

NEAR EAST COOPERATION IN
SCIENCE AND TECHNOLOGY

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PREFACE

As originally conceived, this report undertook to be an Overview of Mid-East Science and Technology, focused primarily on Israel and its immediate neighbors. In the process of organizing the research effort, this rapidly evolved into an examination of the process by which S & T cooperation might be initiated between Egypt and Israel and secondarily, between Jordan and Israel. Limitations of time and the reality of the current political scene made it necessary to forego an examination of the development of cooperative relations between Syria and Israel and Lebanon and Israel.

Less than two months were available for the research and preparation of this report; two weeks of this time were spent in the Middle East. Much more time than that could profitably have been spent in the Middle East. One consequence of the time constraint is that the report is more impressionistic than definitive. Nevertheless, the author has substantial confidence in the findings of this report because the insights and understandings acquired in the course of interviews with local persons were supplemented and supported by the knowledgeable and experienced long-time observers of the local scenes in the United States embassies in the countries visited. Furthermore, the excellent support in scheduling appointments made by the embassies in Cairo and Amman, and by the Ministry of Energy in Israel made possible maximum productive use of the field time. As a consequence, the coverage in every country visited was comprehensive though not as deep as might have been preferred.

The coverage was heavily concentrated on senior government officials and members of the academic communities. Notably lacking were contacts with

the business and banking sector, which are very likely to be deeply involved in any long-term transfer of industrial technology between Israel and its neighbors.

In the conduct of this project, it was decided to forego any effort to provide definitions of the terms "cooperation", "science", or "technology". That did not seem to be in this instance very germane to the intent of the overall study. Insofar as science and technology are concerned, the study proceeded on the basis of the popular broadly encompassing perception that science is the search for basic knowledge, and technology is the application of that knowledge to human use.

Cooperation frequently connotes an equality of capability, a connotation felt to be unnecessarily restricting in the context of Israeli S & T relations with Egypt or Jordan. In that context a better term would have been "interaction", which is less precise yet could still retain the ingredient of mutual benefit. In a discussion with an Israeli government official who enquired as to what the United States meant by "cooperation", it was agreed that the concept of "reciprocal relations" would serve well. Nevertheless, primarily because it is the customary term, this report utilizes the term "cooperation" to designate the relationship it is discussing.

The author wishes to express his appreciation to Addison Richmond, Scientific and Technological Attache at the U. S. Embassy in Cairo. His deep knowledge of the Egyptian S & T scene and his close relations with the senior personalities in that community made possible highly efficient and effective use of the time spent in field investigation in Egypt. His expertise and that of the senior Embassy staff which were so generously

proferred, greatly enriched the investigative process.

Similarly, gratitude is expressed to Nathan Arad, Director General of the National Energy Authority, and Mr. Amie Ben-Bassat, Special Assistant to the Director General of the Energy Ministry for the assistance in scheduling and transportation provided in Israel. Again, the support provided meant that excellent use was made of the limited time available in Israel.

Various officials of the U.S. Embassy in Amman and especially Ambassador Nicholas Veliotis were very helpful in supporting the visit to Amman.

Mrs. Sally Ann Baynard, a graduate student at George Washington University served as research assistant in the preparation of this report. Her excellent ability to ferret out materials and information and her highly developed analytical capabilities resulted in major contributions to the effort as a whole. In addition, she wrote the section on Middle East Regional Cooperation and prepared the Bibliography at Appendix 1 and the Tables at Appendix 3. Finally, a word of appreciation to Mrs. Lucie E. Raymond, secretarial assistant, whose ability to decipher illegible handwriting and noisy confused tapes is unsurpassed.

GENERAL PERSPECTIVE^{1/}

There are many commonalities among Israel, Egypt and Jordan that bear on future cooperation among them. Among the most obvious, they share borders which will make necessary common health measures. In each case the need to use desert and semi-arid areas for agriculture and human settlement places a premium on enhancing water resources and management and on appropriate agriculture. Each is ambitious to modernize and industrialize its economy. A high value is placed in each country on higher education and on the development of internal scientific and technical capabilities.

On the other hand, the differences loom large in considering the development of cooperative S & T relations between Israel and its neighbors.

- There are 30 years of warfare and incessant hostility to take into account.
- Israel is essentially a western state, in orientation and philosophy; Egypt and Jordan are Middle East Arab States. 2/
- Egypt's population is larger than Israel's or Jordan's by an order of magnitude; 40 million to 3.6 and 2.8 respectively.
- Israel is both absolutely and proportionally more heavily industrialized than Egypt or Jordan.
- 84% of Israel's population is urban compared to 48% and 56% for Egypt and Jordan (1975).

1/ This report deals primarily with S & T relations between Israel and two of its neighbors - Egypt and Jordan. To simplify the presentation, unless otherwise specified the comments in the paper relate to Egypt only.

2/ In Egypt, one frequently encounters statements indicating that some Egyptians view their Arabness with a bit of skepticism, and allude instead to their pharonic heritage.

--Life expectancy in Israel is 71 years, Egypt 54 years and Jordan 53 years (1975)

--Israeli universities such as Hebrew University, Weizman Institute and Technion are of world stature in science and technology; nothing comparable is to be found in Egypt or Jordan.

--Israel is economically, technologically and culturally (by Western standards) considerably more advanced than Egypt or Jordan.

Except in isolated fields the participants will not be on an equal footing when cooperation is initiated. While it will be both appropriate and necessary to ensure that benefits of cooperation are mutual, it will be desirable to be flexible in approaching the definition and measurement of benefits. Equivalent technical returns will be possible only in a few instances; even less frequent will be technical benefit in Israel's favor. However, both countries may value the political return from interaction among its S & T communities. In some cases value will be attached to access to geographic locales (e.g. archeology), to data (geologic) or to subjects of research (e.g. bilharzia). All of these, and others, can, if the accounting is not too literal, be taken into account in the benefit equation.

Moreover, the role of third parties in initiating cooperation seems destined to be large. In that case, the financial support supplied by the third party, the general advancement of science or the development of technology may well provide sufficient benefit to the other participants to serve the need of mutuality.

A major existing constraint in Israel and in Egypt in thinking about future cooperation is the very substantial ignorance in each country about the other's civil economy, educational institutions, culture, and S & T infrastructure and leadership. This is not surprising given isolation of over 30 years duration and studied separation when together on neutral

grounds such as at international scientific meetings. The several instances in which the barriers were broken on neutral grounds are principally notable for their rarity.

Egypt anticipates continued financial support from the Gulf States following completion of a Peace Treaty. In its peacetime approach to Israel, Egypt will have to keep a keen eye on the Arab nations in the Middle East whose support it will wish to retain and who do not subscribe to the Egyptian approach to a peace settlement with Israel.

Egypt will also continue to receive substantial financial support and technical assistance from the West. It is not readily apparent that she will, or why she should, turn to Israel rather than to the United States and Western European nations for S & T cooperation or technical assistance.

In the best of circumstances, cooperation among nations does not come about easily, nor does it often flourish even when there is a long history of friendly relations in the background. Nation level cooperation is almost always politically motivated and is usually carried on with an eye on the political impact. Cooperation among scientists is another matter and frequently flourishes very well indeed and with little regard for sovereign sensibilities.

The tradition of warfare and enmity which characterizes the relations of Israel and its neighbors, together with other factors discussed above, suggests quite strongly that the development of cooperative relations in science and technology between Israel and its neighbors will proceed tentatively and at a measured pace, at least for the first year or two following peace.

Over the longer term there is to be faced the interesting question of Israel's relation to the mechanisms for inter-Arab cooperation which have been launched or discussed and planned primarily this decade. Political differences, lack of infrastructure, and lack of organizational capacity have handicapped this effort severely. Until such time as a general political settlement is arrived at in the Middle East there is little likelihood, if any at all, that any relationship on the part of Israel to regional Arab activities will be possible

The subject of Arab regional cooperation is taken up in the next section.

MIDDLE EAST REGIONAL COOPERATION

Middle East Regional Cooperation is effectively Arab State cooperation, since for the past 30 years Israel has been isolated from its Arab neighbors by war and political and economic boycotts. Inter-Arab contact in the areas of development, development finance, science and technology occurs through a multitude of organizations which operate at the regional and international - as well as the bilateral - level. Although these institutions collaborate and there is a continuing pattern of communication and contact among Arab science, technology and development personnel, there is a marked scarcity of regional cooperative projects.

Regional

The two major foci of Arab interaction on the regional level have been the Arab League (and its specialized agencies) and the regional multinational development finance institutions, primarily the Arab Fund for Economic and Social Development (Arab Fund).

In the years since its formation in 1945, the Arab League has established over twenty specialized agencies, including the Industrial Center for the Arab States (IDCAS), the aforementioned Arab Fund, the Arab Center for the Study of Arid Zones and Dry Lands, and the Arab League Educational, Scientific and Cultural Organization (ALECSO). ALECSO has played a key role in the organization of inter-Arab meetings, studies and publications, and, with UNESCO, was the coordinator of the 1976 meeting in Rabat of the Conference of Arab Ministers Responsible for the Application of Science and Technology to Development (CASTARAB).

As for the regional financing, the mandate of the Arab Fund places a high priority on the promotion and funding of Arab regional projects, although very few have as yet been proposed. However, two significant projects with a regional focus have been launched by the Arab Fund within the past several years. The first of these, the "Program for Identifying and Preparing Inter-Country Investment Projects and Related Feasibility Studies", a joint program with the United Nations Development Program, is specifically designed to foster inter-Arab projects, and to promote collaboration with other regional and international organizations. The preparation of feasibility studies for joint projects in a wide variety of fields to be developed into proposals to be financed by the Arab Fund itself or by other financial organizations is already under way. Among the ten studies now in progress are two on an inter-Arab telecommunications link, as well as other studies concerned with maritime transport, a passenger airlines reservation system, a regional natural resources survey, and a study of agricultural machinery and equipment in the Arab world.

The other regional program sponsored by the Arab Fund with interesting implications for the future of inter-Arab cooperation is the "Basic Program for the Development of the Agricultural Sector in the Democratic Republic of the Sudan, 1976-85-2000." This program is designed to pool Arab financial resources to exploit the vast agricultural potential of the Sudan on a long-term basis to provide food products for the entire Arab world.

Other organizations which provide frameworks for inter-Arab contact on the regional level include the Arab Scientific Union and the Federation of Arab Engineers (both formed in the 1950's), the Union of Arab Universities and the Union of Arab Research Councils (formed in the 1960's and 1975, respectively). Arab multinational investment institutions, such as the

Arab Investment Company and the Arab International Bank (established in 1974 and 1972, respectively) are active in development finance in the region.

International

On the international level, it has been the specialized agencies of the United Nations which have played the strongest role in the promotion and implementation of regional projects. The United Nations Educational, Scientific and Cultural Organization (UNESCO) through its Regional Office for Science and Technology in the Arab States (ROSTAS), hold regional courses, seminars and workshops and conducts regional and sub-regional surveys. The United Nations Development Program (UNDP) is a major underwriter of the programs carried out regionally by other U.N. agencies. The U.N. Food and Agriculture Organization is conducting eighteen regional projects at present, far more than are sponsored and implemented by any other regional or international organization. These projects include work on the improvement of field food crops, olive production, date and palm production, land and water management and other projects related to food production. Most of the activities of other United Nations agencies are carried out on a national basis.

Bilateral

In addition to the activities of the regional and international organizations, much contact among Arab science, technology and development personnel occurs on a bilateral level. Unofficial inter-Arab cooperation takes place through private sector recruitment of scientific and technical personnel from one Arab country to another. Secondment of Arab scientists and educators dates back to the late 1930's when the first wave of establishing new Arab universities began and the movement of Arab teaching staff from one

country to the the Arab universities in another began. The large movement of professional staff, especially from Egypt and Jordan (primarily Palestinians), to other Arab institutions of higher learning and governmental posts, as well as the significant movement of students among Arab universities, have been going on for a number of years. Egypt is a major provider of such assistance, with some 3,000 teachers provided annually under government agreements to other, mainly Arab, countries. Engineers and other professionals are also provided.

The national development finance institutions of Kuwait, Abu Dhabi, Saudi Arabia and Iraq provide concessionary loans for development projects in other Arab States. Each has indicated an interest in promoting and funding regional projects, although, as with the Arab Fund, few have been proposed. Note should also be made of the activities of national investment companies (such as the Kuwait Investment Company and the Kuwait Foreign Trading, Contracting and Investment Company) which invest in projects in other Arab States. Although the activities of the national development finance institutions and the investment companies are growing the vast bulk of inter-Arab bilateral financial assistance is provided through direct government-to-government grants and loans. For example, the government of Saudi Arabia provided Egypt with over \$2 billion in direct bilateral concessionary assistance in 1973-1977, while disbursements to Egypt through the Saudi Fund for Development for the six projects which it helped to fund in 1975-1977 came to about \$226 million.

It is promising that three of the essential conditions for Arab regional cooperation exist: professed interest on the part of national governments and regional organizations, funds from national and regional development finance and investment institutions, and the beginnings of an institutional framework for cooperation. Despite this, Arab governments have not been quick

to propose specific regional projects. In addition to an understandable priority on national development projects, this may also be a reflection of internal bureaucratic inertia, a disinclination to enter into regional projects given the very volatile state of Arab politics, or an interest on the part of the oil-rich states in maintaining the close control that is more likely with bilateral than with regional projects. Interestingly, a high level of inter-institutional and personal contact among institutions concerned with science, technology and development has been maintained despite the numerous and bitter disputes that have marked inter-Arab politics for at least two decades. These inter-Arab contacts, along with the continuing exchange of students and educators, represent a potentially cohesive force in science and technology in the Arab world.

Despite the proliferation of meetings, conferences and studies carried out on a regional basis, there has been a dearth of actual cooperative projects. Several reasons have been proposed for this lack of progress in Arab science and technology cooperation. At the Conference on Science and Technology in Jordan in February of 1978, the Assistant Director-General of ALECSO, Dr. O. A. El-Kholy, suggested that Arab decision-makers have failed to grasp the kind of contribution that science and technology can make to development and that the Arab scientific community in the past may have failed to prepare and select regional projects with sufficient care. He noted that, despite the emergence of national science policy-making bodies and national research centers, these units were unsuccessful in most Arab States in integrating their activities with national development planning efforts. According to El-Kholy, Arab States are in either one of two stages of development: virtually complete reliance on imported science or haphazard continuing growth, with a splintering of the scientific community into small enclaves of different specializations, isolated from one another.

In a 1978 study of trilateral cooperation published by the Development Centre of the Organization for Economic Cooperation and Development, Traute Scharf suggested that the problems which have been involved in joint, regional and trilateral projects in the Arab world have included: scarcity of qualified personnel for project identification, promotion and evaluation; the desire of national governments to realize important projects so quickly that planning mistakes are made; problems of integrated coordination between suppliers of equipment, foreign experts and local management; the continued need for national projects in most Arab countries; and the greater ease in appraising and financing national rather than regional projects. Furthermore, the regional and joint projects that have been undertaken may not have brought about the training and other development results expected, leading to frustration on the part of national governments and creation of some suspicion in regard to further joint projects. The Development Centre report noted that, although the operational styles, sectoral and geographic priorities of the Arab development finance institutions have varied, all have been - to a striking degree - project-oriented in their provision of concessionary assistance. The report also indicates that the increasing volume of Arab assistance in the future will ultimately necessitate the introduction of program lending, particularly in cases where there is substantial involvement of industrialized nations as well. In addition there will have to be a substantial streamlining and strengthening of national development finance institutions in the recipient states in order to absorb the additional funds and allocate them to the sectors with the greatest potential for development. The report concludes that the maximum potential for trilateral cooperation will have to be based on more innovative

forms of cooperation and more integrated approaches than the project approach which has prevailed until now.

A move in the direction of more program lending by the Arab development finance institutions to developing Arab States may result in a greater degree of regional integration in development planning, with a more substantial role for regional experts from the Arab funds in national development planning. Assistance from the industrialized nations is welcomed by the regional Arab funding organizations, who view their role as an addition to traditional Western assistance, not a replacement.

Current manifestations of interest in the regional application of science and technology to development in the Arab world include not only the two regional projects of the Arab Fund, but also the efforts by the U. N. Economic Commission for Western Asia (ECWA) to establish an Arab Center for the Transfer and Development of Technology, and the feasibility study for an Arab Fund for Scientific and Technological Development (one of the recommendations of the CASTARAB meeting).

Regional Arab cooperation in science and technology for development is still in its infancy. While the course and speed of its maturation are difficult to predict, certain key elements - interest, funds, and the beginnings of an institutional underpinning - are emerging and provide potential for future cooperation.

This entire pattern of relationships among the Middle East Arab States is of course developing entirely apart from Israel. A constructive connection between Israel and inter-Arab cooperation is not possible at this time nor is it in sight for the foreseeable future. It is likely, however, that U. S. support of and participation in Arab cooperation would be welcome. Should that come to pass, an eventual connection with Israel may be easier to establish.

COUNTRY PERSPECTIVES

Egypt

Interviews were conducted in Egypt with the Minister of Education, Culture and Scientific Research (who had previously been President of Cairo University), the Minister of Housing, the former Minister of Transport, Communications and Maritime Transport, the Under Secretaries in the Ministry of Scientific Research, the President of Alexandria University, other key members of the Egyptian scientific leadership, the U. S. Ambassador to Egypt and the senior officials of the U. S. Embassy. A list of those interviewed may be found at Appendix 2 . In several instances both in Egypt and in Jordan, it was felt desirable to put the interviews on a "Not for Attribution" basis in order to increase their productivity and candor. As a consequence, the memoranda prepared on each discussion are not appended to this report, but are available in the principal investigator's files at George Washington University to those who have a need to know.

It was the unanimous view of all those covered by the canvass in Egypt that contacts with the Israelis would not be practical until political clearance was available and that such political clearance would not be available until a political settlement was arrived at and ratified. The few instances in which Israeli and Egyptian scientists have discussed together matters of common interest at international meetings or on neutral university grounds are exceptional. They tend to prove the original point.

In general, it is clear that the coming of peace is anticipated with some eagerness and that the establishment of normal contacts

with the Israeli academic community is looked to favorably. The receptivity of the Egyptian scientific community to relationships with their Israeli counterparts is, on the whole, positive.

Nevertheless, apprehension is widely felt at the imbalance of Egyptian and Israeli scientific and technical resources and capabilities. There is a fear of the Israeli embrace, of domination by the great resources, capabilities, aggressiveness and better organization perceived to be the Israelis'.

Moreover, most of those interviewed pointed to the obvious fact that there is no reservoir of good will in Egypt toward Israel. Numerous Egyptian families have suffered war casualties. Over half of the Egyptian population, including the entire university student body, have never known a time in which there has not been a state of war with Israel. There is thus not only an underlying hostility toward Israel, but also a sense of awkwardness about the initial contacts with the Israelis. There is also a feeling that the older generation will be more understanding and sophisticated in their relations with individual Israelis than may be the younger generation whose hostility is seen as stronger and more emotional in content.

The standard advice offered to the United States is "Don't push". The Egyptian scientific community describes itself as to move slowly into the new relationship with Israel that de jure peace will presumably bring.

Several of those interviewed suggested that the initial contacts might best be made on a tourist basis, that is without formal invitation or institutional clearance. It was also frequently suggested that the initial contacts would best take the form of individual visits to attend seminars, conferences or meetings in each other's country. Anything more substantial

would be a matter for the future and would best be based on the understanding and confidence that will be created by the continuing process of normal human interaction of educated people pursuing the same interests.

Much more central, however, to the Egyptian approach was the high universal recommendation calling for the United States to be a third party to cooperative activities or to anything more substantial than a tourist visit or attendance at an international meeting held in either country. It was usually proposed that the United States finance an S & T project in both Egypt and Israel and that a meeting of the principal participants be held in the United States at an appropriate sponsoring institution to discuss the research protocol and administrative arrangements, or to present papers on the subject itself. It was suggested that the interaction between Egyptian and Israeli counterparts that would take place at one or two such meetings might well lead to direct Israeli-Egyptian cooperative interaction without the necessity for continuing third party match-making. This formulation was presented so frequently as to strongly suggest that the question had been discussed at least informally among the Egyptian scientific and technical leadership.

Several of the more influential of those interviewed admonished that the meetings sponsored by the United States not be for the purpose of identifying projects, but to pursue existing projects or newly defined projects directly and immediately relevant to Egyptian developmental goals. Several of the more influential Egyptians asserted that cooperation with Israel in and of itself was of little interest to Egypt. United States emphasis should be placed on activities beneficial to Egyptian development.

If cooperation with Israel were a by-product of such support, so much the better.

Jordan

In Jordan interviews were conducted with the Crown Prince, the President of the Royal Scientific Society, the Dean of Science at the University of Jordan, the Deputy Director of the National Planning Council, the President of the Jordan Valley Authority, and the Director of the Amman Chamber of Industry, as well as the Ambassador and other senior officials of the U.S. Embassy (see Appendix 2).

Given the current political climate in Jordan, it is not surprising that it is emphatically clearer in Jordan than in Egypt that cooperation with the Israelis is not a realistic possibility until there is a satisfactory political settlement between Jordan and Israel or one appears in sight. Antagonism toward Israel is both more freely spoken of and appears to run deeper in Jordan than in Egypt. A key factor to keep in mind in assessing the Jordanian situation is that many high policy level officials in Jordan are Palestinian. The President of the Royal Scientific Society and the Dean of Science at the University of Jordan are both Palestinian and both have families still in Israel or in territory under Israeli control.

The necessity, once a satisfactory political settlement is reached, for the development of working relationships with Israel seems to be assumed, although the idea is not viewed with equanimity in Jordan. Frequently encountered is the view that Israel would seek to return Jordan to a colonial status by use of superior technology and commercial capabilities. In the same breath, any Israeli superiority that may exist is attributed to access to Western capital and technology and not to any natural endowment. The sense of superiority perceived to be held by the Israelis is resented.

The Crown Prince as well as others stressed that any cooperation that might be considered in the future should deal with "real" problems. By this was meant that the cooperation should deal with the developmental needs of Jordan. This point is similar to the one emphasized so strongly in Egypt.

One outstanding characteristic of the scientific and technical scene in Jordan is the relative absence of an American presence. This is attributable in part to the lack of a P. L. 480 science program in Jordan and to the low priority accorded to Jordan's scientific and technological institutions by American governmental granting or lending agencies. This point was referred to by almost every Jordanian official from the Crown Prince down. Western Germany, France, England, Switzerland and others were referred to as benefactors. The question was raised as to why the United States could not play a comparable role.

Israel

Conversations were held in Israel with the Director-General of the National Energy Authority, the Acting Director of the National Council on Research and Development (NCRD), the Chief of the Macro Economic Planning Division of the Ministry of Finance, the Chief Scientist of the Ministry of Energy, the President of Tel Aviv University, the Chairman of the Peace Commission, and the Director of the Peace Project at Tel Aviv University, the Executive Secretary of the Truman Institute at Hebrew University, various Professors at Hebrew University and Tel Aviv University, the U.S. Ambassador to Israel and an Economic Officer on his staff (see Appendix 2).

The counterpart in Israel to the Egyptian slogan, "don't push" is "caution". There seemed to be universal recognition in Israel of the diffidence and hesitation on the part of the Egyptian scientific community with respect to the evolution of relations with Israel.

Among other concepts that appear to have wide acceptance in Israel were the need for each side to feel it is participating in activities under arrangements in which each voice will have equal weight; the project should be based on real needs and provide for quick results; to the extent possible, projects should be cooperative rather than technical assistance in nature; and there should be an overall balance of benefits within the same project, if possible, but in any case balance among the several projects.

Frequently enunciated was the desire to avoid becoming the "ugly Israeli". This point was illustrated in several ways. One spoke of the need to avoid projects in which the Israelis would end up as foremen and the Egyptians

as laborers. Perhaps the most vivid arose from a discussion of manpower flows arising from Egypt's surplus, low cost manpower and Israel's labor needs in an expanding economy. It was asserted that Israel would need to assure that every Israeli housewife did not try to end up with an Egyptian housemaid.

Israel is further advanced than is Egypt in planning for the post-war period. Much of the conceptual work has been done at Tel Aviv University which, on the heels of the Sadat visit to Israel, organized a Commission on the Peace which was followed by the ongoing Research Project on Peace. The Peace Project is seeking to identify projects and activities suitable for cooperation with Egypt. Planning is underway for a conference "Toward Peace in the Middle East and Beyond" to be held in the Spring of 1979, a series of Peace Reports, prestigious monthly lectures, and the creation of a major inter-regional "Institute for the Study of Peace and Regional Cooperation". (see Appendix 4)

Hebrew University has recently begun to organize itself for a role in preparing for peace. Early in November 1978 it established an inter-university committee under Professor Aveneri to assemble its thoughts.

Within the government there is a ministerial committee dealing with broad plans for peaceful relationships with Egypt. Little more than its existence was ascertained. A Committee of Director Generals of the technical ministries, chaired by the Director General of the Ministry of Finance has held two meetings since the beginning of October 1978 to develop specific plans and recommendations. As part of this effort, each ministry is preparing a booklet of proposals for cooperative undertakings with Egypt. The standing committee of the chief scientists of the technical

ministries has not yet met on the subject of scientific and technical relationships with Egypt. The NCRD is developing proposals for cooperative activities but as of mid-November those proposals were still contained within the NCRD and had not been exposed to other parts of the Israeli government.

The activities at Tel Aviv and Hebrew University are entirely independent of each other and were not known to each other except in the most general and vague terms. There are, however, ties between the Tel Aviv activities and those of the government in that the Director General of the Ministry of Finance and the Director General of the Budget of Israel serve on the steering group or the governing body of the Peace Project. At one point or another, the Ministry of Agriculture and the Ministry of Defense have also been represented in the planning activities of the Peace Project. More important perhaps the activity itself has been financed by the Ministry of Finance. It may not be unrelated that the Director General of the Israeli budget was recruited from the staff of Tel Aviv University.

One impression received from the quick review that was made of the state of thinking in Israel on this subject is that a good deal of high quality and conscious thought has been given to the subject, but that the Israeli government as a whole has not yet pulled its act together. Furthermore, the actions being pursued by the Director Generals of the several ministries in assembling projects for cooperation tend to belie the principles that would call for moving slowly and non-aggressively.

There is, undeniably, vying for position taking place among the universities and to some extent within the several ministries. One of the

senior men interviewed with high level military background, spoke of the need for the creation of a central authority to monitor and oversee Israel behavior and activities not only in science and technology, but across the other fields of human endeavor that will be engaged in the initial relationships with Egypt.

Prospective relations with Egypt are preoccupying and all of the activities discussed above are concentrated on Egypt. Not once did any Israeli raise the subject of prospective relations with Jordan.

GENERAL OBSERVATIONS

The overwhelming conclusion derived from discussions in the countries concerned is that the participants in the proposed cooperation feel it essential that the pace of development of cooperation be slow and careful. On the one hand, the Egyptians are concerned about the Israeli embrace and on the other hand the Israelis are concerned that if they seek to move too aggressively they will be set back in their efforts to establish ties with Egypt.

In Egypt, and Jordan as well, benefits to their own national developmental programs are quickly identified as key criteria to govern any future relationship with Israel. Indeed, a relationship with Israel per se appears to be far less important to the Egyptians than does a relationship with Egypt to the Israelis. Closely related to this point is the widely held Egyptian view that they do not wish initial seminars and conferences to be devoted to seeking topics for cooperation. Rather, they should deal with ongoing or newly proposed subjects of research and development that would build Egyptian national capacity or serve its national needs. Israel intends to lean over backwards to ensure that the subject matter of any relationships in science and technology be proposed first by Egypt. At the moment the fit between the views of Egypt and Israel on this point seems to be nigh perfect.

The Egyptians will press hard for a U.S. role in at least the initial interactions with the Israelis. Israel is prepared to accept such a role on the part of the United States

An evolving relationship between Israel and Egypt will, from the viewpoint of Egypt, take place under circumstances in which Egyptian sensitivity to other Arab sentiment will remain an important consideration. This is to

say, the static from Jordan, Syria, the Gulf States and the PLO will influence Egyptian attitude and behavior. Depending on the final terms of the political settlement, it is also possible that the West Bank issue will intrude sharply into the relationship.

Additionally, the now historic although uneven antagonism of important segments of the Egyptian population to Israel and Israelis will be a major constraining influence on the rapid development of relationships between Egypt and Israel. For some time to come, no one in Egypt is going to wish to be identified specifically as a leading friend of the Israelis.

There is no indication that anyone in either Egypt or Israel has given much serious thought to longer term relationships. The nature of the longer term will depend upon many factors, not the least of which will be the experience acquired under the initial and short-term relationships. It appears likely that the nature and character of that relationship will be determined largely though not exclusively by the Egyptian side. Israel appears to be looking forward to the post peace relationships with Egypt, not only in science and technology but across the economic spectrum generally. They also appear to be very flexible in how the development of these relationships should progress.

If the major pacing factor is to be Egypt, then mention should be made of what might be called the "Sadat factor". He is a man given to the dramatic gesture and appears to his own people as well as to the world to be capable of doing the unpredictable thing. He may do so again. The possibility exists that he may wish for reasons not now entirely visible to speed the pace of development and intensify the relations with Israel. If so, all of the suggestions that follow will of course be overtaken by his action. The evidence currently in hand gives no reason to suggest that is his intention.

What follows, therefore, may well be described as Phase I recommendations dealing with the first three to six months following the delivery of political signals by Mr. Sadat to his countrymen that relationships with Israel of a peacetime character are permissible. Although some ground work can be laid during the first three to six months for later phases of the relationship, there does not appear to be much merit in attempting to speculate now on the nature of the subsequent relationships.

RECOMMENDATIONS AND SUGGESTIONS

Subject Matter of Cooperation

This is not a problem!

There are many subjects which bear directly on the developmental programs of both countries. Both are trying to populate arid and desert areas and solve the concomitant technical problems of agriculture, water, housing, and community organization and services. Both are seeking to develop alternate energy sources, especially solar. Both share many common medical problems and those which are not now shared are of concern to both as movement of peoples becomes a reality. These are but a few items on a long list. Specific suggestions will abound in the reports of those examining specific sectors as part of the overall study of which this report is a part.

However, brief mention will be made of several suggestions encountered in the Egyptian interviews that seem attractive. NIH has organized a group of about 40 hospitals into the Southwest Oncology Center known as SWOG. The hospitals serve as collection points for case histories on certain types of cancer. The 4,000-bed Cairo University Hospital has become a member of SWOG because it can deliver about 200 cases a year against an average of 40 for the other participants. The top cancer men at Cairo University Hospital are American trained and favorably known at NIH. The suggestion is a simple one. Arrange for one or more hospitals in Israel to join SWOG.

Another suggestion related to training Egyptians for arid land agriculture. The point was made that traditional training in agriculture in

Egypt presumed intensively irrigated lands, With national goals looking to the deserts, there is a need for new schools of agriculture focused on arid lands. The proposal is for the United States to provide support to the development of such schools and in the process arrange for the participation of the Israelis.

Although subject areas suitable for cooperation abound, an important immediate problem is the extensive state of ignorance that exists in both countries as to what the specific technical resources and activities are of the other country. Curiosity about each other is very high, and presently largely unsatisfied.

At the moment, the most immediate problem to be dealt with is the large ignorance that exists on each side as to what the technical activities and problems are that are being dealt with by the other side. Senior officials in government ministries in both countries as well as senior academic personalities usually sought information on what the scientific and technical community in the other country was up to and what the national priorities in science and technology were.

An immediate and constructive role which the United States could play would be to assemble specific and detailed information on Israeli and Egyptian scientific research, institutions, resources, capabilities and programs generally and to make them available to the other country. Simplistic as this sounds, it would fill a real need in a situation in which two countries have been without direct contact for over 30 years.

There are a number of ways in which the United States can be helpful. For example, the Egyptian Academy of Scientific Research and Technology

prepares an annual publication describing its organization membership and activities. In the 1976 version of that report, Annex VI is a list of the "Titles of Research Projects". That list and the report itself was shown to Israeli academicians and government scientists. In every instance they were unaware of its existence and avidly interested in its contents. In several instances, they were interested, if not surprised, to discover the identical nature of some of the activities in Egypt to those in Israel. Such activities are, of course, natural candidates for cooperative activities. Mr. Richmond, Attache for Scientific and Technological Affairs in the U. S. Embassy in Cairo, has agreed to seek a copy of the 1977 report which is believed to be in Arabic, so that it might be made available to the Israeli scientific and technological community.

Along a similar vein there is maintained in Mr. Richmond's office in Cairo a list of all of the projects financed by P.L. 480 funds. Numbering in the hundreds, these projects represent in the first instance a decision on the part of the Egyptian authorities that research on a given subject is appropriate and perhaps more that it is in accord with their developmental goals. Secondly, these projects are bringing Egyptian and American scientists together. A sample of this list was also shown to Israelis and generated great interest.

If a copy of all of these projects titles were made available to the Israeli scientific and technical community many would be found to be closely related to ongoing research in Israel and would be candidates for cooperative activity. Moreover, if a canvass were made of the American participants in the Egyptian P.L. 480 S & T projects, it is believed that many of them would be found to either know about or be participating in comparable projects in Israel.

If speed is of importance as is likely to be the case, consideration might be given to a plan under which small American teams in various S & T disciplines would be sent promptly to visit both Egypt and Israel in sequence with their principal purpose being to prepare descriptions of ongoing research activities in the government and in academia, and to communicate them to the other side. Some of these teams might start out in Egypt and some in Israel. In every case, provision would have to be made for a return visit to the initial country in order to be sure of a two-way flow of information. Such an activity would go far toward providing an information base on which to approach cooperative relations in science and technology.

An additional step would take advantage of the know-how of the staff of the AID Mission in Cairo and their excellent contacts with Egyptian authorities. As far as could be determined, no member of the AID staff has current knowledge of or recent experience in Israel. Thus, they are greatly handicapped in identifying or fostering cooperative activities. A well-organized one week visit to Israel would go a long way to providing AID staffers with knowledge that they could uniquely put to profitable use in supporting U.S. efforts to promote Egyptian-Israeli cooperation.

Although the Sinai Peninsula on the face of it seems to offer an excellent locale for ventures in agriculture and settlements in which Israeli experience and site know-how and Egyptian developmental goals and water would be well mated, the Egyptians were on the whole discouraging about cooperative activities in the Sinai. Having gone to a great deal of trouble to get the Israelis out of the Sinai, they were not much interested in

bringing them back under cover of cooperative activities. It is not entirely clear whether the Sinai is for the present an area excluded from cooperation or merely a highly sensitive area. At the outset, it is likely to be the former.

Basic research is seen as playing a minor role in the initial development of S & T relations between Egypt and Israel largely because Egypt assigns very low priority to such research. Large-scale projects are similarly excluded from consideration in the initial phase basically because it is believed that the market won't bear them. What appears to be in the realm of the realistic and possible are a series of activities ranging from a variety of arranged contacts such as seminars, lectures, visits and short-term exchanges to parallel and joint small-scale projects of applied research and development.

Pace and Scale

The pace of the development of relationships between Egypt and Israel should be at a level tolerable to those two countries. At the moment, it is clear that especially in Egypt they wish that pace to be slow. There is no apparent reason why the United States should not adapt to that position.

The Egyptians seem to be saying that they wish an opportunity to get acquainted with the Israelis, to develop a basis for making their own assessments as to what they will be dealing with. The Egyptians want, in effect, to feel their way. This attitude, of course, has a potential for rapid change as the Egyptian knowledge of the Israeli personalities and scene begins to grow. If empathy is found to exist and trust and confidence begins to develop it is likely that the pace at which the relationships grow will speed up.

While the initial pace and intensity of the relationship should be low, nevertheless the scale of the relationship should be as large as is tolerable to the participants. By that is meant that it would be desirable and would appear to be feasible to involve a large number of Israeli academics for example in contacts with their Egyptian counterparts and vice versa. To adapt a Chinese phrase, there is no reason that hundreds of flowers could not begin to bloom simultaneously.

Technique of Cooperation

Every conceivable technique of cooperation should be employed. Those which do not seem to work, should be set aside for the moment. Those which do work should be used as fully as possible.

One technique, previously mentioned, which already has some standing in the Egyptian community and is acceptable to the Israelis is for the United States to serve as a mid-wife or third party in the initial contacts. In this role, the United States through one of its institutions (National Academy of Sciences, University, Foundation or Government Research Facility) would identify an existing, or create a new project essentially identical in both Egypt and Israel and then convene a tri-partite meeting in the United States to review the plans for the project, discuss the research protocol or receive substantive papers on the subject of the project. The formulation of the project is less important than the meeting of Egyptians and Israelis it will generate.

Additionally, both Egyptian and Israeli participation should be solicited in meetings being held in the United States on subjects of common interest to both countries. Among the most obvious of these subjects are arid agriculture, the management of water resources, the delivery of health services

to outlying areas, treatment of diseases common to the Middle East area, industrialization and human settlements.

It is to be assumed that there will be some visits of scientists and engineers of each country to the other and that contacts will be made on such visits that will lead to continuing relationships. A constraining influence may very well be travel and subsistence funds. The United States should consider making \$150,000 available to each country to cover such costs. In order to minimize the delays of processing and red tape, the funds should be provided in a manner which make them available directly to the universities or other institutions which will fund the traveller. In the case of Israel this might be done through the binational foundations in which the United States participates. Several alternatives exist by which this might be done in Egypt. Such financial support would not only remove constraints created by lack of foreign exchange and funds, but might well serve as an inducement to encourage travel of scientists and engineers between Egypt and Israel.

Institutional Mechanisms

There are, of course, no existing binational organizations in Egypt or Israel - commercial, cultural, scientific, professional or academic. Nor do any governmental binational committees or other bodies exist for any purpose (except perhaps military). There is certainly a need for such institutions which could serve as a vehicle for sponsoring and arranging cooperation and other constructive relationships between Egypt and Israel.

The Tel Aviv University Peace Project proposal for an "Institute for the Study of Peace and Regional Cooperation" is envisaged at the University

as binational institute with perhaps the University of Cairo as the partner. Such projects deserve U. S. support, both moral and material.

The great American professional societies -- engineering, medical, chemical, physical, etc. -- should be enlisted in the effort to promote trilateral interaction between themselves and their Egyptian and Israeli counterparts. Similarly, the American Association for the Advancement of Science (AAAS) which has had a long-term special interest in arid zone science could serve as the aegis for bringing American, Egyptian and Israeli scientists together on that subject. The AAAS has other sectoral capabilities as well and might consider an extrapolation to the Middle East of its successful regional meeting in Mexico City earlier this decade.

American universities also have considerable capability for devising and executing programs of trilateral interaction, cooperation and collaboration between themselves and Egyptian and Israeli universities. So too American foundations with international experience and reputation, especially in the Middle East, could provide an umbrella for Egyptian/Israeli cooperation.

If the United States is to play a major role in promoting Egyptian/Israeli S & T cooperation, it should prepare itself to pursue all of the above suggestions, and many others as well. It is not now well prepared to do so. In promoting cooperation, the first six months are going to be of great importance. Given a reasonable chance of an early, favorable end to the negotiation process, the United States should put itself in a position to be in high gear in its third party role by the end of this year. That is to say, that extraordinary steps need to be taken immediately if the U. S. is to organize itself in timely fashion for its new responsibilities.

A task force, with a life of 6 to 12 months, composed of 5 or 6 senior professionals would be a suitable form of organization. The personnel could be recruited from the existing centers of activity in AID and State, with NSC, OSTP and other departments possibly contributing support. The Task Force would provide a central focus for the U.S. effort to promote Egyptian and Israeli S & T cooperation. The Task Force would organize and coordinate the U.S. third party effort, not itself serve as the third party. It would serve as a central and expert center of information, promote and screen proposals for cooperative activities, keep in close touch with the S & T scene in Egypt and Israel, and seek to ensure an exchange of information between interested academic and other organizations in the United States and their counterparts in Egypt and Israel.

By its very existence it will serve as a lightning rod to interested Americans, Israelis and Egyptians. Many plans and pre-plans are now in discussion in many institutions in the U.S. and in Israel - and perhaps in Egypt. These will tend to surface quickly once final peace is reached and especially if the U.S. indicates a willingness to underwrite cooperative activities.

It can be anticipated that the activities sponsored by the Task Force for United States-Egyptian-Israeli Cooperation (to give it a name) will add enormous additional workload on the embassy staffs in Cairo and Tel Aviv, particularly in the early months following final peace. To prepare for this, it is suggested that the staff of the science offices in both embassies be increased promptly by the temporary detail for 4 to 6 months of a qualified professional person, preferably with recent experience in the country of assignment.

It is assumed that the Task Force for United States-Egyptian-Israeli Cooperation will have funds to disburse to support the travel and other costs of conferences and meetings, the costs of small projects with relatively short life spans, exchanges and other appropriate activities. Standard governmental granting procedures are too cumbersome and too time consuming to serve the needs of this activity. Were they to be employed, a minimum of several months would be lost and the pace would be ponderous. There are undoubtedly solutions to this problem at hand within existing legislation and regulation. Prompt steps should be taken to make sure that they are available to the Task Force when it is ready to begin its activities.

Now, a word on Jordan. Its science and technological infrastructure is smaller, newer and much simpler than is Egypt's or Israel's. It is also much less well-known to official Washington or to the United States as a whole than the other two. Consequently, the United States is very poorly prepared at this time to serve as the third party in promoting S & T relationships between Jordan and Israel. It would be useful now to take steps to equip the United States to play a constructive role when the time to do so arrives. One step in this direction would be to add a science officer to the embassy staff in Amman to develop contacts with the Jordanian S & T community and to report fully on the Jordanian S & T scene. It would also be very helpful to enter promptly into a U.S.-Jordanian Agreement for Cooperation in S & T. This would increase interaction between American and Jordanian scientists and between technical agency officialdom in both countries. Additionally, the exchange program should be reviewed to see if the number of American scientists visiting Jordan might be enlarged.

Lastly, short-term (6 to 9 months) studies should be undertaken to examine the manner in which the West Bank might be fit into a program of Jordanian-Israeli cooperation in S & T. It is not considered likely that Egypt will be interested in cooperation relating to the West Bank, or even Gaza.

Cooperation between Jordan and Israel regarding the West Bank is simply a non-starter until a peace settlement is in hand, and may continue to be a non-starter thereafter. Nevertheless, there is much that needs to be done to develop universities and, broadly speaking the economy and welfare of the West Bank. Although the published literature on the politics of the West Bank is large, the West Bank per se - its economy, land, society, etc., - has received next to no attention. A systematic examination of the developmental needs of the West Bank may bring forth topics suitable for consideration should a Jordan-Israel cooperation mode come to pass at some future point.

Addendum

One suggestion that arose in a brainstorming session with several officers in Embassy Cairo may be of interest.

Mrs. Sadat is something of a public figure in Egypt. Much publicity has attended her sponsorship of institutions for the care and training of the retarded.

Mrs. Rosalyn Carter has lent her name and devoted her time to calling attention to the needs of the D. C. General Hospital and to the problems of mental health care generally.

Mrs. Begin is reported to be actively interested in the welfare of veterans and children.

The suggestion is to have Mrs. Sadat, Mrs. Begin and Mrs. Carter jointly inaugurate and sponsor parallel efforts in Egypt and Israel for the care or treatment of an important health problem, possibly eye diseases affecting children or the rehabilitation of disabled war veterans. The example might clear the atmosphere a bit and make the development of Egyptian-Israeli working relationships socially acceptable.

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1/ Interview by telephone

name of organization	Arab Fund for Economic and Social Development*	Islamic Development Bank
year operations commenced	1973	1977
authorized capital	\$1.3 billion	\$2.4 billion
total potential lending resources (including borrowing and reserves)	\$4.14 billion	\$2.4 billion (no borrowing power <u>per se</u> because of Islamic law but arrangements are planned for member states to deposit additional sums)
largest shareholders	Kuwait: about 20% Saudi Arabia: about 20% Libya: about 13% Egypt: about 11%	Saudi Arabia: about 26% Libya: about 16% United Arab Emirates: about 14% Kuwait: about 13%
geographic coverage	Arab world only: (illustrative list) Egypt: 23% Syria: 9% Jordan: 6% Lebanon: 4%	Moslem countries and communities (presently limited to the 33 member states) 55.6% of value of all funds have gone to Arab states
sectoral coverage	industry: 14% agriculture: 9% electric power: 23% transport: 32% water and sewerage: 11%	in principle equity participation is to emphasize industry and agribusiness, but so far lending for infrastructure has predominated.
terms and policies	special priority on Arab regional projects; lends to both public and private organizations, but no equity participation; attempts to stimulate co-investment by other institutions	Islamic law prohibits taking interest, so IDB charges 2-3% service charge; regional or complementary projects among Moslem countries have high priority; IDB may make loans, issue guarantees or take equity, hopes to put 3/4 of funds in equity, but as yet only about 1/4 are in equity participation

* Note that the Arab Fund administers the Organization of Arab Oil-Producing Countries (OAPEC) Special Account, a fund established in 1974 and capitalised with \$80 million to provide assistance to Arab oil-importing states in overcoming balance of payments problems caused by the increase in oil prices.

name of organization	Arab-African Bank	Arab International Bank	Inter-Arab Investment and Guarantee Corp.	Afro-Arab Company for Investment and International Trade	Arab Investment Company	Arab Bank for Investment and Foreign Trade	First Arabian Corporation
year of establishment	1964	1972	1971 (operations began in 1975)	1972	1974	1974	1973
ownership	Kuwait Ministry of Oil & Finance = 42%; Central Banks of Egypt (42%), Iraq, Algeria, and Min. of Finance of Jordan and Qatar	Libyan Arab Foreign Bank, governments of Egypt, UAE, Oman, Qatar, and private Abu Dhabi investors	18 members of the Arab League	KFTCIC* = 62% Arab-African Bank, Misr Lebanon Bank and private investors (38%)	15 members of the Arab League	government of UAE, Libyan Arab Foreign Bank, Algerian Foreign Bank	private Arab investors
authorized capital	\$50 million	\$90 million	\$58 million	\$6.8 million	\$300 million	\$15 million	\$28 million (total assets controlled by group = \$1 billion)
mandate	all banking activities, including commercial and financing foreign trade and development projects in Arab & African states	to promote investment projects for 1 or more Arab nations; to develop Arab regional/international	to provide insurance for investments with majority Arab equity; to promote transfer of capital w/ in Arab region, especially for inter-Arab projects	to finance development projects in Arab and African nations; to promote international trade & finance operations primarily between Arab & African states	to encourage Arab economic development by identifying, promoting & financing projects in agriculture, industry, tourism, transport, minerals and property	to mobilize resources for profitable projects and investment; to finance foreign trade; to operate as a commercial bank; to finance development projects in Arab states	meet requirements of an expanding Arab financial market; large projects and financial packaging, willingness to deal with relations of risk and return beyond traditional banking criteria. projects include 2nd trans-Egypt pipeline, aviation co. banks and other companies.

* KFTCIC = Kuwait Foreign Trading, Contracting and Investment Company /

Source: Traute Scharf, Trilateral Cooperation, volume 1, pp. 177-184, 215-222

name of organization	Egypt-Kuwait Investment Company	Kuwait-Egyptian Investment Company	Saudi-Egyptian Industrial Investment Company	Saudi-Egyptian Reconstruction Company	Gulf Organization of Development in Egypt	Faisal's Islamic Egyptian Bank
year of establishment	1974	1974	1975	1975	1976	1977
ownership	n.a	KFTCIC*, Deposit and Investment Insurance Company (Egypt), Al Shark Insurance Company (Egypt)	Saudi Arabia = 50%, Egypt = 50%	Saudi-Arabia = 50%, Egypt = 50%	Saudi Arabia, Kuwait, Qatar, UAE and Egypt	Egyptian shareholders = 51%, Saudi shareholders = 49%
authorized capital	\$25 million	\$25 million	\$100 million	\$50 million	n.a.	\$8 million
mandate	investment in Egypt	primarily investment in industry, transportation and real estate in Egypt	promotion of projects in Egypt to be carried out by Egypt alone or with Arab or international groups	investment in Egyptian real estate projects, particularly in the Suez area	development projects (industry & agriculture) and balance of payments support in Egypt	provision of financial assistance for development projects in Egypt

*KFTCIC = Kuwait Foreign Trading, Contracting and Investment Company

Source: Traute Scharf, Trilateral Cooperation, volume 1, pp 55-56, 193-194

name of organization	Arab Maritime Petroleum Transport Co.	Arab Shipbuilding and Repair Yard Co.	Arab Petroleum Investments Corporation	Arab International Company for Hotels & Tourism	Arab Company for Mining	Arab Company for the Development of Livestock Resources	Kuwait Real Estate Consortium
established by/established when	OAPEC/1973	OAPEC/1974	OAPEC/1975	Arab International Bank, Kuwait Hotel Co., banks and private investors/1975	Arab League/1975	Arab League/1975	Kuwait government = 20%, plus other Kuwait investment institutions/1975
authorized capital	\$600 million	\$300 million	\$ 1 billion	\$20 million (subscribed capital)	\$414 million	\$210 million	\$34 million
mandate & activities	all activities for the maritime transport of hydrocarbons	drydock and facilities in Bahrein	assist development of petro-industries in member states*	construction of hotels and tourist facilities	mineral resource development of member states**	development of livestock resources in member states***	real estate investment projects

* member states of the Arab Petroleum Investment Corporation: Saudi Arabia, Kuwait and U.A.E. (17% each), Libya (25%), Iraq and Qatar (10% each), plus Algeria, Bahrein, Egypt and Syria

** member states of Arab Company for Mining: Iraq, Kuwait, U.A.E., Egypt, Syria, Somalia, Mauritania, Yemen A.R., Yemen P.D.R., Jordan, Sudan and Saudi Arabia

*** member states of the Arab Company for the Development of Livestock Resources: Iraq, Kuwait, U.A.E., Egypt, Syria, Somalia, Yemen A.R., Yemen P.D.R., Jordan, Sudan and Saudi Arabia

Source: Traute Scharf, Trilateral Cooperation, volume 1, pp. 184-187

name of organization	Kuwait Fund for Arab Economic Development	Abu Dhabi Fund for Arab Economic Development	Saudi Fund for Development	Iraq Fund for External Development
year operations commenced	1962	1973	1975	founded 1974 - still pre-operative
authorized capital	\$3.45 billion	\$0.5 billion	\$2.9 billion	\$0.17 billion
total potential resource base	\$11.5 billion	\$1.9 billion	\$2.9 billion	n.a.
geographical coverage	1962-'74: Arab world, now: all developing nations. 74% of all loans (1962-present) to Arab nations (Egypt is biggest recipient: 13% of value of all loans made). Since '75 48% of all loans to non-Arab nations.	1973-'74: Arab world, now: developing world, except Latin America. 72% of all loans to Arab nations. 1977: 36% of loans to non-Arab nations.	<u>55% of all loans to Arab world</u>	n.a.
sectoral coverage	industry: 25% agriculture: 25% electric power: 22% transport: 21%	industry: 46% agriculture: 9% power: 24% transport: 17%	industry: 16% agriculture: 13% power: 19% transport: 43%	n.a.

Source: Traute Scharf, Trilateral Cooperation, volume 1, pp. 152-156, 195-206

name of organization	Kuwait Investment Company	Kuwait Foreign Trading, Contracting and Investment Company	Libyan Arab Foreign Bank	Kuwait International Investment Company	Saudi Arabian Investment Company-
year of establishment	1961	1965	1972	1973	1974
ownership	government of Kuwait = 50%; Kuwaiti nationals = 50%	government of Kuwait = 80%; Kuwaiti nationals = 20%	government of Libya	private sector	private sector
authorized capital	\$38 million	\$68 million	\$68 million	\$34 million	\$300,000
mandate	to invest for profit in securities, property and other assets; to participate in the formation of other companies; to trade in stocks, bonds and debentures; to give investment advisory services	to invest through loans and equity participation in profitable opportunities abroad; to act as catalyst by channeling Middle East capital into joint ventures together with own funds	to finance development projects and to promote Libyan investments abroad	to invest and diversify Kuwaiti capital domestically and abroad; to advise Kuwaiti and international enterprises on investment opportunities in the Arab world; to participate in real estate investment and financing	to advise international institutions on enhancing Middle East business; to manage joint ventures between international companies and Saudi interests; to participate in international banking syndicates
geographic coverage	Kuwait, Arab and industrialized countries	Arab-African countries are priorities but no geographic limitation	activities so far concentrated in Arab, African and developing nations	Kuwait and worldwide	concentration so far in Saudi Arabia and Egypt, looking for industrialized partners
activities	direct investments, portfolio management, underwriting international issues and arranging private placement	investment (loans and equity) banking operations	joint investments, and development loans (project lending and equity participation)	equity investments, development of loan portfolio, real estate financing and underwriting	investment in joint ventures; also provides financial and management consulting services on fee paid basis

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APPENDIX 4
פרויקט המחקר על השלום
של אוניברסיטת תל-אביב
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רמת-אביב, תל-אביב

D R A F T

October 1978

TEL AVIV UNIVERSITY RESEARCH PROJECT ON PEACE

Developments since the dramatic visits of President Sadat to Jerusalem and Prime Minister Begin to Ismailia have demonstrated the unfortunate fact that in all the long years of war serious planning for peace has been sadly neglected. Believing that such planning is essential for the ultimate attainment and maintaining of peace, and wishing to contribute to the peace-making process, Tel Aviv University has decided to initiate a new academic project the objective of which is to investigate the various aspects of peace. It is expected that the project will continue for several years. The University possesses the human resources, academic traditions and organizational talents necessary for tackling this task, which it considers to be both a great challenge and an unusual opportunity. More specifically, the goals of the Project are to analyze present problems relating to the prospects for peace in the Middle East, to improve our understanding of the political, social and economic aspects of the transition from war to peace, and to explore the prospects of securing and stabilizing peace through political, economic and cultural cooperation. These activities will be carried out according to the accepted practices of the scholarly world, including, of course, complete academic freedom for participating researchers.

Tel Aviv University decided to undertake this project upon the recommendation of a university committee headed by Maj. Gen. (Res.) Aharon Yariv. Professor Avivi I. Yavin, former Dean of the Faculty of Exact Sciences, was appointed director of the Project. To ensure that the Project will be in close contact with the institutions concerned with policy making and implementation, a steering committee composed of senior scientists, civil servants, business and political leaders was established.

Members of the academic staff have been asked to submit proposals for research projects connected with peace (its advancement, stabilization, implications, etc) and cooperation between Israel and Egypt (or Israel and the Arab world). This approach has already produced results and numerous proposals have already been

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submitted, including planning medical services and medical research to accommodate possible developments resulting from the opening of borders between Israel and the neighboring Arab countries, Israel as a financial center, locating and cataloging the institutions of higher education and scientific research in the Arab countries, etc. Scholars from Tel Aviv University are already at work on some of these projects. In addition, suggestions for research projects from various economic circles and other groups in the country have also been received.

One of the major activities in the first year will be an international conference "Towards Peace in the Middle East and Beyond", to be held in the spring of 1979. The conference will deal with political, economic, scientific, cultural, social and legal aspects of the peace process, and with various programs for regional cooperation. Plans are also being prepared for a series of conferences on specific problems connected with the peace process and with regional cooperation. The Project intends to publish a series of reports on the research projects under the heading of "The Tel Aviv University Peace Reports", which will also include the proceedings of the conferences. The Project is also planning a series of monthly lectures on some aspects of peace and the peace process. These lectures will be published in Hebrew, Arabic and English, and distributed in Israel, Arab countries and the western world.

Following the Camp David summit meeting, the Research Project on Peace decided to exploit the organizational and research base that has been achieved to expand its own activities and to make itself more available to the State and the region as a whole. A number of specific projects for cooperation between Tel Aviv University and academic institutions in Egypt were considered. Examples are the possibility of establishing a joint university project to study the development of the region, setting up a joint observatory in the Sinai and joint planning of nature conservation in the Sinai. A workshop with the participation of senior scholars from various faculties of the University, public figures and government representatives examined the coordination of national efforts in investigating the implications of peace and possible regional cooperation. Towards this end, the Project envisages establishing an Institute for the Study of Peace and Regional

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Cooperation. A proposal based on the conclusions of the workshop was submitted to the Ministry of Finance and has received preliminary approval and a promise of financial support.

The several activities being undertaken by the Tel Aviv University Research Project on Peace are open to participation by faculty members of all institutions of higher learning and research in Israel, as well as to members of the public from all sectors. Efforts are being made to include Arab scholars in the various activities, in the hope that major Arab universities will eventually become partners in the Project.