

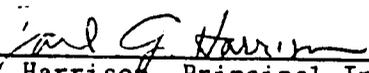
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Trip Report
April 27 - July 2, 1985

Nutrition CRSP
Egypt Project


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NUTRITION INTAKE AND FUNCTION (CRSP)

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University of California, Berkeley

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Saturday April 27th: In transit Tucson to Mexico City.

April 28 to May 2: Meeting of External Evaluation Panel with Scientific Coordinating Board and Management Entity representatives, Galindo, Quaretero, Mexico. Transactions and activities of the SCB can be found in the minutes of that group, and those of the SCB with the EEP can be found in the minutes in the EEP report. In addition, the week included a visit to the field site in Solis arranged by the Mexico Project investigators. During that field visit I had the opportunity to observe a food intake visit to a household in one of the study communities as well as to discuss in some detail, with the physician responsible for RMR and anthropometry, methods utilized by the project in those areas.

Friday May 3 and Saturday May 4th: In transit from Mexico City to Cairo.

Week of May 5th through May 9: Activities and accomplishments of this week included the following: a) general orientation as to the current state of the project in the field and of data entry and data management in Cairo; b) reporting to the Egyptian investigators with regard to the EEP review meeting the previous week in Mexico; c) discussing the CRSP data analysis strategy with a view to enlisting active participation in the process by the Egyptian investigators; d) initiating a systematic approach to exploring the apparent high energy intakes in toddlers in the Egypt data set; e) ongoing management and trouble shooting.

Specific activities: May 5th, meetings with Drs. Osman Galal, Farouk Shaheen, Ghada Fuad (liaison with Al-Ahram Computer Center) and others. Update from Dr. Ritenbaugh who had been in Cairo for the previous ten days. May 6th, attended an all-day seminar on Fetal Malnutrition held at the Nutrition Institute. CRSP birthweight distribution data were compared with other available Egyptian data sources (distributions look quite consistent). There was extensive discussion of possible explanations for the low average Dubowitz scores in the CRSP data set (mean = 37.5 weeks) compared to estimates of gestational age by menstrual history (mean = 40 weeks) and to expectation. The possibilities include a systematic error in scoring, factors (possibly nutritionally related) which affect particular signs independent of gestational age, or actual shorter gestation. Drs. Galal and Sohier Salem offered to make available to the CRSP raw data from Dubowitz scoring on approximately 1,000 newborns studied in a major project in Giza Governorate several years ago. The mean Dubowitz score from this study was also approximately 37.5 weeks. It was decided that Dr. Ritenbaugh would take back with her to the US a copy of the Dubowitz score sheets from the CRSP data, and a sample of about 100 from the larger Giza Study. She will initiate activities to analyze these sets of information sign by sign and compare them to similar information from US infants. I brought back with me (5/22) photocopies of the remainder of the Dubowitz data from the Giza study for further comparison.

May 7th, most of the day was spent with Dr. Wafaa Moussa and separately with Ms. Nancy Meyer, the Field Coordinator, discussing the problem of apparent high energy intake in toddlers addressed by the EEP and the

necessity to systematically explore all possible sources for explaining this phenomenon. We evolved a plan of investigation which includes a toddler observation substudy, consideration of the feasibility of an investigation of toddler diet digestibility/absorption, and a validation of food composition tables for major toddler energy sources. I also met with Dr. Ritenbaugh and Dr. Ghada to bring myself up to date on the details of data management and data flow. We reviewed several suggestions which they had evolved with regard to streamlining data entry and saving funds in this area, particularly with regard to food intake data entry. These proposals were summarized in a memo to be sent to Dr. Jerome for reaction re: compatibility with Kansas DMU. We also discussed in some detail the need to evolve systems for new identification numbers for situations which have recently arisen which did not fit original expectations. The proposed solutions were agreed upon and these proposals were also committed to a memo to be sent to the Data Management Unit at Kansas for their input and approval.

May 8th, I met with Dr. Mamdouh Gabr, Chairman of the Executive Committee for the CRSP and Head of the Department of Pediatrics at Cairo University. I updated him on the EEP review held in Mexico and on the progress of the CRSP as a whole. He expressed continuing interest in being kept abreast of the details of the progress. I spent much of the rest of the day helping to prepare materials to return to the US with Dr. Ritenbaugh on the 9th. I also met with Dr. Shaheen and Dr. Nargis Bassily regarding the possibility of correcting anthropometric data for differences in clothing weights when weights are taken at the RMR facility versus the home. The major problem is that adult women tend to wear a heavy outer garment when they go to the RMR facility and to leave it on through the entire process. When they are weighed in their homes however, they are unlikely to be wearing this particular garment. We decided to have the RMR technician begin to note on every form whether the woman was wearing her outer galabiya or not when the weight was taken. At the same time, Dr. Nargis, who obtains the birthweights with an accurate electronic scale, will weigh each woman's outer galabiya when she is in the home to weigh the baby. After enough galabiya weights have been accumulated, we will evolve correction factors to correct the RMR weights.

May 9th, there was a CRSP project meeting in the morning, the major agenda item of which was a report from the EEP meeting in Mexico. Considerable discussion of the food intake issues ensued. Following the meeting, I met with Drs. Wafaa Moussa and Hekmat Aly and we designed the toddler observation substudy. The substudy will be done by Dr. Hekmat's personnel, already experienced in toddler observation. Their usual child care activity form will be modified for this substudy to focus on food. They will focus particularly on food given to toddlers, food actually consumed, and the fate of any food which is not consumed, i.e. dropped or discarded or eaten by another family member. They will also focus particularly on consumption of "toddler food" consumed in part by an individual feeding the toddler. A list of six households with target toddlers was identified for the substudy. Each child will be observed for five days, two hours each day as follows: 8 to 10 am on day one, 10 to 12 am on day two, 12 to 2 pm day three, 2 to 4 pm day four, 4 to 6 pm day five. Thus 10 hours of observation on a toddler will be accumulated. We agreed that we will begin the study promptly, with training

promptly, with training occurring May 11 and 12 and initiation of the study May 13. The first week's worth of data should then be available for review and discussion by May 20th. Later in the afternoon I met with Dr. Ahmad Dakroury with regard to resolving some questions about identification numbers on several serum zinc samples which have been sent to Arizona, and with Dr. Saneya Abdul-Azim Wahba with regard to the possibility of entering the sample entries, exits and changes on the small Hewlett-Packard micro-computers which have been used in the Institute for data analysis. It seems that access to these micro-computers has been recently restricted due to circumstances beyond the Institute's control, and it is not possible to make substantial progress on this aspect at the moment. Dr. Saneya, however, has requested that such a program be written.

Week of May 11th to 16th: This week was devoted to continuing work on food intake, data management and handling, and to evaluation and decision making with regard to the illness subroutine. Saturday May 11th, I spent most of the day gathering the data which had been accumulating over the previous five weeks on the illness subroutine. At the February-March SCB meeting in Berkeley, discussion of the subroutine had brought to light the fact that the Kenya and Egypt projects had found the subroutine difficult to manage and had not accumulated useful data in this area, although the Mexico project found the subroutine doable and was continue to collect information in this area. We agreed at that time to evaluate the situation and propose whether and how we would attempt to gather this information in the remaining period of field work. The Egypt project decided at that time to implement the subroutine between that meeting and my arrival in Cairo with a view to evaluating the situation at this time.

Data collected between April 4th and May 9, 1985, a period of five weeks, included 29 illness subroutines. Twenty-eight target individuals were involved, including six lead females, one target schooler, sixteen target infants, and five target toddlers. No lead males were represented. Illnesses represented included one pneumonia in a target infant, one case of mastitis with fever in a lead female, seven cases of fever without other associated symptoms in various targets, and the remainder of cases diarrhea with or without fever. If this rate of illness subroutine continues, it is probably that we would be able to accumulate enough by the end of the field work phase to answer some of the basic questions involved about food intake, activity, time allocation and growth with significant illness. Finding that more than half the illness subroutines in this period of time were accounted for by target infants was surprising. A number of serious logistic and communication problems came to light in gathering the data and discussing them, and the actual weight, food intake and follow-up observations included a large percentage of missing data. It was decided that I was to attempt to summarize this situation in detail and that all concerned scientists would meet together on May 14th to review the situation and make a decision.

May 12th, I met with Dr. Shaheen about the details of the illness subroutine, and then attended the weekly meeting of the young doctors in which field problems are reviewed and discussed. Later in the day I met with Dr. Amin Said and Dr. Sawsan, who are analyzing individual Dubowitz

scores. From Dr. Sawzan's analysis it seems that three of the neurological signs (arm recoil, leg recoil, and head lag) appear to be contributing heavily to the low Dubowitz scores; the significance of this remains to be established. In the evening I met with Dr. Daisy Fleita for an up-date on project immunology. May 13th, I spent most of the morning summarizing the illness subroutine data, and in the afternoon attended a seminar at the Ford Foundation on sex differentials in mortality.

May 14th, I visited the National Research Center with Dr. Galal, and we were able to establish that a new Parr bomb calorimeter (so far unused) is available in the NRC. We obtained the instruction manual for consultation with the Nutrition Institute food scientists, and information on how to contact the person responsible for relevant laboratory in the NRC.

That afternoon a meeting on the illness subroutine was held with Drs. Galal, Wafaa, Shaheen, Nargis and two of the young physicians, Drs. Aiman and Magda Shaheen. We discussed at length the reasons for the illness subroutine, the questions it is designed to answer, the protocol, and the actual logistics of the operation. We identified many reasons for the difficulty in implementing the subroutine, and agreed upon a system for implementation from now until the end of field work. The illness subroutine form which was previously developed at Arizona will be used to summarize these data.

I met with Dr. Ghada and Nancy Meyer and we established range checks for the reproduction forms, needed by Al-Ahram Computer Center. These will be utilized beginning now, and I will take a copy back for consultation with Dr. Kirksey. I also consulted with Dr. Hekmat on progress of the toddler substudy and decided to visit Kalama on the 15th for the purpose of observing the substudy in progress.

May 15th, I spent the day in Kalama observing the child care/toddler food intake substudy. With one of the child care data collectors especially trained in the last few days by Dr. Hekmat, I spent one hour observing one toddler and two hours observing another. For the latter observation we were accompanied by a village woman who is being trained to carry out some of these observations for the early morning and late afternoon hours. Our presence was well tolerated by these two families, who had agreed to participate in the substudy. I am satisfied that the data we want to be documented are being carefully recorded and observed by this data collector. I observed several incidences of the type of behavior which I believe may affect reported toddler intake due to the sharing with other family members of foods clearly designated in the mother's mind for the toddler.

I also talked briefly with Dr. Ihab Hegazzy, of the Department of Biochemistry, Nutrition Institute, to whom I had given the instruction manual for the calorimeter found yesterday. He plans to visit the National Research Center, look at the equipment and talk to the person in charge of the laboratory there tomorrow.

Thursday May 16th, I attended the CRSP project meeting in the Nutrition Institute in the morning. The agenda focused primarily on two items:

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scientists into the data analysis process for the CRSP as a whole. Copies of the Data Analysis Group report have been made available to all key scientists and several had read the report prior to this meeting. A small group was appointed to bear responsibility for ongoing reaction, response, integration, and activity in this regard and will meet on Saturday. I also met with Dr. Adel Fahmy, newly appointed Director of the computer and statistics unit at the National Research Center. He has a good physical facility with a Digital mainframe computer and appropriate other hardware as well as a fairly standard software package. He is beginning to build a service unit and is currently soliciting work. He believes that he can provide computer services in general at least 20% below the cost that the CRSP is paying at Al-Ahram. I believe that it would be a false economy to consider shifting the CRSP data entry site at this point and this issue although brought up was never seriously considered. However, Dr. Fahmy's enthusiasm and facility may be helpful in providing the capability to analyze small subsets of data. We discussed his services in relation to other projects, and agreed to try using his unit for a small set of pilot data on another project.

I met briefly with Dr. Hegazzy, who had visited the National Research Center in the morning to check out the bomb calorimeter situation. He is going to work with the director of the laboratory at the NRC to get the instrument operational.

Week of May 18 to 22: This week included meetings with Population Council and Ford Foundation representatives as well as intensive work on CRSP data management and analysis issues.

May 18th: The data analysis group formed last week met for several hours (Drs. Galal, Moussa, Shaheen, Saneya, Yuniss, Ghada, and myself). The overall strategy of the CRSP DAG report and plans for the next several months were reviewed. A detailed schedule was devised for the data flow over the next weeks. The group also gave considerable attention to ways in which it can interact with and provide input to the overall CRSP data analysis strategy. Most members of the group had read the DAG report prior to this meeting and expressed their comments and suggestions, which were then incorporated into Dr. Galal's response to Drs. Feinberg and Selvin. The group discussed at length the data analysis needs in Cairo, and a strategy evolved which should provide complementary analyses to those being done in the US. This strategy involves analysis of particular and specific subsets of data with a view to clarifying their structure so that they may be sensibly used in overall core analyses. Specifically, the "noise" referred to by inter-project statisticians and necessarily seen as something to be minimized in the overall strategy, can only be understood by fine-grained analyses, preferably done by the individuals closest to the collection of the data. Our current attempt to take apart the components of the Dubowitz scoring system in order to understand the results we are getting is an example. It was decided that the group would put its efforts immediately to the task of trying to figure out, based on the data, how to handle the weaning/breast milk issue in this currently planned analysis.

May 19th: I attended an all-day symposium on Nutrition Problems and Status in Egypt given for the benefit of a visiting group from Lund University Medical School in Sweden. In the afternoon I visited the Offices of the Population Council, at the invitation of Dr. Fred Shorter, Senior Representative. Besides Dr. Shorter the meeting was attended by several social scientists working with the Population Council on various aspects of child survival and child health. At their request I outlined in some detail the overall structure of the CRSP, the scientific questions that it is intending to address, and the nature of the data being collected. We had a very fruitful discussion of the potential application of these data to important questions which are central to the research models in child survival being utilized by the Population Council and others. We expressed mutual interest in further communication and possible development of a proposal from the Nutrition Institute for specific aspects of data analysis including provision of appropriate microcomputer facilities and training. Dr. Shorter is leaving for a trip to the US over approximately the same 2 weeks that I will be away; we agreed to meet together with Dr. Galal upon both of our return to Cairo mid-June. In the evening I had dinner with Dr. Cynthia Myntti, Program Officer locally for the Ford Foundation. I was acquainted with Dr. Myntti previously, but we have never discussed specifically the possibilities for CRSP follow-on activities. Dr. Myntti will be leaving Cairo for a year beginning in mid-June, to pursue study for an MPH degree at Johns Hopkins University. She will visit Cairo twice during the year and will return upon completion of her study leave. Next year is not the optimal time for new initiatives; however, she has been impressed with the changes and development she has become aware of in the Nutrition Institute, and she is aware of the general outlines of the CRSP and what it is attempting to do. She indicated that she would entertain sympathetically any reasonable proposal from the Nutrition Institute.

May 20th: First day of Ramadan. Received from Dr. Jerome by telex a listing of the 13 food items which comprise the majority of energy intake in Kalama toddlers' diets. With Dr. Wafaa and Dr. Hegazzy, we reviewed the list and decided that all items on the list with the exception of cottonseed oil and sugar should be subjected to validation by both proximate analysis and bomb calorimetry. Dr. Hegazzy will proceed with this study, and Dr. Moussa will assist in terms of sampling the relevant food items. Later I met with Dr. Hekmat and her field assistant regarding the toddler substudy. We went over the data collection forms from the 4 two hour observations completed to date, and due to the press of the holiday activities decided to complete our review in the evening of the next day.

May 21st: Data analysis group met again. We reviewed in some detail from analysis that I had done over the previous 2 days with the energy intake data from non-breast milk sources for toddlers who were weaned during the period of data collection. Plots of moving averages of energy intake along with time of weaning seem to indicate that the effect of weaning is abrupt. Some toddlers seem to dramatically increase their energy intake from non-breast milk sources in the month immediately after weaning, while others experience an immediate decrease followed by a recovery. In any case, it looks as though the replacement of breast milk by other food is not gradual. The group in Egypt will

continue playing with these data; in the mean time I will share the plots which I have done with the other US PI's and with Dr. Beaton with a view toward developing an approach to modelling energy intake for those toddlers who are partially breast fed. Later in the afternoon I met with Dr. Hekmat and we reviewed the results of the 4 toddler observations from the substudy. Only two are usable; the second data collector appeared to not completely understand the objective of the substudy and some critical data were missing. The useable observations indicate that we should continue to pursue the possibility that some food identified as toddler intake may be consumed by mothers or other individuals feeding toddlers. We decided that the data collector who had accomplished these observations will continue as time allows to pursue the substudy in the next weeks.

In the evening I met with Drs. Galal, Yuniss, Ghada, and with Drs. Ali Ghomeim and Mustafa Gholi at the Al-Ahram Computer Center. We picked up the data tape which I brought with me for forwarding to Kansas and settled a number of issues between the Nutrition Institute and Al-Ahram computer center including flow of work, scheduling of activities, and financial arrangements. We decided to attempt to get on a schedule of producing a data tape every month with whatever is available and cleaned rather than gearing activities to the travelling schedules of individuals. An extensive discussion was held about the problems of double entry and the cost of workload associated with this. The tape I brought back and forwarded to Kansas included the following official data: anthropometry for January, February, and March 1985; food intake for August 1984 (food items, as yet unconverted to kilocalories); morbidity recall for August, September, and October 1984; reproduction (form 2, schedules 6 and 11) for August 1984 through March 1985.

May 22nd: In transit Cairo to Tucson.

May 23rd through June 7th: Other business in the US, per diem for this period and cost of transportation not charged to CRSP.

June 10th through June 13th: After arriving back in Cairo on May 9th, I spent May 10th largely with Dr. Shaheen reviewing his plans for organization and supervision of the work of the young doctors while he will be on vacation June 15th through July 5th. We also went over the Ramadan field schedule in some detail. I met briefly with Dr. Daisy Fleita and with Dr. Ron Watson, who had been in Cairo for several days, about the status of the immunology laboratory and their activities. Tuesday, June 11th was devoted to a series of brief meetings regarding CRSP. I met with Dr. Ihab Hagazy, and delivered to him some blinded quality control results from Dr. Weber's laboratory in Tucson which Dr. Hagazy had requested in relation to food composition analysis. I met with Dr. Galal and Ms. Meyer about the question of double entry of data at Al-Ahram computer center; Dr. Galal had forwarded a request to reduce the percentage of data double entered due to unforeseen costs. Dr. Jerome has telexed that this proposal will not be acceptable. We reviewed alternatives and decided to meet with Mr. Moustafa Gholi from Al-Ahram the following day. I met briefly with Dr. Aiman, Field Director for the young doctors, about the field schedule, and with Dr. Watson who felt that his work had largely been completed and was planning to leave Cairo somewhat earlier than expected. I asked him to spend a couple of

days conferring with his colleagues and devising a reasonable long range set of objectives for the immunology competency in the Nutrition Institute.

Wednesday June 12th, I reviewed with Dr. Shaheen and some of the young doctors all of the illness subroutine data collected since May 15th. Twenty-three illness subroutines have been completed or begun since that date, including 19 infants, 3 toddlers, 1 schooler, and 1 lead female. Of these, 7 have recovered and the subroutine is completed. We discussed the unusual distribution of targets within the subroutine data, and the question of whether we may be missing target toddlers who should be the subjects of subroutines. We agreed that Dr. Magda Shaheen will undertake the task of checking the May 1984 and May 1985 morbidity recall data on toddlers in order to give us a notion whether we are missing significant disease in these targets in terms of the subroutine. The consensus of opinion was probably that mothers are less aware of the number of stools that a toddler with diarrhea may have and thus few toddlers meet the criterion of 5 or more reported stools for 24 hours.

We met with Moustafa Gholi of Al-Ahram computer center and negotiated an agreement for double entry of 100% of data.

Thursday June 13th I toured the new Japanese childrens' hospital in the company of two post-graduate trainees from Arizona. Following this I had a long meeting with Dr. Wafaa Mousaa about various food intake issues. I learned from Dr. Hekmat that the toddler observation substudy was not in progress, due to lack of trained staff availability.

June 15th through June 17th: On Saturday June 15th, Dr. Galal and I met with Drs. Cynthia Myntti and Lee Traverse of the Ford Foundation regarding the possibility of the Nutrition Institute applying for funds from the Ford Foundation for an intervention project in Kalama following the CRSP. I spent most of the rest of the day reviewing data analysis and cleaning issues with regard to anthropometry and morbidity with Dr. Magda Shaheen, and an informal data analysis meeting was held with Drs. Aiman, Magda, Saneya and Osman.

Sunday and Monday June 16th and 17th, Dr. Magda Shaheen and I attempted to make contact with Dr. Adel Fahmy of the National Research Center's computer facility with regard to another project. This consumed considerable time. We met on Monday about the logistics for continuing the illness subroutine over the upcoming 5-day holiday period since Nutrition Institute drivers will not be coming to work during that period. A system was worked out whereby the subroutine will be able to continue.

June 18th through June 22nd: Holidays.

June 23rd through June 27th: Sunday June 23rd I met with Dr. Wafaa Mousaa regarding her perceptions of some confusion which apparently exists with regard to which food composition data bases are actually being used for analysis. Dr. Wafaa has drafted a memo to Dr. Galal, accompanied by all relevant documentation. Dr. Galal will circulate this memo in hopes of resolving some of the issues. I discussed with Nancy Meyer and Dr. Esmat, a young doctor in charge of the RMR protocol, the need

for us to sit down and review the situation with regard to RMR data and scheduling.

On Monday June 24th, I spent most of the morning working with Dr. Ghada, our liason with Al-Ahram computer center, regarding refinement of range checks for some of the data forms and minor issues of data flow. I attended the seminar in the Nutrition Institute by Dr. Fikry el-Nahri with regard to the biochemistry of fiber in foods.

Tuesday June 25th: had a telephone call from Dr. Ritenbaugh in Arizona indicating that Dr. Calloway had responded by letter to our request for advice on the digestibility issue. At my request she entered the letter into the telex which arrived this morning. We had a meeting about these issues which consumed most of the day. Involved were Dr. Ihab Hegazzy, Wafaa Moussa, Osman Galal, myself and Dr. M. Amr Hussein. We discussed at length the feasibility of carrying out the protocol suggested by Dr. Calloway and decided to give it a try. The first step will be to draw suitable children from the data base and then to ascertain if enough families are willing to participate. If so, a detailed protocol will be devised and the study will take place in the health center in Kalamā. It was decided that since the locally available bomb calorimeter needs substantial and expensive parts, all aspects of the protocol will be carried out in Cairo except the bomb calorimetry; dried samples will be sent to Arizona for bomb calorimetry in Dr. Weber's laboratory. The issue will be further discussed at the Thursday CRSP meeting.

Wednesday June 26th: I reviewed the illness subroutine data and the anthropometry data corrections with Dr. Shaheen, and spent some time arranging appointments for Dr. John Mare', Director of International Programs from the University of Arizona, who will be visiting Cairo June 28-July 2.

Since May 15 through June 24 a total of 24 illness subroutines have been initiated. Two families refused the subroutine from the outset, yielding 30 with useable data. Twenty-four were in target infants, six in toddlers and one in a schooler and one in a lead female. All involved diarrhea, fever, or both. There is some missing data, especially initial weight. We discussed plans for continuation of the subroutine and minimization of missing data.

Dr. Wafaa Moussa and I met to settle the question of sampling for the ongoing validation of food intake. After indirect communication with Dr. Beaton, we decided upon simple random sampling (without replacement) of households remaining in the study.

Thursday June 27, was a regular CRSP staff meeting, during which progress both in the field and with regard to data analysis were reviewed. The question of whether to undertake a small substudy in order to estimate the crude digestibility of toddler diet was discussed at great length, and the ultimate decision was to attempt to do the study. The protocol supplied by Dr. Calloway will form the basis for the design. Nutrition Institute scientists felt strongly that a fecal marker should be used, rather than to use three concurrent days for food intake and fecal collections. It was decided to use Carmen Red for this purpose. The laboratory will generate the protocol for all sample

handling and collection in the field, as well as containers and labels. Dr. Ihab Hegazzy will provide a list of laboratory supplies needed to accomplish the analyses prior to my departure on July 2. Dr. Wafaa Mousa will be in charge of field protocol, training and supervision of staff.

Week of June 29 through July 2. Saturday June 29 was spent at the Nutrition Institute primarily working on details of the proposed digestibility with Drs. Wafaa Moussa and others. In the afternoon Dr. Galal and I met with Dr. Fred Shorter of the Population Council Middle Eastern Office in Cairo. The subject was the follow-up of earlier discussions we had had about the possibility of the Population Council funding a small grant to the Nutrition Institute for supplementary analyses of CRSP data once the project is completed. The Population Council focus on research related to the child survival model will lend itself to analyses of CRSP data; their policies provide the possibility for infrastructure development within the Nutrition Institute including micro-computer acquisition and appropriate training of staff. It was agreed that these ideas will be followed-up during the fall with a view toward developing a proposal to the Population Council.

Dr. John Mare' from the University of Arizona spent the day at the Nutrition Institute and I spent several hours orienting him and meeting with him and various senior staff members.

Sunday June 30th and Monday July 1st were devoted to cleaning up a variety of loose ends, as well as meetings with the Ford Foundation's new local director Dr. Lee Travers regarding a potential application from the Nutrition Institute to the Ford Foundation for an intervention program in Kalama to follow the CRSP. Dr. Galal and I also met on July 1st with Dr. Fawzi Kischk of the Canadian IDRC, with regard to various activities of the Nutrition Institute and possible interest of the IDRC in supporting development of information systems and continuation of the annotated bibliography which has been developed by the Nutrition Institute and the University of Arizona.

Tuesday July 2nd: Travel from Cairo to Tucson.