

# Lessons from Personal Experiences in International Cooperation

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The basic reason for personal involvement in international cooperation is the same as for any other type of cooperation. It is the innate predisposition of human beings to lend a helping hand when they see others engaged in a worthwhile job and in need of help which to supply is within the capacity of the on-looker.

Prerequisites of successful cooperation are: (a) recognition by the cooperating agencies or individuals of the worthwhile nature of the project under consideration and the expectation of mutual benefit which need not be exclusively pecuniary or economic; (b) scientific, engineering and financial capability of the cooperating agencies or persons to see the project through; this often has to be supplemented by diplomatic ability on both sides which, however, does not mean a bag of diplomatic tricks but serious attempts at mutual understanding; (c) sincere dedication to the job on the part of individual protagonists; this is of greatest importance in projects of any and all sizes; (d) avoidance of unnecessary difficulties by trying to understand the different customs and habits, and even different codes of honor, one is likely to encounter in foreign parts; also, one should always keep in mind that other people are not as good as we ourselves should be.

The growth of personal involvement of the author in international cooperation is traced from the participation of the Vialidad Nacional of Argentina in his research at the Highway Department and the University of Missouri, to organization of international symposia within the frame of the Highway Research Board and to consultation and lecture tours to various countries abroad. Illustrative episodes are related especially from the fall and winter 1964-1965 tour to Europe and the Near and Middle East.

It is concluded that international cooperation is a very worthwhile undertaking even for individuals who are not involved in large-scale United States Government projects. The broadening of scientific knowledge and professional experience, the widening of human understanding and the friendships with sincere and devoted people that grow out of such cooperation can be highly treasured rewards.

\*THE REQUEST for the preparation of this paper caused me to search my soul for the why and how of my involvement in international cooperation. I did not come up with a great philosophical maxim. It just happened that I became involved, and I think the reason why it happened is the innate predisposition of human beings to lend a helping

hand when they see others engaged in a worthwhile job and in need of help which is within the capacity of the onlooker to supply.

I was reminded of the time when as a young professor in Missouri in the depth of the Depression I had built, with meager means, an apparatus that was to supply important data. One day the apparatus started to collapse in the middle of an experiment. While I was using both hands to save what I could, there was a knock on the door and I gruffly shouted "come in." A young lady appeared, saw my situation and without any word spoken lent me her two helping hands to save the apparatus and the experiment. It took about half an hour of silent cooperation; after it was all over the young lady introduced herself as a student of journalism who had come to get a story out of me. Incidentally, she was the sister of Professor Edgerton, of Massachusetts Institute of Technology, which may explain her ability to help. For effective cooperation such ability must be added to the innate inclination of man to help his fellow in a worthwhile job. Another important element in this situation is, of course, that the job is recognized as worthwhile by the helper.

The ability to help does not presuppose that the helper is smarter or richer or stronger or generally superior than the one he is helping. Will Rogers once said, "It is not so that some people know more than others, rather they know different things." It is good to keep this great truth in mind when cooperating with others. My homely example about lending a helpful hand may be considered as too simple and too primitive by those who are planning, initiating or administering large cooperative international projects. But basic principles are always simple though usually pregnant with implications that may not be easy to discern.

The prerequisite that somebody must be engaged in what the potential helper considers a worthwhile job may not seem applicable to such an undertaking as the planning and hoped-for ultimate establishment of a Mekong Valley Authority in the image of our T. V. A. But certainly, the most important activity anybody, a person, a family, a nation, a country or even a subcontinent can be engaged in, is in living. Often the outsider has a clearer view of the means by which life can be made easier and more joyful. Therefore, effective planning may be done by an outside observer or agency; but such planning can be successfully put into effect only if the people concerned become wholeheartedly engaged in the project and make it their own. Here lies the great difficulty and also the great promise of international cooperation.

The one really successful, large-scale, multifaceted cooperative project in international cooperation was the Marshall Plan. This success was due largely and perhaps determinantly to the fact that the countries involved shared with us similar states of economic and industrial development as well as a corresponding general cultural background. This provided a good basis for mutual understanding and harmonious cooperation. Whenever such a basis was lacking in larger international cooperative projects, trouble and waste of money resulted, even if the economic calculations, on which the project was based, were correct.

This basis of mutual understanding plays the same role as the foundation of a building; it must be the stronger and larger, the bigger and more important is the structure to be built on it. For this reason international cooperation tends to be more successful if it deals with limited areas and specific endeavors. The European Common Market started with the Coal and Steel Community which still serves as its strongest structural element. Also, people in the same fields of endeavor possess a similar work and life philosophy that easily bridges language, cultural and racial differences. Good examples for this are the successful reorganization of the Turkish Highway Department by the United States Bureau of Public Roads, some eminently successful activities of our Department of Agriculture, those of the Rockefeller Foundation in the field of preventive medicine, and many more.

Yet, upon taking a close look, you find behind the curtain of success not only the common interest in the joint activity, but also a few personalities of deep understanding and sincere devotion to their task and to the human beings who are to be helped. Such dedication is sensed by the other side. Robert Pendleton, the U.S. soil scientist who did so much for the agriculture of Thailand, was beloved and honored by its people and given a princely burial when he died. The success of the Bureau of Public Roads

mission to Turkey owes much to the understanding of American ways and ideals acquired by Vecdi Diker, then Chief Engineer of the Turkish Highway Department, during his studies at the University of Missouri. This, incidentally, is a very good example of the importance of giving foreign students an opportunity to study in the United States, an activity in which the International Road Federation has been effectively engaged.

#### NATURAL GROWTH OF PERSONAL INVOLVEMENT IN INTERNATIONAL COOPERATION

The preceding general remarks may appear to have little connection with the title of this paper that stresses personal experiences, especially since I was never officially connected with any of the large-scale government or private efforts financed by the United States in international cooperation. However, I have had for many years the privilege of being acquainted with and befriended by leading citizens and government officials in foreign countries, including heads of various ministries and of states, who discussed their problems freely with me and helped me to see the other side of the picture. Therefore, what has been said above should be considered as quintessence of this type of experience. Now I shall briefly relate personal experiences in proper sequence.

My involvement in international cooperation in the field of road building actually started when, as a young German scientist on a visit to Missouri, I learned about the urgent need of lifting this and other midwestern states out of the mud. Being a guest of a fellow Heidelberg student, the son of Jewel Mayes, then Secretary of Agriculture of the State of Missouri, I heard him and also Chief Engineer Cutler and Materials Engineer Reagel of the State Highway Department as well as others expound the problem of low cost roads and the attempts that were being made toward its solution by something called soil stabilization. Since the age of nine I had experienced nothing but destructive war, gnawing hunger, disastrous inflation, and foreign occupation of my homeland, and again at that time I could see the political clouds drawing together for a new thunderstorm. With this background I felt that here was something to be done that was really worth the time and effort of a young man. The matter was clinched when upon my question, "What is soil stabilization?", Mr. Reagel answered, "This is what we want you to find out."

From this assignment grew a cooperative project that expanded in ever-widening circles until it reached the farthest corners of the globe. The work was cooperative from the beginning; the highway engineers furnished a wealth of practical information and of clear-sighted observations; however, their scientific coordination and explanation had barely begun. Toward the organization and scientific evaluation of the available data I could contribute the newest concepts and theories of physics and chemistry and my own practical experiences in the construction industry. Very soon, fundamental investigations could be started in both laboratory and field. When Mr. Hogentogler learned about my work in Missouri, he persuaded the Bureau of Public Roads to join the project by sharing the cost of my salary with the State Highway Department. In 1932, the University of Missouri joined in the effort by contributing laboratory and other facilities, though no pecuniary remuneration, to the writer in exchange for teaching of courses in advanced physical chemistry. By 1936 word of the accomplishments of this project had spread sufficiently to bring me offers of positions from Argentina and Germany. I preferred to stay in Missouri but the Government of Argentina was induced to participate in the project to the extent of sending typical Argentine soils to Missouri and of contributing to my salary, equally with the Bureau of Public Roads and the State Highway Department of Missouri.

The year 1936 also saw three other important events: (1) the founding of the Soil Science Society of America; its sphere of interest included from the start the soil physics and soil stabilization problems of the road builder; (2) the first international congress on Soil Mechanics and Foundation Engineering at Harvard University; and (3) the reorganization of the Department of Soils, Geology and Foundations of the Highway Research Board, and the establishment of the Committee on Physico-Chemical Properties of Soils which was later renamed Committee on Physico-Chemical Phenomena in Soils.

All three events provided vehicles for spreading knowledge of the achievements of the cooperative venture in Missouri. As a result, problems encountered in many different parts of the world were brought to my attention with requests for help in their solution. My associates and I were very grateful for these requests. Each new problem submitted represented an opportunity to test the power and reliability of our scientific tools. Each problem solved added another supporting element to the structure of the new engineering science that we were building. Also, the specific facts and data that pertained to each problem increased our fund of useful information. In this manner, our work, insights and understanding could gain a much wider range and greater depth than would have been possible without the continued stimulus and supply of data from the outside.

The most interesting and valuable cooperative effort that is still continuing started in the late thirties with Colonel Wooltorton who at that time was Resident Engineer at Shwebo, Burma. The problems there concerned heavy tropical soils in monsoon climate. Many things happen with such soils that appear strange and often unbelievable to those who are acquainted only with soils in other climatic regions. Although, up to that time, I was not personally acquainted with tropical soils in their natural environment, I had learned enough about the importance of environment and microclimate on the performance of soil and road structures to be able to utilize my general physical and physico-chemical knowledge in assaying the new soil engineering problems submitted to me. In a way, this problem was of the same nature as that which faced me originally in Missouri, where the climate differed considerably from that in which I had grown up. In a more extreme form, an analogous problem confronts, at the present time, all of us who are concerned with the behavior of lunar soils.

When Colonel Wooltorton was subsequently transferred to India and later to Kenya, he brought knowledge of the problems of these countries to my attention and he introduced my or rather our joint approach toward solution of these problems to the attention of the countries concerned. One important by-product of this cooperation and exchange was a crop of promising young men who were sent to do graduate study with me; most of these have returned to their native countries and have become prominent engineers. Close contacts still exist between these former students and myself.

The Second World War interrupted peaceful cooperation with many parts of the world. However, the research and development projects in which I was involved for our armed services helped to expand my knowledge of soils in many parts of the world and my understanding of the particular engineering problems peculiar to various climatic environments. This proved of great benefit for peaceful work in the postwar years. In 1946, I spent several months in Argentina as a guest of the Direccion Nacional de Vialidad and of an association of estancieros that furnished the funds for this undertaking. During a subsequent stay in Brazil on the invitation of the Brazilian Government, I became, for the first time, personally acquainted with real tropical soils in their natural environment. I found that all my science and imagination had not been quite sufficient to predict the real thing. This experience was of great help in later cooperation with the Highway Departments responsible for road construction in tropical countries.

The postwar years brought many invitations for lectures and high level consultations from government and private agencies and universities of Western and Central Europe. In response to these, visits of several months duration each were made to Europe in the winter of 1951-1952, in the summers of 1955, 1956 and 1958. The visits were mainly to France, Germany, Austria, and Switzerland. In 1957 the President of the German Federal Republic honored me by awarding the Order of Merit in recognition of assistance given to Germany and of my efforts toward better mutual understanding between nations. Most recently, in the fall and winter of 1964-1965, my wife and younger son accompanied me on a five-month consulting and lecture tour to Europe and the Near and Middle East, including among others such countries as Hungary, Yugoslavia, Egypt, Lebanon, Syria, and Turkey.

It may be helpful to list here briefly the main types of international cooperation in which I have been engaged over the years:



1. Inclusion of soils from foreign countries in the research projects conducted in my laboratories first in Missouri and later in Princeton.
2. Assisting government and private agencies in foreign countries to establish research and testing facilities for soil stabilization and in the design and control of test roads.
3. Assisting in the scientific analysis of road failures, especially when they were due to interaction of peculiar microclimatic factors with the road structure.
4. Formal lectures and informal discussions with audiences and groups of wide ranges of background, such as high governmental planning bodies, academic audiences, contractors and industrial associations, groups of field engineers and others, representing practically the entire highway industry in various countries.
5. Field inspection of test and other roads and evaluation of design, construction, and maintenance procedures.
6. Enlisting the aid of foreign engineers and scientists in the organization of the various international symposia sponsored by the Highway Research Board's Committee on Physico-Chemical Phenomena in Soils.

Such activities, of course, have to be financed. The contributions of Argentina to our research in Missouri have already been mentioned. The overseas work was usually organized in connection with a paid sabbatical furlough and a round trip ticket to Europe furnished by my university. The additional overseas expenses were carried by the government or other agencies that asked for my services but were usually supplemented by my own means. There was never any help from the United States Department of State or the National Science Foundation or similar government agencies. In Hungary, where on the last trip we were guests of the Hungarian Academy of Sciences, I was handed on arrival a thick envelope filled with money that was ample for all the needs of our week's stay. In Slovenia on the same trip, we were guests of the University of Ljubljana; on arrival we were taken to the best hotel and advised to charge all our bills. Outside of the hotel, we were always escorted by members of the university and by government engineers who took care of expenses. In Egypt, Lebanon and Turkey, the honorarium for my lectures took care of the living expenses of my wife, son and myself in the best hotels. My own financial contributions consisted mainly in the air fares to get to these countries. However, I felt that this was a fair price to pay for what I and the members of my family learned on these trips. Now, let us turn to the main lessons I learned in addition to increasing scientific knowledge and professional experience.

### LESSONS LEARNED

International cooperation is not essentially different from cooperation in more restricted areas. There has to be a recognized need and a potential solution, a promise of mutual advantages to be gained, and a willingness to cooperate. Also, in every nation as in every other group, there is about the same percentage of saints and of stinkers, and a normal probability distribution in between. However, one must realize that the concepts of what is honorable may vary widely among different nations—indeed, even within the same nation. This has long been known to the historian and ethnologist. Thus, the Roman historian, Corneliu Nepos, pointed out about two thousand years ago in his "Lives of Famous Men" that many things which are honorable in Greece are dishonorable in Rome, and vice versa. But such basic differences in customs and even concepts of honor are very easily forgotten in these days because the general adoption of Western dress and outside manners make us appear increasingly like each other. For the stated reasons, it is wise, before working in a certain area, to acquaint oneself with the range and type of behavior covered by the ruling concepts of honor. Often there is no ready guide to this; if one does not want to be a victim of prejudice, one must patiently gather and evaluate pertinent facts and concepts from the history, literature and general culture of the people or tribe with which one is concerned.

Cooperation presupposes communication, and communication normally is accomplished by means of the written or spoken word. The advantages of having a common

language are obvious. Most educated people in Europe and other continents can understand English to a greater or lesser extent. But, as the president of the University of Ljubljana told me, "they understand English best when they talk it to each other; second is English English and only third American English." If one does not know the language of the host country and if comprehension of English by the foreign partner is not perfect, it is good to have another foreign language in common. Thus in both Hungary and Yugoslavia, I was asked to give my formal addresses in English but conduct the more important scientific and engineering discussions in German. In Egypt and in the Levante, a working knowledge of French is of great advantage. Need to express one's thoughts in a different language often helps to refine and simplify these thoughts or even to find out that what sounded good in English proved to be not much of a concept if translated into another language.

Effective cooperation is based on the scientific understanding of the problem and on practical knowledge regarding the potential and the actually available means for its solution. Outside advice is usually not sought for easy problems nor for any that can be solved by recourse to a handbook or a set of specifications from another country. One needs the ability of appraising complex situations from a fundamental physical and often also chemical point of view and of subsequently translating the scientific appraisal into materials and methods. Some of the most serious mistakes I have encountered in the field were due to blind following of non-indigenous specifications or literature, including some from over here.

When one looks at a job that is definitely a mess, one never knows whether it has been designed by the chief engineer or by some poor devil who is in danger of losing his job. Not to point out the error and to show the right way would be professionally and morally wrong. In most cases, one can also be sure that there are engineers in the audience who know what is wrong, though they may not dare to say it. Situations like this are the normal ones, not the exceptions. I endeavor to show, in such cases, how the error was of a kind that could be easily committed by people not having previous experience with the exceptional features of the situation. Then, I demonstrate what I consider the correct analysis of the problem and its proper engineering solution. In other words, the offender, whoever he might be, gets off the hook, but, hopefully, he has learned his lesson, and so have the other attendants of the visitation.

In relatively public meetings and in receptions or smokers with a wide range of participants it is often good to beware of the con-man who has some cure-all to sell. He will stay close to you and engage in conversation that usually has little or nothing to do with engineering or science. He just wants to be seen talking with you so that he can later claim that he has discussed his material or method with you and that he has your endorsement. Interestingly, the most conspicuous case of this sort happened to me in Germany; people who fall for such tricks, more likely than not, belong to the engineering "intelligentsia," i. e., those who know a great deal about theory and mathematics but very little about materials and their performance under different environmental conditions.

True cooperation involves mutual contributions and mutual benefits. The benefits cannot always be expressed in dollars and cents or other economic measuring units. In the case of a professor and consulting scientist, every new experience and new piece of factual knowledge ultimately benefits his students and his normal clients. Some of the "lessons to be learned from Europe" have been eloquently reported by Von Eckardt in Highway Research Record No. 97. Something that can help to make our own life richer and fuller can be learned from almost every country or nation. On the other hand, we can often increase our usefulness in other countries by serving as catalysts in bringing people and organizations together that should know each other and work with each other. In most countries I visited, I have found that the highway soil engineers do not know the soil scientists in their ministries of agriculture and agricultural colleges. I make it a point to bring these people together wherever I go, and I have seen important fruits of cooperation grow from this.

## SOME PROGRAMS AND INTERESTING EPISODES

For illustrative purposes a few schedules are given below:

Austria: Sunday 18th to Saturday 24th October 1964:

Sunday—arrival in Linz and social evening with Dr. Aichhorn, Director of Highways of the province of Upper Austria, and other engineers and their ladies.

Monday and Tuesday—visit of construction projects involving high soil fills on the Linz-Vienna Autobahn route and of construction sites of the Enns-Chain Electric Power Works.

Wednesday and Thursday—participation in the International Conference on Soil Mechanics in Highway Engineering in Vienna, sponsored by the Austrian National Committee of the International Society for Soil Mechanics and Foundation Engineering; to this conference I had contributed two papers in German, entitled respectively:

- (1) Critical consideration of the influence of chemical additives on the properties of soil-cement.
- (2) New theoretical developments regarding the shear resistance of granular soils and their practical significance.

Also, the author served as the General Reporter for the group of papers on the theme: Soil as a Construction Material.

Friday—inspection of farm and farm-to-market roads under the guidance of Ministerial Councillor Scholz of the Austrian Ministry of Agriculture.

Saturday—obtaining visa for Hungary at the Embassy in Vienna and preparing departure for Budapest.

Hungary: Sunday 25th October to Sunday 1st November 1964

Arrive Budapest from Vienna on evening of 25th October.

Date	A. M.	P. M.	Evening
October 26 Monday	Visit to the Technical University, Dept. of Geotechnics	City tour	Spent with Prof. and Mrs. Kezdi
October 27 Tuesday	Preparing for discussion and lectures	Scientific discussions with Prof. Kezdi	Attendance at concert by Russian Violinist Ojestrach
October 28 Wednesday	Lecture in English on <u>Soil Stabilization</u> at the Hungarian Academy of Sciences	Free	Dinner with Prof. and Mrs. Kezdi at hotel
October 29 Thursday	Excursion into environments of Budapest including proposed building site for large Danube power project		Free
October 30 Friday	Reception at the Technical University and lecture in German on <u>Soil Water Interaction</u>	Visit to U.S. Embassy to have absentee presidential election notarized	Attendance of opera "Don Carlos"
October 31 Saturday	Lunch with Vice-President of Government Agency for Development and other dignitaries; afternoon with Vice-President of Development		Farewell dinner at the Kezdis
November 1 Sunday	Departure for Vienna and Linz, Austria		

Yugoslavia: Sunday 15th November to Saturday 21st November

Arrival in Ljubljana, Slovenia, by train from Salzburg, Austria, 4:14 p. m.

Date	A. M.	P. M.	Evening
November 16 Monday	Visit at the Soil Mechanics Laboratory of the University (Prof. Dr. Sulkje and his staff). Visit of the President of the University	Walk through Ljubljana and car trip through immediate surroundings	Free
November 17 Tuesday	Discussion in Soil Mechanics Laboratory. First lecture (in English) on: <u>New Theoretical Knowledge on the Shear Resistance of Granular Soils and Its Practical Application</u>	Trip to Bled Lake and inspection of highway and other engineering projects	Attendance at opera
November 18 Wednesday	Visit at Government Institute for Materials and Structures Research and discussion with its director and staff on various aspect of materials research	Lecture (in German) at this Institute on: <u>The Basic Principles of the Stabilization of Granular Soils and Their Practical Application</u>	Dinner at the home of Prof. Suklje
November 19 Thursday	Excursion to the Drawa River Canal and Power Station in construction. Discussion meeting with engineers from the Electric Power Authority on soil stabilization problems. Banquet in the evening.		
November 20 Friday	Trip to the Adriatic and inspection of new harbor facilities of Slovenia		
November 21 Saturday	Early morning departure by air for Belgrade and from there in the evening for Athens, Greece.		

#### THE NIGHT THE UNITED STATES LIBRARY OF INFORMATION BURNED IN CAIRO

Somehow, from every trip I have brought home memories of scenes or pictures indelibly engraved in my mind. One of these is a double feature, related in time if not in substance, but with sharp contrasts. It concerns the night when our Library of Information in Cairo was burned by African students.

The Dean of Engineering of Ain Shams University had invited us to the wedding of an assistant professor of civil engineering and his bride, an instructor in a medical school. The wedding celebration took place in a large rented hall on the outskirts of Cairo. It was a most impressive affair with hundreds of guests and enough food and drink for all of them. The guests came in families including children who could barely walk. This gave a special quaintness and warmth to the festivity which made it remain a family feast despite the crowd.

The entertainment was lavish; there was a stage and dance floor where outstanding artists performed including the beautiful dancers who at that time were featured in the night clubs of the Hilton and Shephard Hotels. While these performed their astounding and aesthetically impressive feats of muscle control and pleasing coordination of movement, little girls from among the guests went on the stage to show how much they had learned of this native art. The absence of even a drop of alcohol among the refreshments helped us to realize the inner meaning and significance of the development and cultivation of this art form. What man truly can call his own, is the trinity of body,



mind and soul. Is not each of these worthy of fullest development? Do not all of our true joys derive from their capacities and degree of development achieved by serious training?

Still full of the experience of the evening, the Dean drove us back to the Shephard Hotel. Within a block of it the streets were wet and there lingered the acrid odor of water-drenched fire. Groups of soldiers stood at street corners. Our inquiries were answered with accounts of what had taken place. We drove around the United States Embassy and saw with our own eyes the dead, burnt-out remains of what had been our Library of Information.

The morning papers contained expressions of official regret on the part of the Egyptian Government about this act of students mainly from Equatorial Africa but also stated or implied that one could understand the fury of these students because of the recent United States-Belgian act of intervention in the Congo. Until our own Los Angeles riots, I felt that the Egyptian Government could have prevented this act; now I am forced to think differently.

All my Egyptian colleagues, friends and acquaintances expressed sincere regrets about what had happened and hoped that it would not have an adverse effect on United States-Egyptian relations. To me the sincerity of this was indicated by the shift I noticed in the composition of my lecture audiences. These became larger, but instead of students they were composed predominantly of mature engineers. I almost felt that the engineers of the highway department had been ordered to attend my lectures. At any rate, I enjoyed this changed audience and also the more significant discussions that followed my lectures in Cairo. The situation was similar in Alexandria where I lectured later on; however, I sort of missed the engineers from the state highway department whose sincere interest had really been a great stimulus to me in Cairo.

#### STAY AT THE AMERICAN UNIVERSITY OF BEIRUT AND A SHORT TRIP TO DAMASCUS

At the end of my last scheduled lecture in Alexandria, my throat closed with an infection and would not open again for about a week. During that time I lay in bed at the Shephard Hotel in Cairo, well taken care of by an Egyptian physician and shot full with penicillin. I was allowed to get up just a day before we had to leave for Beirut, Lebanon. There, I had been scheduled to give two lectures at the American University, one at the beginning and one at the end of about a ten days' period. In between, I was supposed to deliver five formal two-hour lectures at the University of Damascus in Syria. We arrived in Beirut in the afternoon of Thursday, December 10th and were made at home at the Alumni Club of the American University. My first lecture at the university was the next day, Friday, the 11th.

Still recuperating from my Egyptian infection, I could not face five two-hour lectures within five days in dry, dusty Damascus but I did not just want to write a letter to get out of the agreement. Fortunately, Dean Ghosn, of the School of Engineering of the American University of Beirut, had some business in Damascus on Saturday and had hired a taxi for the trip. He invited my family and me to go along to see the country and the city of Damascus and to arrange matters with the president of its university.

In Damascus, Dean Ghosn went after his own business but got us a local taxi driver whom he instructed to take us to the president of the university and afterwards back to an agreed-upon meeting place. Unfortunately, our driver knew only little English and less or nothing of any of the other languages in which I am able to communicate. First, he took us to the entrance pavillion of the university. There was discussion, telephoning, waiting, some more telephoning, and some more waiting and discussion. Then the driver took us away from the university into a suburban area. There he stopped at a crossing of several streets, got out, walked to a corner, gave a shrill whistle and waited, whistled again and waited again. Then we drove to another similar intersection where the same thing was repeated. After the third or fourth enactment of this scene, the driver seemed to have received a signal. He motioned us to follow him to a house entrance. While my wife preferred to stay in the taxi, my son and I went with him to the house and to an upstairs apartment where we stated our business to a lovely and

dignified lady. We waited awhile in an anteroom and then were conducted to the living room where the president was lying on a sofa. He had suffered a broken leg in a recent accident. The experience we just had gone through was beginning to make sense, but my son and I felt, more than actually noticed, a sharp, distrustful scrutiny by the eyes of the president; however, after I had stated my business and had transmitted the greetings which I brought from old American friends of the president, the atmosphere became very relaxed and friendly.

When we met Dean Ghosn that evening, his first question was why we had not visited the acting president of the university who had been waiting for us the whole evening. We had not even been told about an acting president. By now, it was too late to do anything but return to Beirut. The mystery was cleared up by a notice in Monday's newspaper. There had been a political upset in the University of Damascus and the president had lost his job just during the time of our visit. His initial distrust of two big fellows in trench coats, calling at his residence on a Saturday evening, seemed quite plausible. This, though, was not quite as serious as an experience in 1946 in Argentina, where a day or two before I was to go to Bolivia as the guest of its government, the president and his ministers had been hanged on lantern poles. At that time, I preferred not to accept the invitation extended by the successor government immediately after its accession to power.

The time originally scheduled for Damascus and Syria was spent in Beirut and surrounding Lebanon; under Dean Ghosn's expert guidance, we visited the beautiful palace of Beta-Din, the overwhelmingly impressive ruins of Baalbek and under that of a former student, Dr. Nazih Taleb, the site of the City of Biblos which has been continuously inhabited for over seven thousand years. The American University of Beirut was like a friendly oasis where I fully recuperated. In addition to giving the formal lectures previously agreed upon, I played the role of a scientist in residence and had several opportunities for informal discussions with students and staff of the Schools of Engineering and Agriculture. Checking out of the Alumni Club, I found that the university had already taken care of the bill, in addition to paying the honorarium for my lectures. This I appreciate even more since I recently found out that the whole annual research budget of the Engineering School amounted to only \$3,000.00 that year.

#### A STRENUOUS SCHEDULE IN ANKARA AND ISTANBUL

In order not to extend unduly the length of this presentation, I shall just give a brief list of the major activities during our stay in Turkey.

##### December 1964

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| 21 Monday    | Departure for Ankara, 3:15 p.m., arrival late afternoon, received at airport by three professors of the Middle East Technical University.  |
| 22 Tuesday   | Visiting the Middle East Technical University and city of Ankara.  |
| 23 Wednesday | (1) Lecture at the Middle East Technical University 10:40-12:30— <u>Soil Water Interaction and Water Conduction in Soils under Various Energy Potentials.</u>  |
| 24 Thursday  | (2) Lecture 4:30-6:30— <u>The Influence of Physico-Chemical Factors on the Shear Resistance of Cohesive Soils.</u>   |
| 25 Friday    | (3) Lecture 9:40-11:30— <u>The Science of Soil Stabilization.</u><br>(4) Lecture 4:30-6:30— <u>New Theoretical Knowledge on the Shear Resistance of Granular Soils and Its Practical Significance.</u> |
| 26 Saturday  | Visit museums in Ankara.   |
| 27 Sunday    | Visit grave of King Midas in Gordion.  |
| 28 Monday    | 9:00 a.m. visit laboratories of Turkish Bureau of Reclamation.<br>(5) Lecture at the Middle East Technical University 4:30-6:30—   |

December 1964The Basic Principles of Stabilization of Granular Soils and Their Practical Significance.

- 29 Tuesday 9:00 a. m. visit Highway Department Laboratories.  
 (6) Lecture at METU 4:30-6:30—The Stabilization of Cohesive Soils That Possess No Coarse Granular Bearing Skeleton.
- 30 Wednesday (7) Lecture at METU 4:30-6:30—Soil-Heat Relationships.
- 31 Thursday Flight to Istanbul, late afternoon arrival because of fog.

January 1965

- 1 Friday- }  
 2 Saturday } Sightseeing with Professor Kumbasar.
- 3 Sunday Visit with Vecdi Diker, former Chief Engineer of the Turkish Highway Department and member of the Board of Trustees of the Middle East Technical University at Ankara and Robert College at Istanbul.
- 4 Monday Lecture at Robert College on The Basic Principles of Stabilization of Granular Soils and Their Practical Application.
- 5 Tuesday Lecture at Robert College on The Stabilization of Cohesive Soils That Possess No Coarse Granular (gravel-sand) Bearing Skeleton.
- 6 Wednesday Visit to the local headquarters of Turkish State Highway Department; also inspection of Field Laboratory, Asphalt Paving Plant and main road connecting with the West. Afterwards, Hagia Sophia and old subterranean water reservoir.
- 7 Thursday 9:30 a. m. visit Testing and Research Laboratories of Istanbul Technical University; 11:00 a. m. lecture at the university on New Theoretical Knowledge on the Shear Resistance of Granular Soils.
- 8 Friday 9:30 a. m. visit Soil Mechanics Laboratory of Istanbul Technical University; 11:00 a. m. lecture at the university on Physico-Chemical Factors Influencing the Shear Resistance of Cohesive Soils.
- 9 Saturday Leave Istanbul for Rome by KLM at 10:25 a. m.

## CONCLUSIONS

In every country I have been in, I have asked myself, "What does this country need most and what least?" The specific answers differed, of course, for different places; but there was one general answer that fitted all cases and this was "Less talkers and more doers." Immediately, a saying of Bernard Shaw comes to mind: "Who can, does, who cannot, teaches." This whimsical bit of wisdom hits close to home when one has been a teacher for more than thirty-five years and also, hopefully, a doer.

There can be little or no doubt that everywhere and especially among the professors there are more talkers than doers. For our own sake and that of the world at large, we should find out the reasons for this. Doing should be more natural to man than talking. Why then does higher education produce more talkers than doers? An answer to this question is urgently needed for the sake of the human race. I think I know at least the direction in which the answer lies but time is lacking for further inquiry at this place.

Another question I often asked myself, especially when I was really tired and worn out from talking and working in foreign parts, is: "Why am I engaging in individual international cooperation, when I would be financially better off without it?" The answer to this question, and the reason why I shall probably continue these efforts, is that I

feel amply recompensed by treasures accumulated that no moths or rust can destroy or debase. Among these treasures are: increase in scientific knowledge and professional experience, widening of human horizon and understanding, friendships with sincere and devoted people all over the world, and, perhaps, even a little bit of wisdom.