free and compulsory to age 14. There was a woman minister, and a third of the new medical doctors were women. Sadat was a polite, decent man, outspoken and honest. Egyptians were free of blood feuds or color discrimination. She regretted that the U.S., specifically John Foster Dulles, had "thrown us into the hands" of the U.S.S.R. which had "cost us quite a bit."

The Minister, Dr. Ibrahim Badran, received me cordially. He is indeed a worthy and likeable person. Earning in a month now what he had earned each day in private practice, he works 16-hour days trying to hold the Ministry together. Dr. Badran values good intentions and is deeply religious. He obviously has the universal high respect of his colleagues. Promising to make me a list of Ministry concerns, he invited me to return at 6:30 the next day.

Ismailia

On Wednesday, I set off to see the country, visit Ismailia, and to locate and interview a Suez Canal Company researcher. My English-speaking driver explained, en route, some of the cultural issues, which I later studied myself by reading the Koran in airports.

The Koran is a collection of 115 chapters, of unspecified order, taken by Muslims to be the word of God, and collected about the time of the Prophet Mohammed, born in 570 A.D. It accuses the Jews of corrupting the Scrip-

—Continued on page 5

Continued from page 4

tures given to them by God and accuses the Christians of wrongly regarding Jesus as the son of God, rather than only as an apostle. The Koran preaches that God is all-knowing and compassionate but stern to wrongdoers.

Traditionally Muslims are taught that the Koran has a solution for all problems. Children memorize such sections of it as they are able. Islamic law is wholly based upon the Koran, supplemented by the precedents (*sunna*) set by the Prophet. This law is further developed through reasoning by analogy — analogies agreed upon by a consensus of legal scholars. A book on Islamic law notes:

"The idea of *sunna* presented a formidable obstacle to every innovation, and in order to discredit anything it was, and still is, enough to call it an innovation." (*An Introduction to Islamic Law*, Schacht, p. 17, Oxford University Press, 1964).

Within two centuries of the rise of Islam (about 850 A.D.), the details of analogy had been so completely worked out that a doctrine became established denying the further possibility of independent reasoning (*ijtihād*). Another tradition specified that no one had the right to personal opinion (*ra'y*) on points settled in the Koran.

I asked my driver whether these conservative aspects of Islam might have been responsible for the fact that Arab knowledge was now behind that of Europe whereas, in the immediate pre-Islam period, it had been more advanced. Did not scientific advance require less dogmatism?

He laughed nervously and said, "Well, we're just talking". It was evident from his description of the public schools, however, that the students were not encouraged to question anything. As a person related to the tourist trade, he was able to send his two children to private school at a cost of 600 Egyptian pounds (\$900) a year. (An Egyptian Ph.D. in government might begin at 300 pounds per year total salary!) The private schools were much more flexible. For example, when his 9-year-old son staunchly refused to sit next to any girl, the teacher had called the father to the office and, in the end, rearranged the son's seating.

The Koran has built in a bias against women that is hard to change. In the Koran, Allah says, "Women are your fields: go, then, into your fields as you please". It prescribes, at length, extended sexual rights for males, specifies the male relatives to whom women can show their faces and calls women "powerless in disputation". The modesty enjoined on women reaches a peak in the instruction:

"And let them not stamp their feet in walking so as to reveal their hidden trinkets."

One residue of this sexist legacy is laws of inheritance that require that males be given twice as much as females. Another was the fact that my Nubian driver had never seen his wife before he married her — with the interesting exception of having played with her in childhood. (Nubians generally marry their first cousins so as to avoid the future possibility of having their lands leave the family, which is considered a mortal sin.)

Suez Canal Authority

At the Suez Canal Authority, I interviewed the director of its research center, Nabil Helabi, a Berkeley Ph.D., vintage 1967. The Canal was in the process of a two-

stage widening and deepening effort that would open it to 90% of all tankers. The first phase would cost about \$1.2 billion which was being loaned, in part, from the World Bank, Japan, and the Arab Fund for Development (i.e., the Saudis and the Kuwaitis) at rates of interest between 2% (Japan) and 7-8% (the World Bank). The Canal Authority was moving eleven times the volume of materials involved in building the Aswan Dam, but all seemed on schedule. Researchers were interested in more accurate calculations: to determine the optimum period between maintenance dredgings (now 3 years); to find the best length of line between the tugs and the tankers they towed; to compute the rate sedimentation in Port Said; and so on. Dr. Helabi welcomed more contact with American scientists and would like to secure their firsthand involvement in some of his problems, which were, he said, invariably novel. All in all, however, the Canal Authority seemed to have its affairs well in hand; backed by Arab funds and strong Arab interest in having the Canal open, it seemed that the role of American science here was minimal.

I dropped in on the Governor-General of Ismailia to see if I could cross the Canal; I wanted to see the remnants of the Bar Lev Line, which my driver had suggested was possible. It turned out to be "inconvenient". I realize now that the meeting I had broken into showed the Governor-General working out plans to receive Begin and Sadat at their subsequent historic meeting in Ismailia.

Driving back, after a quick look at the town, the road to Cairo is straight, flat, and undefended. The Egyptians must have felt terribly vulnerable when the Israelis got to the Canal.

Medical Needs

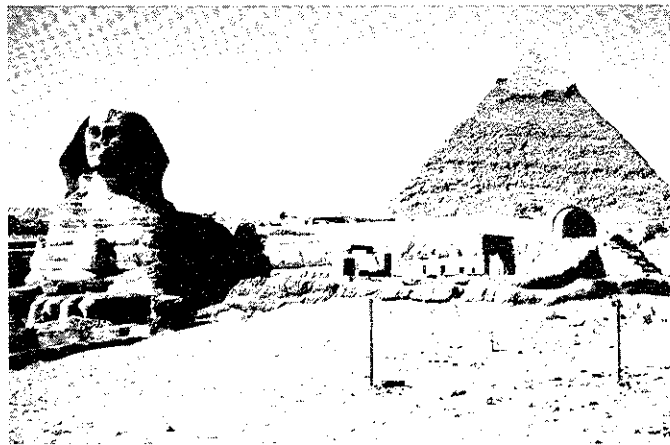
In the evening, I met again with Dr. Badran. He was interested: in upgrading medical school educational facilities, and in curriculum development and evaluation; in continuing education as a new approach to develop the medical staff at the ministerial level; in advice in developing the strategy and system of urban health care delivery; and in methods of evaluating and improving health sciences in general.

I asked what kind of dramatic project might be suitable if America wanted to thank President Sadat for the funds and dangers we would be saved if the Mideast crisis were resolved, and if it decided to support a program to develop the Middle East. His eyes lit up at the thought.

—Continued on page 6



Dr. Nabil Helabi — Canal Researcher



Sphinx and Pyramid

Continued from page 5

He said what was really needed was a modern hospital to replace the evacuated Kasr El Aini Hospital and, above all, in which to train the new doctors. He noted that 25% of the medical students in Egypt came from other Middle East countries. (Indeed, Egypt trained a majority of all Palestinian, Saudi, Lebanese and Sudanese doctors.) Two million Egyptians circulated through such hospitals each year. After Giscard D'Estaing had visited, the French had provided a long-term loan to build a 1,000-bed hospital. These loans were, for all practical purposes, as good as gifts. (The loans America provides are often 40-year loans with interest rates of 2% or 3%.)

Afterwards, the Director of Information at the Ministry gave me some insights into the practical problems of living in Egypt. The minimum wage in government, for those with a primary education, was about \$20 a month, rising to \$40 for a person with a university degree. Because rents were controlled, enormous amounts of "key" money, ranging from \$3,000 to more than \$100,000, could be required to obtain access to apartments. People lived with parents. Many had two jobs. A kilo of meat could cost \$2.50.

Mahmoud Mohamed Mahfouz

At 9:00 p.m., I went to the private clinic of a former Minister of Health, Dr. Mahmoud Mohamed Mahfouz. Here one saw what the wealthier patients — in this case, suffering from cancer — did to avoid using the national health system. The doctors in those private clinics normally work at low wages in the morning in the public hospital and then, in afternoons and/or evenings, take private patients in what can become a very lucrative practice.

Dr. Mahfouz provided me with a wide-ranging assessment of Egyptian possibilities for development. Egypt needed a better data base. But it had the manpower base. Espousing a form of social Darwinianism, he said Egyptians at age seven could do marvels with cars because of the 7,000-year-old Egyptian ability to meet technological challenges. What Egypt lacked was a proper technology, e.g., solar pumps to raise underground water. Mobile schools to spread technological ideas throughout the countryside would be useful. A petrochemical industry was needed to make plastic pipe to be used for irrigation. A highway from Alexandria to Aswan would pay for itself in tolls. A light transport industry, including especially

bicycles, would be desirable to get away from the automotive problems.

Ain Shams University

En route to visit the President of Ain Shams University, an Egyptian reflected that: "We must avoid the ruler mentality in which we became ostriches and, avoiding bitter facts, said we would accept no peace with Israel, no this and no that". The problem, he felt, was to get closer to the West, but not at the expense of Egyptian dignity or the legitimate rights of Palestinians.

I chatted with a number of high officials of the University who were waiting to meet with President Solimen. The University needed a data processing center. It needed language laboratories which were important in all science fields, and the doctors needed a relaxation of the qualifying examinations needed for U.S. visas. Especially important, Egypt needed an Institute for Technology that would play a role comparable to that of MIT; such an institute would help develop the entire Middle East by training appropriate technicians.

On my last morning, I visited the Egyptian Museum. King Tut turns out to have had all the conveniences, including sun shades, razors and a folding bed for camping. While taking a quick look at the pyramids, I traveled the road to the site of the Israeli-Egyptian conference. It was festooned with banners. My driver said the rejectionist Arabs were generating a "sandstorm in a teacup". His wife had lost a brother in the 1973 war. Everyone he knew was clearly for peace except his 9-year-old son Mahmoud, who declined to give an opinion, saying, "Father, this is not my business. We have a very high official, the President, for that." The son was rather more interested in having his bicycle turned in for a motorbike. As I checked out of the Nile Hilton, someone was complaining to the assistant manager that his room had been canceled. At the airport three different clocks were running — but all gave quite different times; clearly Egypt could make good use of peace.

Beirut, Lebanon

Beirut, Lebanon is an hour's flight away. The plane crosses the Canal and moves up the Mediterranean parallel to the length of Israel. My seatmate, a Lebanese Christian airline steward, had fought in the Lebanese civil war. It had been, he said, frightening; one never knew whether one was in the sights of someone's gun.

The fighting in Lebanon had resulted indirectly from the influx of Palestinians into Lebanon, who desired to use it as a base against Israel. This had destabilized a long-standing balance of power between Lebanese Moslems and Lebanese Christians. Fighting had broken out first in the Beirut suburbs and, some months later, in the downtown area. Both sites looked like Vietnam, with totally burned out buildings. As a result of the conflict, Moslem popular opinion toward the Palestinians had shifted. Earlier, one informant suggested, 75% had welcomed them. Now 90% wanted them to leave. But things were tense and I was told, "Everybody keeps quiet now".

Leaving the airport, one is immediately stopped at a Syrian Army checkpoint, and the checkpoints continue every few hundred yards. When the Lebanese civil war had reached the point where the country was disintegrating, President Assad of Syria had assented to sending in his army to keep order. That night I heard loud explo-

Continued from page 6

sions. In the morning, I learned that two Palestinian commando units had been fighting with each other until the Syrians had stopped them. (The Syrians were joined in peacekeeping by Saudi Arabians and Sudanese, among others, providing an exotic spectacle.)

In the morning I headed for the Arab part of town, after being warned not to consult my map lest it provoke suspicions. Arriving at the Arab University, I first interviewed the public relations officer. He advised me that the U.S. should insulate its scientific cooperation from propaganda, as had the British and Germans, perhaps by conducting the cooperation through a private organization. For example, the students considered the Peace Corps to be an arm of the CIA. All the students took the P.L.O. point of view. While only 15% of them had Palestinian papers, perhaps 50% were Palestinians in fact.

I called next upon the president of the student body who had, I discovered, held this position since the University opened in 1962! He was an energetic, somewhat charismatic figure, and likeable. He opposed the Sadat visit as an acceptance of Israel which had helped Israel escape from a "bad situation". He felt Carter was behind the move and that the Americans had violated an agreement with the Russians to settle the matter jointly [Ed. note: he meant, I suppose, that they were Geneva Conference co-chairmen] and hence that the Cairo conference was "illegal". He felt all the students agreed — the 10,000 on the campus and the 20,000 who took correspondence courses and came for examination.

He asked whether it was true that Kissinger was Jewish and, if so, how he had been able to become Foreign Minister. Learning that there were six Jewish senators in America, he asked if they were "Zionists". It was evident that Zionism meant much more to him than being a supporter of a Jewish state, but constituted an international conspiracy that was, in particular, suppressing the majority of the Jewish population in Israel. He believed, for example, that Yemeni Jews had been better treated in Yemen than they were in Israel. (In fact, the Yemini Jews are considered the best security risks in Israel as a result of their memories of bad treatment in the Yemen.) The four or five students watching were mostly Palestinians, and all agreed that they were unable to return to the West Bank to visit their parents; since their parents could not leave to visit them, they had not seen each other for 10 years. (America and Israeli sources agree that such students must be on a blacklist since such travel is otherwise permitted.)

Leaving the University, I made my way to the heavily guarded headquarters of the Palestinian Liberation Organization (P.L.O.). There I spent two hours in highly civilized conversation with Shafaq al-Hout, chief P.L.O. spokesman in Beirut (which is P.L.O. headquarters now).

Mr. al-Hout is a P.L.O. moderate. During the 24 hours that Arafat had waited before commenting on the Sadat mission, Syrian agents had, he said, put up posters attacking Arafat for wavering, thereby forcing Arafat to denounce the mission.

Mr. al-Hout described the P.L.O. position as follows: Palestine had been a well-defined entity in 1919, with 600,000 Palestinian Arabs and 46,000 Jews. The British did not have the right to give away what did not belong



Beirut: Open Air Shops Amidst Destruction

to them, so the Balfour Declaration was invalid. By 1948 only 6% of the land was owned by the Jews and the population was still $\frac{2}{3}$ Arab. The U.N. debate on partitioning Palestine had had no representative of the Palestinian people.

The Palestinians had lost their land and their identity. At first they had wanted a secular state and the destruction of the State of Israel. Later, from 1974 on, they would have settled for a return to the original partition, with the thought that Zionism was a declining movement. Now, it was evident, they would settle for a Palestinian State made of the West Bank and Gaza — only 23% of what had been Palestine. It was true that these changes in attitude were not reflected in the National Charter of the P.L.O.; the P.L.O. had a hell of a time maintaining consensus in what was a diverse revolutionary movement. And, anyway, Israel also had the same undefined character about its goal; the wall of the Knesset had inscribed upon it: "Israel: from the Nile to the Euphrates".

I heard this point often from Arabs. The P.L.O. literature quotes Ben Gurion as saying:

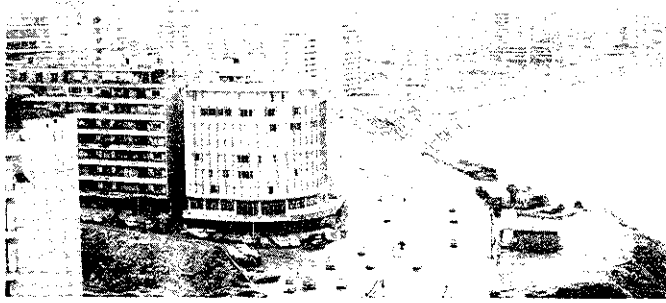
"The present map of Palestine was drawn by the British mandate. The Jewish people have another map which our youth and adults should strive to fulfill — from the Nile to the Euphrates".

But the P.L.O. gives no reference for the quote. An Israeli spokesman says they do not know this quotation. But he flatly denies the frequent assertion that the phrase "from the Nile to the Euphrates" is inscribed in the wall of the Knesset — or that any quotations at all are so inscribed. American officials confirm this.*

Mr. al-Hout spoke with feeling of the plight of the Palestinians. Only Jordan had given them citizenship. In the other countries, they were playing leading intellectual roles but often getting inferior pay and being replaced as quickly as circumstances permitted. Libya minus the Palestinians would be nothing. Aramco had been built on the shoulders of the Palestinians. Yet many Palestinian triumphs were hidden.

The conservative Arab states feared the radicalization

*The phrase evidently springs from Genesis, where the Lord tells Abraham that his descendants will have the land "from the river of Egypt to the river Euphrates". But the "river of Egypt" evidently meant the Wadi El Arish, a river close to the 1967 Sinai boundary, and for this reason contemporary Bibles translate the phrase as the land "from the border of Egypt to the river Euphrates".



Beirut on Mediterranean

Continued from page 7

of the Arab world, and the mere existence of the Palestinians in an unsettled condition was a threat to them — “walking dynamite”. All the Arab regimes were “fed up with the Palestinians”.

The third dimension of the Palestinians, as with the Jews, was their propensity to education. They would be able to make a real State of the West Bank and Gaza. (Mr. al-Hout obviously believed that Jordan would, in due course, be part of a Palestinian state.) But, in any case, he noted that the Israeli Secretary of Agriculture had had plans to settle 2,000,000 Jews on the West Bank and hence it was as plausible that the Arabs could settle there in large numbers.

Mr. al-Hout felt that the U.S. government wanted to keep Israel as a source of tension so as to preclude Arab unity and so as to sell arms; hence he questioned the sincerity of U.S. desires to settle the conflict. I suggested that the President's recent effort to bring the Soviets into the solution was a vouchsafe of sincerity, since it could have had no other domestic or international political justification except as a way of ensuring that any settlement would stay settled. He did accept the President's sincerity, but he also questioned the relevance of sincerity in political matters; his own experience in taking unpleasant actions had persuaded him that sincerity was of limited significance in policy determination.

That afternoon, I toured the open air bazaars that replace the bombed-out stores and saw the anti-Sadat posters. For the Arab Middle East, the bookstores are an intellectual oasis. That evening there was more gunfire.

At 7:30 the next morning, I left Beirut in a taxi bound for Damascus with four Syrian passengers. This was the only part of the trip reputed to be dangerous. But the main problem that day was the weather; the road was said to be open but in fact was only barely so. A high ridge which is intermittently closed due to snow, must be crossed. A large truck had turned over, blocking one lane and, with one delay and another, it took six rather than two hours to reach the capital of Syria. At the border, a grey fog began. And a Syrian border guard shook down my driver for some bread (literally, bread!). Syria seemed even more heavily guarded than Beirut, and we were stopped about three more times during the hour's drive within Syria. Young boys and girls are often in military dress. As I arrived in Damascus, a four-hour anti-

Sadat demonstration involving 500,000 people had just ended.

By moving fast, I was able to leave my card at the Syrian Foreign Ministry just before it closed at 2:30, and to leave another card for the American Ambassador, Mr. Richard Murphy. In due course, the latter called and invited me to dinner followed by a movie on W. C. Fields, attended by some of his Syrian friends, and interrupted by American community Christmas carolers.

Earlier that afternoon, my complaints to a Syrian that I had missed the demonstration had induced an invitation to visit his home and see the late evening news broadcast. Returning at 11:00 p.m. from the Ambassador's residence, I therefore went to this modest home and was received with tea and cookies. The host was a Lebanese who had become Syrian when his industry was nationalized; only Syrian nationals can work for the Government. The television played dirge music while the demonstrators marched; an attractive woman announcer showed sadness while reporting on Sadat's actions.

Outside my window the next morning, there were drilling, marching and calisthenics on the otherwise deserted grounds of the Damascus fair. (The Syrian Constitution says: “Physical education is a basic factor in building up society. It shall be encouraged by the state in order to bring up a generation, strong in body, character and thought.”)

Syria

Before 1970, Syria had symbolized instability, but with the seizure of power by President Hafiz al-Assad, there had been an unprecedented seven-year period of stability. Despite the fact that Assad was a member of the 12% minority Alawi sect, and had installed fellow Alawi military officers in central positions, he had been able to cultivate a certain amount of support from the Sunni Moslem majority and from the Druse and Christians. Notwithstanding the recent stability, Syria is not a country in which people speak freely about politics. The Syrian Embassy in Washington had cautioned me that I might find no one in Syria willing to discuss political questions — as opposed to scientific and economic ones. Despite the fact that I was bearing a very warm letter of endorsement from America's only Senator of Arab origin, Senator James Abourezk, that Embassy had done nothing for me. Because the political situation there is tense, a few interviews have been omitted entirely and statements resulting from others have not been attributed directly.

The Foreign Ministry

I met in midday with the head of the Foreign Ministry's American desk, Hamud Al-Shufi. He is a brilliant man who had formerly been deputy secretary general of the ruling Bathist party but had been drummed out for his independent views. Mr. Al Shufi and I talked for an hour, during which I came to realize that Syria had considerable potential materially and spiritually. He defended Syrian positions loyally but seemed uncomfortable at times.

An effort to meet with the ruling Bath Party failed when it insisted that the Foreign Ministry make the request. The Ministry suggested that the American Embassy do so. The American Embassy, in turn, revealed that the Bath Party had been unwilling to receive even our Ambassador, much less our political officers. I complained

—Continued on page 9

Continued from page 8

in broken French to the Chief of Protocol of the Foreign Ministry and he received my complaint in a mature and amused fashion. I felt, throughout the dealings with the Foreign Ministry, that it was wholly westernized in approach and quite relaxed in style, sending me from one office to another without escorts and so on. But the Baath Party itself was born in conspiracy and is locked in bitter struggle with its Baath counterpart in Iraq. It sees itself as a revolutionary center with underground revolutionary movements in other Arab states. Significantly, it has a "national command" and a "regional command"; the former refers to the pan-Arab area and the "regional" command deals only with purely Syrian matters. It has 20,000 members (one inhabitant in about 400) placed within all important local and national groups, (much as the Communist Party in the Soviet Union infiltrates domestic life so as to control it.)

I met the next day with the Minister of Economics, the western-trained Dr. M. Imadi. He observed that many of the Ministers, especially the ones that bring technical expertise, were not even in the Baath Party. The readiness of the government to open toward the West was reflected in the fact that he was even married to an American.

I reread a number of books on Syria and an important interview President Assad had given the *New York Times* on August 29. He was not giving explicit support to a Palestinian state. It was obvious that Syria had little interest in creating new Arab states; its constitution put Arab unity first and foremost. Indeed, since Syria considered Palestine to be part of greater Syria, it probably had, in certain romantic intellectual quarters, its own designs on Palestine. In the interview, after noting that Arab unity came first, Mr. Assad said that perhaps the Arabs would "have to fight each other to create Arab unity — just as you did in the United States". He went on to say that a failure in Geneva would not be an unalloyed evil, since greater cohesion of the Arab states would result.

Despite these views, Assad was considered by the Americans, Israeli observers, experienced Jordanians, and many others, as a force for normalcy, balance and reason in Syria. He had softened the nationalization measures installed by Nasser during the brief period of Syrian-Egyptian merger. Recently he had even arrested a number of persons for corruption.

However, the persons arrested were released, some said without even being questioned. The brother of one such detained businessman had fallen to his death from a window during his brother's arrest. The street rumor suggested that it had been a case of defenestration induced by his quiet threat to tell all he knew about his arrested brother's links to corruption in embarrassingly high places. (The detained brother having been released, I called to get his side of this story, but found that he had left the country for parts unknown.)

I interviewed three Americans on the AID program. Syria has a \$700-\$800 per capita income, a literacy rate of 40% and an average life expectancy of 54. Inflation last year was between 19% and 26%. The U.S. program of aid to Syria of about \$80 million was initiated by Henry Kissinger as a way of weaning the Syrians away from their reliance upon the Soviets. The AID mis-

sion has trouble spending the money because of the slowness with which the Syrian bureaucracy reacts. Thus far, Syria has received about \$370 million. In fact, in order to spend the money the AID program must get an exception to the normal Congressional ban upon building roads abroad. There is no AID sign on the building (the landlord made this a condition) and little or no publicity in the paper about our assistance.

Syria is a country with much economic potential. There is an active and well-developed middle class of entrepreneurs and a great deal of available capital. The real problem is that socialistic measures insisted upon by the Baath Party cast a shroud over the always-fragile flower of business confidence.

The official five-year plan calls for:

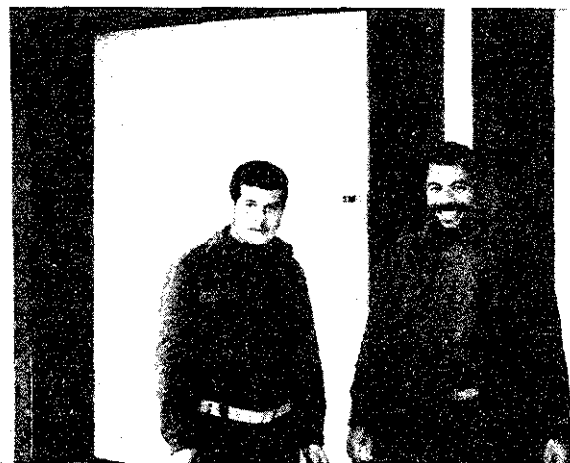
"Gradual and optional replacement of the individual form of exploitation by a cooperative form in the agricultural, professional, housing, internal commerce and transport fields, in rates higher than previous ones".

(But one Syrian official said: "You have more socialism in America than we have here. It is simply a romantic slogan that confuses the masses.")

The original nationalization acts of 1963-65 led the private sector to smuggle out of Syria sums estimated at \$1 billion, or enough to build the Euphrates Dam — Syria's biggest project, now funded by the Soviet Union. The anti-corruption campaign had further alarmed the businessman although, paradoxically, it had not really done anything about corruption. One well-informed observer called Syria the most corrupt government in the developing world. An economist said that the U.S. aid program was subsidizing inefficiency since the Syrians could, by liberalizing the regime, provide themselves with that much more investment without difficulty. As it was, the money flowed out to Lebanon. Another said that the low-paid government employees could not efficiently manage the private sector projects they took over.

Apparently President Assad is willing to assure the private sector that certain specific areas will not be nationalized, but he is unwilling to comply with the request of investors that these assurances be written into law. This, evidently, would require him to confront directly the ideological position of the Baath which had enshrined socialism. For the same reason, periodic instructions are given

—Continued on page 10



Two Syrian Soldiers



A Syrian Mosque

Continued from page 9

to the authorities not to indict recent violators of currency restrictions, but the restrictions themselves cannot be suitably modified lest open political war break out.

One official observed that President Assad is very much in charge politically and can dictate the policies he wants to the Ba'ath. But he must decide which fights he wants to pick. And here he is pragmatic, and uninterested in wasting political capital.

The main problems, as described by the Minister of Economics, lie in the Euphrates Dam project. This dam is the keystone in achieving the agricultural advance crucial for Syria. By 1980, 240,000 of a total of 600,000 hectares are scheduled to be irrigated. But so far only 17,000 have been, and the program is far behind. There have been a number of problems. In particular, the gypsum that underlies the irrigation ditches is melted by the inevitable minor leaks in the canals and then falls away, leading to enormous holes in the bottom of the canal. Furthermore, a bad salination problem exists.

More generally, Syria needs a comprehensive survey of resources — and also advice on how to use them. For example, its iron ore has titanium impurities. How best to smelt such ore? Another basic problem is enhancing human resources with suitable training.

A brief visit to the U.S. cultural center uncovered the fact that the center had just opened after a delay of many months while awaiting Syrian Government permission. (Everything, I was told, took a long time in Syria.) Some fear that Syrians may be reluctant to come; one security specialist suggested that such contacts might be put in the Syrians' dossiers. But the Center hopes, with a low profile, to develop a limited clientele of interested young Syrians. It was just putting out its tendrils. Since the Embassy was just about to have its Christmas party at the cultural center, I stayed and interviewed a number of American officials.

Apparently the authorities have relaxed in their dealings with Americans recently. Where hand-delivered messages used to be necessary to get appointments, now information could even be secured over the phone. The Ambassador, Mr. Murphy, is being looked after with cautious security measures. His chief Syrian security officer had not slept for a couple of days so as to keep his ear to the ground, following the turmoil of the anti-Sadat demonstrations in Syria and elsewhere at which the U.S. had been roundly criticized. (Two American AID officials

had had to leave their residence because it was above the Egyptian Embassy which had twice been bombed.) Our Ambassador accepts these dangers with grace but obviously wonders if he will return home in one piece. His counterpart in Lebanon was assassinated during the civil war.

American officials agreed that there was no popular unfriendliness, but there was much saying of "yes" with nothing happening.

The evening *Jordan Times* described Begin's proposal as "Nice Try, Try Again". At the top of the paper, a box noted a charge by a P.L.O. second-in-command that his family in Cairo was being held hostage. (The same P.L.O. official had referred publicly the day before to the threat of assassination if Egypt preceded with a separate peace.)

After a morning interview with a friendly but determinedly noncommittal Syrian science official, I heard a Moslem barber from Lebanon complain that life was too dull, and the variable prices and bargaining tedious. Young women were not permitted to go out with young men, and there was nothing to read. After the civil war in Lebanon, prices in Syria had become higher than in Lebanon; the price of alcohol was out of sight.

Amman, Jordan

I took the bus to Amman (cost, \$5) where next morning it was the kind of day the Jordanians love, with a hard rain that would help the water table. Jordan seems almost as westernized as Lebanon and things move fast. By 12:00 that morning, I had interviewed the Minister of Information for an hour, talked at length with the American Ambassador, Mr. Thomas Pickering, and, with his help, arranged an appointment with Crown Prince Hassan for 6:00 p.m. After talking to some other American diplomats, an English-speaking driver who gave me a tour, and a Jordanian scientist, I reached these tentative conclusions.

In the first place, Jordan is more secure than one expects. Although the population is 60% Palestinian, many of the Palestinians had moved here 30 years ago, after the 1948 war, and were loyal to the King. They had done well in Jordan and had been given citizenship and good and equal treatment. Even the Palestinians in the camps were living better than the rural Jordanians. With free education and care, they had a high propensity to save. Some people living in the camps even owned and rented out buildings in Amman, staying in the camps partly in the expectation of an eventual financial settlement. One Palestinian observer estimated that only 10% of the Palestinians in the camps would return to the West Bank. (But this depends upon the terms of the final arrangement.)

As far as Jordanian politics was concerned, it was felt that Sadat had reversed the longstanding Arab position which put a peace treaty first, and normalization of relations second. The Arab rejectionists were making the mistake of judging the new process by the old standard, rather than assessing the new context created. But the Minister of Information felt that the Israeli proposal was designed to "regulate occupation rather than to terminate it". Still, a bargaining process was going on. One Jordanian expectation for an optimal realistic outcome was that there would be a Palestinian entity federated with (rather than absorbed by) Jordan. The preference for

—Continued on page 11

Continued from page 10

a marriage between the Palestinian entity and Jordan was based on a statesmen-like assessment that the Palestinians had suffered too much to be denied a land they could call their own. There would be no Jewish settlements on the West Bank (which would only be reminders of a past defeat), and Jerusalem would be an open city divided in sovereignty.

My driver said that Jordan was the cleanest country in the Mideast — as a truck driver, he had been to them all. He complained that, as in Saudi Arabia, it was impossible to find prostitutes in Jordan, although they could be located elsewhere, even in Syria. Driving had been a good career before World War II, when a driver could get a good wife even from a gentle family. Today driving had little status although it was still paid more (100 dinars, or \$300 per month) than teachers (\$80 dinars, or \$240 per month). Both the King and the Crown Prince *had done a great deal for the country*, and this Palestinian spoke of them with sincere affection and regard.

Crown Prince Hassan

At 6 p.m., after a tour of the town, I was driven by a security guard into the Crown Prince's heavily guarded palace. There Dr. Sultan Lufti, a staff economist, provided me with an interesting lecture, complete with charts, on economic development. King Hussein's main responsibility, naturally, is defense and foreign policy. He therefore delegates a primary role in social and economic development to his 31-year-old younger brother, Prince Hassan. As a result, the Prince's palace is well supplied with data. The Prince is widely credited with a leading catalytic role in the recent successful three-year development plan.

Mideast oil prices had been raised, of course, in 1973. The resultant wave of higher incomes reached the oil-producing countries in 1974, and the subsequent inflationary wave had reached Jordan in 1975 with 20% inflation. Highly trained Jordanian manpower was being siphoned off into oil-rich countries in even greater measure than before to assist Arab development programs.

Jordan is working to develop dams on the Yarmuk River with which to exploit the Jordan Valley and to build up potash production in the Dead Sea. It wants to map its mineral and water resources and to build roads. It wants to expand port facilities in the Gulf of Aqaba and to develop the Wadi Araba region, a valley between the Gulf and the Dead Sea. Like the Gulf, this valley is shared by Israel and Jordan and could be developed jointly.

Evidently, West Bank incomes had increased under the Israeli rule but there was not much new development for Arabs, and the West Bank had been treated much like a colony. If the West Bank were reunited with Jordan, it would turn out to be a drag on the Jordanian economy. Population pressure was serious, with 50% of the population under 15. (One family with 13 children could nullify all the efforts of many other educated families to keep down their family size.)

In its size and disposition, Jordan seemed to me ripe for development, especially if peace comes. Jordan's economy was the most dislocated and burdened by the establishment of the State of Israel and the resultant wars. Its natural economic outlets to the sea lie in Israel, and Israel is its

natural partner in developing the Jordan Valley, in using the Gulf of Aqaba, in mining the dead Sea, and so on. Nothing would be more useful in institutionalizing peace than to strengthen these critical ties as part of improving the standard of living in the area. We could encourage not only the projects that require noninterference (e.g. mining the Dead Sea for potash side by side) but also those that need active cooperation (e.g. joint port facilities in Aqaba).

At about 7:30, His Highness Prince Hassan arrived. He had wasted two hours at the airport waiting for a late plane because he had thought it would be a nice gesture to greet some group that had helped Jordan. He had been working, his aide advised me, since early that morning but seemed undaunted and settled down to talk to me.

Gesturing at the charts, he spoke rapidly, in a clipped English style, using phrases and references that presupposed a more intimate familiarity with the situation than I possessed. When I slowed him down from time to time, I found it all well formulated and interesting. Prince Hassan has the demeanor of a senior executive of a major corporation, well versed in its problems and completely confident in his ability to master its details and negotiate its problems.

Hovering over all Crown Princes everywhere is, of course, the question: "Could he manage the Kingdom?" It is entirely possible that this one could.

When he realized that I was planning to leave at 3 a.m. for America, after only one day in his Kingdom, he looked me right in the eye and announced that I had "short-changed Jordan". When it was evident that I could not change my plans, he suggested a number of ways I could rectify the situation. In particular, he observed that the Conference on the Scientific and Technological Development of Jordan would take place on February 18 and invited me to return. I found him quite likeable. And I began to see how Jordan had maintained itself in the shifting Middle East seas: good judgment and aggressive management.

In order to fully exploit my remaining time, the Prince picked up the phone and simply advised the Director of his Royal Scientific Society that "I have work for you", which was to dine with me and discuss common problems, which we did, until I left. □ —Jeremy J. Stone

UNIQUE MEETING OF SOVIET AND EASTERN EUROPEAN DISSIDENT SCIENTISTS

Soviet authorities have been following, in recent years, the shrewd policy of letting the most troublesome scientists emigrate, whether they were Jewish refusenik scientists or dissidents. These protesting voices have, in effect, been silenced by their departure. Dissidence inside Russia is so rare, dramatic, and poignant, that its occurrence there resonates through the Western press in a way that outside protest cannot.

Some of these emigrés met in December in Venice at a symposium on "The Freedom of Science — Science and Scientists in Eastern Europe".

There was, for example, Zhores Medvedev, the exiled biochemist, whose twin Roy is still writing dissident history in Moscow, and who had himself written a half dozen books on dissident problems. There was recently released

—Continued on page 12

MEETING OF DISSIDENT SCIENTISTS

Continued from page 11

Valentin Turchin, physicist turned computer linguist, who had lost his position for four years for defending Andrei Sakharov by letter. During this time Turchin had chaired the Moscow section of Amnesty International and defended his dissident colleagues. There was the mathematician, Leonid Plyushch, still showing the deep emotional ravages of the brutalizing treatment he received in his notorious and prolonged confinement in KGB psychiatric wards. There was Aleksandr Voronel who had started the parlor-based scientific seminars with which the blacklisted refusenik scientists tried to maintain their technical skills while awaiting visas for Israel. There were the young Chudnovsky brothers, whose super mathematical skills were eagerly awaited by the American mathematical community and whose family had been repeatedly beaten by anti-Semites after their request to emigrate, and so on.

The organizer of the symposium, Czech emigré physicist Frantisek Janouch opened by observing that, "American scientists are unable to conceive of the real working conditions in Eastern Europe for scientists". The "old Bolshevik", Arnost Kolman, eighty years of age, recounted, without sparing himself, the tribulations of science brought on by formulations of Marx, personal attitudes of Lenin, and actions of Stalin. He said the "fetishization" of the party had misdirected the energies not only of careerists, but also of those who acted with misplaced conviction. Admitting his own early errors, he recounted his struggle to permit cybernetics to be discussed in the Soviet Union, and concluded that science would be free only when socialism had a human face.

Mel'chuk, the linguist, whose plight consisted largely of writing the *New York Times* op-ed page in defense of biologist Kovalev, said the problem was the widespread acceptance of immorality. Janouch described the post-'69 methods by which the Czech authorities had put a leash on science. One Institute had come to have a director who said "I would fire even Einstein if his political views were not O.K."

Plyushch observed that scientists found themselves in the forefront of the struggle for freedom because they became useful to society before their independence of mind was known. Political scientists, by contrast, were

normally squelched early when their political attitudes inevitably became known through their political analyses.

He complained about the militarization of science in which everything from agriculture to E.S.P. was examined for military advantages — the level of science often being so crude as to involve suggestions of "duplicating U.F.O. behavior so as to study U.F.O.s".

Voronel warned, however, that children are born even from rape. The Soviet scientific world had an inner life, as in the West, and it did make progress. Anti-Semitism was now more open, and a drive was underway to lower the percentage of Jews in the intellectual world to their level in the population.

A Rube Goldberg chart was displayed by one emigré showing the insanely long and complicated route required for approval of an exchange of information between Western and Soviet scientists. The review was such that a man lost his job after receiving a letter with the innocuous phrase, "We thank you for your kind words"; he was accused of having links to the West.

People used to "Not Thinking"

Turchin, now in America, said the basic trouble was that after 60 years of repression people had gotten used "not to think". He himself was astonished to realize that Westerners had free access to photocopying — in the Soviet Union printing facilities of all kinds are tightly guarded.

Medvedev called the verbal contribution of the Chodnovskys' vulgar and a provocation; they responded that this characterization showed his Soviet turn of mind. One was reminded that the dissidents are as variegated in their views and characteristics as Russian dissidents have been for centuries.

A Czech scientist observed that plagiarism became inevitable in his country because the real authors were often on a list of banned scientists and their names could not be referred to. A Romanian scientist said that his country was, nevertheless, the worst. It featured even such Chinese-like repressions as prohibiting a woman from achieving a Ph.D. because her father had owned land in Romania before World War II!

FAS's Director was the only American in attendance. He urged the symposium to give somewhat more thought to the "second front" of motivating the Western scientists to defend their colleagues. □

FAS PUBLIC INTEREST REPORT (202) 546-3300

307 Mass. Ave., N.E., Washington, D.C. 20002

Return Postage Guaranteed

February, 1978, Vol. 31, No. 2

Second Class Postage

Paid at

Washington, D. C.

I wish to renew membership for the calendar year 1978.

I wish to join FAS and receive the newsletter as a full member.

Enclosed is my check for 1978 calendar year dues. (I am not a natural or social scientist, lawyer, doctor or engineer, but wish to become a non-voting associate member.)

\$20 Member \$50 Supporting \$100 Patron \$500 Life \$10 Under \$10,000

Subscription only: I do not wish to become a member but would like a subscription to:

FAS Public Interest Report — \$20 for calendar year

Enclosed is my tax deductible contribution of _____ to the FAS Fund.

NAME AND TITLE _____
Please Print

ADDRESS _____

CITY AND STATE _____ Zip _____

PRIMARY PROFESSIONAL DISCIPLINE: _____