

STUDY GROUP ON APPRAISAL OF FELLOWSHIPS

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NOTES ON SOME ACTIVITIES FOR THE  
APPRAISAL OF FELLOWSHIPS

by

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In these notes are summarized selected previous studies relevant to the appraisal of fellowships. They are based on published or internal reports made available by various governmental or other agencies in one country with which the writer is particularly familiar. Only incidentally do they refer to the World Health Organization or other agencies' activities in this field.

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The expressions "fellows", "participants", "exchangees", "grantees", "scholars", etc. are used in the text according to the terminology employed in the various schemes to indicate persons assisted for further training, mostly outside their own country.

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### Introduction

The history of the movement of students and scholars across national boundaries is a long one, but organized programmes of international and intergovernmental education to advance mutually agreed objectives are, as Brewster Smith calls them, a social novelty.<sup>1</sup> There has been a vast expansion of such programmes and of the numbers of individuals involved since World War II. The pre-war programmes, largely sponsored by commercial groups and private foundations, have been continued - even expanded - and significant new programmes have been launched by the United Nations and its several specialized agencies, including the World Health Organization, and by national governments. This expansion has involved a tremendous increase in the application of time, energy, men, materials,<sup>2</sup> thought and study to the development of these programmes.

The accomplishment of the humanitarian objectives of technical assistance programmes, improved cultural relations, and enlarged areas of understanding between nations has been brought under increasing scrutiny, not as to the objectives per se, but as to whether the specific measures taken do, in fact, accomplish those objectives, and to what extent. What collateral, unanticipated results are also involved? If these effects are unfavourable, what changes might eliminate or minimize them? What are the short-term or long-term effects on the individuals involved, on developments within their home country, on the institutions at which they study or visit, on the institutions in which they serve on return? How may each programme step in the entire chain be objectively studied and improved so that the end-result will accomplish the predetermined objectives?

The necessity for evaluation is axiomatic. Similarly axiomatic is it that evaluation must be objective, systematic and as continuous as the on-going programme. It is neither practically feasible nor theoretically desirable to halt operations

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<sup>1</sup> Smith, M. B. (1955) Research in the Field of International Education, Handbook on International Study, Institute of International Education, New York

<sup>2</sup> Klineberg, O. (1955) The Problem of Evaluation, International Social Science Bulletin, Vol. VII, No. 3

periodically in order to survey what has been done. What seems clearly essential in every action programme is that there should be a built-in administrative process which routinely produces information or data on which continuing evaluation and corresponding administrative decisions may be made.

Not all programme administrators are equally interested in or are under similar compulsion to evaluate the results of their work, to give unmistakable evidence of progress, or to prove that at least minimum goals are being accomplished. Those administrators who must answer to public appropriating bodies seem to feel rather keenly the need for such proof or support. Indeed, they have been asked the equivalent of "What are you really accomplishing?" and then, "How do you know?".

Administrators of fellowship programmes, and the legislative or administrative bodies to which they are responsible, are among those who "need to prove". Accordingly, various efforts have been made to appraise or evaluate the effectiveness of fellowship programmes. The purpose of the remaining pages is to review a sample of these efforts. One of the problems involved in any effort to summarize the several evaluation efforts is that many of the studies are regarded as "for internal use only" or were produced in limited numbers in typed or mimeographed form for restricted circulation. They repose in files, on desks, and in possession of ad hoc advisory committees. Their contents, while easy to remember, are somewhat elusive.

The problems surrounding evaluation of fellowships are not concerned with whether to evaluate but primarily with how to evaluate, whether it can be done and how much should be invested in it. Almost all authorities seem to agree that it can and should be done. How it should be done, and how much to spend in doing it, seem to be the decisive issues. These pages are directed to how organizations, other than the World Health Organization, have assessed their fellowship activities, leaving the cost factors to be weighed by each programme administrator.

In summarizing selected previous studies, therefore, no cognizance is taken as to whether the evaluations found the respective programmes to be wholly successful, partially successful, or failures. Such information is primarily for the policy guidance of the relevant programme administrators. What matters here is how other agencies have evaluated their fellowship activities.

### Evaluation through periodic staff reports

Several private foundations in the United States have had a cumulative experience of over one hundred years in awarding fellowships for the long-range improvement of professional education and of public health services in the United States and other countries.<sup>1</sup> The objectives and methods of these foundations vary to some extent. For example, the Markle Foundation is active only in the medical sciences in the United States and awards 12-25 scholarships each year for a five-year period; whereas the Kellogg Foundation awards fellowships in medicine, dentistry, nursing and hospital administration to Latin American fellows for study in the United States for one to three years, depending on the needs of the fellow. Only the Rockefeller Foundation maintains a staff overseas; all the others rely entirely upon visits and inspections by central office staff which, in the case of the Kellogg Foundation, means that one staff member is travelling approximately half-time and may be accompanied by others from time to time.

Fellowships are officially awarded by the governing board of each foundation. They are granted, in most instances, on the recommendation of foundation staff members who are personally acquainted with each applicant, have interviewed him on one or more occasions, and may have observed his work and needs over one or more years. In place of staff study, the Markle Foundation relies on the rank-ordering by panels of selection committees which interview candidates nominated by deans of medical schools.

In each instance the number of fellows in any given year is relatively so small<sup>2</sup> that staff members are able to appraise the study or research progress of each fellow through periodic visits to the school or laboratory. Moreover, on completion of the fellowship, the foundation staff periodically appraises his progress and contributions through visits to the parent institution and conversations with colleagues and superiors.

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<sup>1</sup> The institutions referred to are: The Rockefeller Foundation, the W. K. Kellogg Foundation, the Commonwealth Fund, the John and Mary Markle Foundation, and the China Medical Board of New York, Inc.

<sup>2</sup> 12 Markle scholars; 66 Kellogg fellows

Evaluation of fellowships, in the case of these foundations, is contained in narrative reports by various staff members describing contributions of former fellows to professional education and research, honours received and level of responsibility of present position in contrast with the position held at the time of the fellowship award. Thus, the Markle Foundation reports that only 12 of 229 Markle scholars have left academic medicine. Another foundation reports that "we have had considerable satisfaction from observations made at the time of our visits in terms of what our Fellows have accomplished ... In a similar way, we have observed that many of the emerging leaders in other schools have had fellowships from us ...". A third foundation reports that of the 75 who completed advanced medical fellowships, 56 hold responsible positions in medical schools, 12 hold responsible positions outside universities and seven are scattered. Another foundation observed that "one can best judge the success of a fellowship program by reviewing in later years with the men who have held them the role it played in the development of their own scientific career ...".

Thus, these several private agencies have made no detailed objective evaluation of their fellowship activities beyond the accumulated judgements of their respective staffs as presented in trip reports which are intended for internal staff use. No evaluation studies beyond those contained in their annual reports have been published.<sup>1</sup> However, the Kellogg Foundation has recently circularized all its former fellows with a questionnaire, and is awaiting returns.

#### Evaluation through questionnaires

Several large-scale studies have been undertaken through questionnaires to former fellowship-holders, asking primarily for information about the personal and educational characteristics of former fellows and about post-fellowship activities.

The National Foundation (formerly the National Foundation for Infantile Paralysis) made a survey of the careers and contributions of 590 postdoctoral clinical fellows

<sup>1</sup> Directory of Fellowship Awards, 1917-1950, The Rockefeller Foundation New York, 1951, and its Supplement, 1951-1955, most nearly approach an evaluation of fellowship activities.

who had received scholarship or fellowship assistance since 1939.<sup>1</sup> Information was sought through pre-tested questionnaires on the following: undergraduate, medical, and postdoctoral education; degrees; present professional position (including appointments, income and duties); present fields of interest and present research programme; membership in professional associations; honours and participation in community affairs.

The National Foundation recently released a companion study on the education, utilization and activities of 1800 physical therapists who responded to questionnaires sent to the 2500 recipients of Foundation scholarship support before 1 July 1957.<sup>2</sup> The report summarizes the current activities and future plans of those receiving Foundation support and tabulates personal and educational characteristics.

The United States Public Health Service conducted in 1957 a follow-up of 2023 fellows who had completed training under Public Health Service research fellowships prior to 30 June 1956.<sup>3</sup> This was a companion study to previous follow-up studies in 1953 and 1955. The objective of the programme is to provide training at the pre- and postdoctoral level in research. Information was solicited on a broad variety of personal, educational, geographical and employment characteristics of former fellows, but the primary focus was upon whether or not they were currently "engaged in research activities".

The National Research Council now has in draft form the results of a nationwide survey of postdoctoral fellowship-holders.<sup>4</sup> Current and past fellows (since 1945)

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<sup>1</sup> An Analysis of Careers of Postdoctoral Clinical Fellows, New York, The National Foundation, 1958

<sup>2</sup> Hislop, H. J. & Worthingham, C. (April 1958) Analysis of physical therapy education and careers, Phys. Ther. Rev. 38

<sup>3</sup> Scantlebury, R. E. (1957) Former Public Health Service Research Fellows, Public Health Service, Washington, D.C.

<sup>4</sup> National Academy of Sciences - National Research Council Study: Postdoctoral education in the medical sciences and research: A preliminary report J. Amer. med. Ass. 1958, p. 1478

of 22 national agencies sponsoring fellowships in the medical sciences were asked to assess their fellowship experience and to state their present positions and future plans, and all applicants for fellowships during a single best year, 1955-1956, were questioned about their research interests and future plans. Furthermore, all 1957-1958 interns, residents and trainees of teaching hospitals were asked about their professional interests, attitudes toward research and academic careers, and additional study needed. In order to obtain the views of institutions, additional questionnaires were sent to medical school faculties, asking a number of questions about the balance between teaching and research, the supply and quality of candidates for staff vacancies, the support of staff research, and a battery of other inquiries inventorying the backgrounds, fellowship experience, clinical training and research support of the full-time faculty members of preclinical departments and of departments of medicine and surgery.

The analysis and cross-tabulation of the information obtained is expected to give a comprehensive view of the research opportunities, needs, and environment for postdoctoral fellows in medical teaching institutions in the United States.

Twenty years of experience in the Rockefeller Foundation-National Research Council medical research fellowship programme during the period 1922-1941 was reviewed and analysed through 998 returns from questionnaires sent to the 1136 persons who applied for fellowships in the medical sciences during this period.<sup>1</sup> The primary objective of the fellowship programme is to provide postdoctoral experience for persons with promise in medical research and teaching.

The success of the programme was evaluated in terms of the following combined criteria: (1) inclusion in the selective American Men of Science; (2) listing by Medical Sciences Information Exchange, which is substantially a master index of all United States holders of research grants; (3) university positions, classified in terms of full-time academic positions, full-time professorships, and senior academic appointments; and (4) private practice, a negative criterion for this study.

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<sup>1</sup> Bowen, L. G. (1953) Subsequent careers of applicants for postdoctoral medical research fellowships, J. Amer. med. Ass. 20 June, p. 693

An "index of efficiency", developed by relating the percentages of actual to potential increase over chance percentages in each category, was the ultimate basis of evaluating the efficiency of the programme. Analyses of successful fellows versus applicants were made on the basis of scientific field of interest, degrees held, fellowships under other auspices, variations in age and sex, first versus second decade of experience, and other factors.

The favourable differentials are attributed to an effective selection process, valuable opportunities provided by the fellowships, and the prestige of holding the highly-competitive fellowship.

The Bureau of Social Science Research has conducted several studies of the operation of the National Science Foundation Fellowship Program. This Program was set up by the Government of the United States to finance graduate training for promising young scientists. One of the most extensive studies was a survey by questionnaire of 6000 applicants during 1952-1954.<sup>1</sup> All applicants were arranged in six quality groups. Analyses were made from information on the number of times applied, places to which applied, length of time waited before receiving reply, number of offers received, and value of each offer for scholarship support.

Only one-sixth of the applicants received Foundation fellowships. Almost all of these fellows replied, whereas only 60 per cent. of the unsuccessful applicants returned questionnaires. A follow-up study of these "non-responses" is in progress.

In summary, the carefully-phrased mail questionnaire is a favourite tool for survey and evaluation purposes. The process of preparing precise questionnaire items which avoid bias and which withstand pre-testing is a delicate task performed by a growing number of experienced technicians. Mailing lists are often kept up to date as regular routine; responses from returned questionnaires can be transferred to coded cards and cross-tabulated mechanically. Thus, the technique for such questionnaire evaluation is well established and not necessarily difficult.

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<sup>1</sup> National Science Foundation Fellowship Program: An evaluation based on 4200 questionnaires, Washington, D.C., Bureau of Social Science Research, July 1956

Evaluation based on questionnaires and interviews

Several of the overseas missions of the International Cooperation Administration have undertaken evaluation efforts based on questionnaires supplemented by extended interviews. The objective of these studies is the assessment of the manner in and extent to which returned International Cooperation Administration participants<sup>1</sup> are utilizing their training. This inquiry was often associated with other questions which sought to ascertain the returned participants' attitudes toward life and culture in the country of study.

Five studies have been chosen as typical examples of the techniques used. Four are fairly typical of the evaluations made by the International Cooperation Administration; one other, made in Brazil, is unique.

1. A Taiwan study in 1954 was based on the experience of 172 participants who had returned from training in the United States prior to February 1954.<sup>2</sup> Questionnaires were filled out after interviews conducted largely by Chinese "end-use"<sup>3</sup> employees of the United States Mission within a six-week period. Intensive interviews were held by Chinese Mission employees with a one-eighth sample of returned participants. These interviews were held in a spot apart from the participants' place of employment. This effort was supplemented by conferences with the heads of 16 Chinese governmental agencies which employed most of the participants, and with representatives of other agencies which had "first-hand information" about the participants' activities. The focus of these inquiries was on the identification of specific practical improvements

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<sup>1</sup> The designation of "participant" is preferred by the International Cooperation Administration to the term "fellow" because each student is defined as a participant in an International Cooperation Administration-assisted project in the host country.

<sup>2</sup> Evaluation of the Technical Assistance Program in Taiwan, Taipei, Mutual Security Mission to China, 1954

<sup>3</sup> The term "end-use" refers to employees whose principal function is to make field inspections on the ultimate utilization or employment of commodities brought into a country in support of a technical assistance project.

which the returned participants had made in their work. A by-product of these inquiries was the identification of intangible results such as: broader scope of interests, new literature read, working conditions for juniors and assistants, contributions to confidence and to morale, values of experimentation, and continuance of international contacts.

2. In a similar follow-up of Iranian participants, made in 1955,<sup>1</sup> 284 (69 per cent.) of the 404 Iranian participants during 1951-1955 were interviewed by nine University of Teheran faculty members under contract, or by Iranian provincial staff members. Information was obtained from returned Iranian participants, representatives of ministries or agencies in which they were employed, and the United States technicians who had regular contacts with these participants. Information was also collected on the educational history of each participant, his employment history, especially his present position, characteristics of his training experience in the United States, including his satisfaction with it, and the specific ways in which the training was being utilized. Attention was also given to the amount of responsibility in his present position as compared to that which he held before the grant, and to whether his salary and allowances were more or less than those which he received at the time of his selection. Additional questions related to his present and previous attitudes toward the country of study.

3. In 1956 Professor Ralph Spence conducted a questionnaire and interview study of 110 returned Pakistani participants who had been home longer than three months.<sup>2</sup> Questionnaires were sent to each of the 234 participants who had held International Cooperation Administration awards between 1951 and 1955. Half-hour interviews were conducted with a large sample of participants, regardless of whether they had returned questionnaires. Extended interviews were conducted with Pakistani and

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<sup>1</sup> Follow-up evaluation study of Iranian participants who received training in the United States under International Cooperation Administration sponsorship, Teheran, United States Operations Mission to Iran, 1956

<sup>2</sup> Spence, R. B. (1956) Technical training of Pakistanis in the United States, United States Overseas Mission to Pakistan

American officials who had regular contacts with returned participants. Ratings were also prepared by technicians from the United States who were on the mission staff to Pakistan. Questions were asked and information was gathered on the selection of participants, their orientation before departure, their programme in the United States, their utilization of training since return, and the effect of their experience on attitudes toward the country of study.

4. One of the most extensive analyses of International Cooperation Administration participants is about to be released.<sup>1</sup> It studies the 445 returned Filipino participants (38 per cent. of the total) who have been home six months or more. Oral interviews with Filipinos of one hour's duration were conducted according to an interview schedule with approximately 75 per cent. of a selected sample, after which returned participants completed a lengthy questionnaire. These returns were supplemented by some 250 mail questionnaires from specially-located Filipino supervisors who had direct and personal knowledge of the participants' work. Further, United States technical experts in Manila who were acquainted with the work of the participants completed a rating sheet on the effort and utilization of the United States training experience by each participant.

The study is pointed specifically at the problem of how participants and their supervisors feel about many aspects of the training programme; to what extent training obtained during their fellowships is being used; the factors associated with success or failure in this utilization; and the differences which exist between participants of different background, training and experience.

These studies may be regarded as typical of the "end-use" surveys conducted by International Cooperation Administration field staff, wherein the emphasis is primarily on the identification of specific examples of instances in which they have utilized the training obtained and, secondarily, on their understanding and opinion of life in the country of study.

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<sup>1</sup> Using United States training in the Philippines: A follow-up survey of Filipino participants, Ann Arbor, Institute for Social Research, 1959

5. An elaborate pilot study of returned Brazilian participants concentrated not so much on breadth or frequency of training utilization as upon trying to identify those characteristics of "successful" and "unsuccessful" participants which could be observed in advance and thereby serve as guides in future selections. Actually, this was not one but four experimental studies of Brazilian International Cooperation Administration participants.<sup>1</sup>

The first study examined intensively all participants in public administration from the Federal District during 1952-1954. Thirty participants were interviewed twice and subjected to a battery of six psychological inventories. The objective was the classification of all participants into two groups, namely: those who did, and those who did not utilize their training on return to Brazil. This was the criterion of "success" or "failure" for the purpose of the study. The preliminary classification of the 53 per cent. who "did" would have risen to 74 per cent. if selection committees had required all candidates, in advance, to show specific examples of improvements which they had made on their own initiative in their present jobs. Specifically, those who had made improvements in their positions before holding fellowships were, generally, the same individuals who utilized their training to make improvements after holding a fellowship.

Accordingly, the tentative conclusion of the study is that training does not make "improvers" out of "non-improvers". Conversely, those who were "improvers" before training are still "improvers" after training. No suggestion is made as to whether "improvers" are more effective after training. Naturally, if one cannot prove their effectiveness the extent must remain an unknown factor.

In July 1956 the Institute reported the reported the results of a survey which included 100 additional returned participants from various fields and areas. Emphasis was still focused on trying to find, not explanations or reasons for using or not

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<sup>1</sup> A pilot study on the evaluation of the Point IV Training Program, Parts I-IV, Rio de Janeiro, Institute de Pesquisas de Opiniões e Mercado (IPOM), 1955-1957

using training, but on correlative factors which might point to characteristics of success or failure which could be identified in advance.

Respondents were asked to cite and to give details of systematic attempts to evaluate their acquired training through formal courses, informal training of associates or subordinates, lectures, or some contribution to professional literature. Casual conversation and random responses to inquiries were not counted as positive examples of passing on training.

The results of this analysis underscored the importance of the "length of time" factor and confirmed the "improver-non-improver" factor in selections. A new criterion of high-low level of work interest was discovered, i.e. those with a high interest proved also to be the primary users and transmitters of training. When both "improvements before training" and high level of work interest were used as selection criteria, the proportion of returnees who utilized their training was lifted to nearly 90 per cent. There seemed to be a high correlation between those who utilized and those who transmitted training.

Other parts of this study were addressed to an intensive study of 35 labour participants and a later group of 65 in all fields who completed training during 1955 and 1956. The results of the latter study tend to confirm earlier findings.

#### Evaluation based on interviews

The Department of State of the Government of the United States has conducted, since 1948, an international exchange of persons programme which has as its primary objective the promotion of a better understanding of the United States in other countries and the increase of mutual understanding through an interchange of students, trainees, teachers, instructors, professors and leaders in fields of specialized knowledge. A principal purpose of the programme is to afford individuals in other countries an opportunity to visit the United States for study, teaching, research or other purposes and, while pursuing this specialized interest, so acquire a greater understanding of the institutions and culture of the United States. The current level of this programme involves about 6000 persons per year, of whom approximately two-thirds are exchanges from other countries to the United States.

In the 10 years in which this programme has been in operation, more than 30 evaluation studies have been made by Department of State staff members, both in the United States and abroad, independent research workers, and commercial research groups under contract. The three studies reviewed here were selected because they are typical of the several evaluation studies which have been made and because of the variety in the methods employed.

Between February and September 1955, Professor Donahue interviewed all of the 102 Greek grantees whom he could locate.<sup>1</sup> The returned grantees were alerted to the purpose of the interview by letters from United States Embassy personnel. The interview consisted of 90 questions largely open-ended and usually took place in Embassy facilities. One-third of the grantees were also visited at their offices or places of work.

This study was conducted through a chronological approach. After returning from the United States, grantees were asked about the accuracy of information on the United States, and attitudes toward the United States at three different points in time: prior to departure, during their visit, and at the time of interview. Evaluations by returned grantees on such matters as orientation before departure and duration and content of programme, for example, were given in terms of a "should have had" or "would like to have had" basis.

In 1955, International Research Associates, Inc. made an evaluation of the Italian exchange programme based on interviews with 205 returned exchangees.<sup>2</sup> In addition, interviews were conducted with 177 other Italians who were eligible for appointment as exchange visitors but who had not been able to accept the appointment for various reasons. One of the principal objectives of the study was

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<sup>1</sup> Donahue, F. M. (1956) Greek Fulbright Research Project - A study in cross cultural education, East Lansing, Michigan State University

<sup>2</sup> Italian exchangees: A study in attitude change and diffusion, New York International Research Associates, 1955

to ascertain the influence which returned exchangeees had on their friends and colleagues. Both the exchangeees and the eligibles were asked to supply the names of individuals whom they regarded as friends and with whom they frequently discussed public affairs and issues. Through interview questions on facts about life in the United States and attitudes toward the United States, it was possible to measure whether exchangeees influenced their associates at all, how much, and whether they influenced their associates more or less than the eligibles. The comparative degree of diffusion of information and of attitudes was the measure of evaluation.

A third study of the exchange programme dealt with 135 community leaders from 16 German cities who visited the United States between September 1952 and April 1953 to observe and study the operations of citizens' groups.<sup>1</sup> The objective of the study was to determine what changes took place in the attitudes and information of the exchangeees and to measure the diffusion of these attitudes and information to friends and associates in their home communities.

Interviews were conducted with each of the 135 exchangeees and with a sample (average of three per exchangee) of the individuals named by the exchangeees as persons whom they knew well socially or professionally. In addition, interviews were conducted with a sample cross-section of the adult population in each exchangee's home country.

In order to establish whether the exchange visit had resulted in any effect on information and attitudes, exchangeees were interviewed one to two months before departure and again three to four months after return. For methodological reasons not all members of each group (exchangeees, contacts, samples) were interviewed both before and after the exchangeees' departure but identical interview schedules were used for all groups. Elaborate controls were built into the study to conceal the sponsorship and purpose of the interviews and to insure statistically-matched sets of interviews with the contacts and the public.

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<sup>1</sup> Cooperative action teams: A study of effectiveness, New York, International Public Opinion Research, Inc., 1954.

Evaluation by experts

Two studies are separated from the others and reviewed together here because of their stature, and because of the fact that the ultimate evaluations were made by professionals, experts in public health and social welfare respectively.

In 1952 a Public Health Service multi-disciplined team made a survey of United States-assisted health programmes in Latin America for the Institute for Inter-American Affairs.<sup>1</sup> The survey team studied files and programme documents in Washington before undertaking field visits. Next, they made an intensive examination of field operations in three countries and of selected programmes in several others, including interviews with some former fellows. Finally, they held an extended group discussion with the chief United States health official in each country at a conference in Washington.

The study gives no evidence of evaluation beyond empirical observation and conferences with unselected former fellowship holders. The education and training opportunities afforded to both professionals and auxiliaries appear to be among the most substantial contributions made by the health programmes. However, there are virtually no data offered to support this conclusion. In several areas the evaluators mention, as examples, the specific contributions which former fellows are making. In other sections of the report reference is made to the need for improving methods of selection and for further studies of education and training projects.

The evaluation represents simply the empirical conclusion of a group of experts who read reports, made field visits to some projects and talked with health workers in selected areas.

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<sup>1</sup> Ten years of cooperative health programs in Latin America, Public Health Service, 1953

An effort to combine all data available in official files, questionnaire returns from governments, interviews with individuals and the evaluation of experts, is presented in the Evaluation of the programme of advisory social welfare services, 1947-1951.<sup>1</sup> In so far as it touches fellowships the study is limited to procedural observations on their number, fields of study, selection and implementation of study programmes. Fellowships are evaluated largely in terms of the ways in which the newly-acquired experience was used, namely, in lectures, published articles, "influence on policy" and new legislation, new social services, and new administrative techniques. No effort is made to quantify or weigh these contributions or to evaluate their quality.

Methodologically, this evaluation was based on staff interviews with government officials, former fellows, and United Nations experts in 15 countries. These interviews were written up in the field and were subsequently handed over to specially-selected experts for analysis and evaluation at headquarters. The relationship of these evaluation experts to the governments, fellows, technical assistance experts and others is not clear, but they were presumably selected in order to bring independent judgment to the material assembled.

A similar pattern seems to have been followed, at least during the early years of the technical assistance programme, by several United Nations agencies, although some relied on expert evaluators and others used central staff members.<sup>2</sup> One organization, indeed, concluded that it was not possible to evaluate a fellowship programme per se because a fellowship is normally an integral part of a technical assistance project and is connected to other forms of assistance.

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<sup>1</sup> United Nations. Department of Social Affairs, Document E/CN.5/266/Rev.1  
New York, 1953, 100 pp. (Sales No. 1952.IV.18) Also F. Price: \$ 0.75: 5/-;  
Sw.fr. 3.-

<sup>2</sup> See, for example, the statements submitted by the International Labour Organisation, the Food and Agriculture Organization and the World Health Organization, Expanded Programme of Technical Assistance, 1951-1954, E/TAC/Sc.1/R.1, pp. 265, 266, 274 respectively

Evaluation of short-course or seminar fellowships

This additional section on short-course or seminar fellowships is included here because of the experience of the World Health Organization in supporting such group training and educational activities, especially in the European Region, and of the United States National Science Foundation in sponsoring "summer institutes".

The purpose of the United States National Science Foundation is to improve teaching and training in science. In 1955 over 400 high school and college mathematics and science teachers attended 13 specially-sponsored National Science Foundation institutes at geographically-distributed academic centres. Questionnaires were administered to those in attendance during the first and last week of the institutes. An attempt was made to determine in what respects and to what extent the institutes fulfilled the expectations of those in attendance, using pre-institute levels of expectation as the yardstick.<sup>1</sup>

Those in attendance executed questionnaires showing their specific fields of interest, years of teaching experience, age, sex, income level, method and time of deciding to attend, specific needs, and expectations. In relating the pre-institute expectations and post-institute fulfilments, inquiries were made as to the degree of fulfilment of expectations in subject matter, teaching techniques, academic or prestige advancement, new theorems, counselling, and course materials.

One year later, 41 carefully-selected participants were interviewed at length concerning their activities before the institute, during the institute, and during the year elapsed since its conclusions.<sup>2</sup> In an attempt to judge the effectiveness and effects of the programme, participants were asked to note significant experiences gained through teaching activities, fairs and exhibits, counselling and guidance, professional advancement, administrative responsibilities, and influence on colleagues.

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<sup>1</sup> The National Science Foundation Summer Institutes of 1955, Washington, Bureau of Social Science Research, 1955

<sup>2</sup> The National Science Foundation Summer Institutes of 1955: 41 participants express their views a year later, Washington, Bureau of Social Science Research, 1956

Again in 1956, a similar evaluation was undertaken. However, the study was extended to include adequacy of informational materials, factors in decision to attend, other institutes needed, and degree of fulfilment of expectations of those attending.<sup>1</sup>

Interviewing is a key method of collecting data. However, because interviews take time, require trained staff and are therefore costly, they are used primarily to obtain information not available in other ways. The interview seems to be the only satisfactory method of obtaining data on attitudes, beliefs, perceptions, past experiences, expectations and anticipated behaviour. The proper use of the interview involves a number of complex considerations, such as who and how many to interview, who should do the interviewing, the design and conduct of the interview, and pre-testing and improvement of techniques before use. Despite the problems and cost involved, the interview is an essential tool for gathering information which may be gained only through direct questions to selected individuals.

### Summary

The recent evaluation studies reviewed here are only a sample of those recently undertaken. Several of these, regarded by administrators as "evaluations", are little more than percentage distributions of fellows by age, educational backgrounds or other personal characteristics. Others represent definitive individual judgements of the accomplishments and potential of individual fellows. In contrast, a few of the studies reviewed seem to move systematically from the "before", "during" and "after" phases of fellowships, in an attempt to suggest progressive changes on the part of fellows. Still others, not concerned with what happens during the fellowship experience, assess only the end result, i.e. the portion of training utilized on return. Fewer still take the important step of comparing fellowship-holders with non-fellowship-holders in an effort to show whether any changes may be attributed to the fellowship experience.

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<sup>1</sup> The National Science Foundation Summer Institutes of 1956: How 1100 participants responded to a questionnaire, Washington, Bureau of Social Science Research, 1957

The studies reviewed may be summarized as follows:

1. All agencies involved in awarding fellowships have made one or more efforts at evaluation.
2. The several agencies awarding fellowships have somewhat different objectives or ends in view, and have utilized different methods of evaluation.
3. Evaluation studies, regardless of quality or method, leave many questions unanswered. Even the most exhaustive evaluations fail to give more than clues to the long-range/short-range effects of their fellowships. Many evaluation studies are concerned with reasonably immediate effects; almost none are addressed to the fellowship experience, say, 20 years later.
4. Various-structured questionnaires and interview schedules are favourite tools of evaluators. The reviewed studies are inconclusive, or are not sufficiently detailed, as to the methods of pre-testing questionnaires or as to the training of local interviewers to make comparisons possible and fruitful. How questions are asked and how responses (especially to "open-end" questions) are recorded is a matter of importance.
5. The studies reviewed summarize numerous factual and attitudinal observations about what former fellowship-holders do and think. Relatively few try to delve into "why" former fellows do what they do or how deeply they feel. Easy readers will undoubtedly read a "cause-and-effect" relationship into changes of information or attitudes on the part of those who held fellowships, but most studies stop at the point of recording the fact of change.
6. Only those studies which undertake to examine information or attitudes of fellowship-holders and of matched non-fellowship-holders during a comparable period can attribute changes to the fellowship experience. Fellowship experiences are not uniformly compatible with or favourable to the objectives of the fellowship, and during the fellowship period the non-fellowship population is also undergoing change. Before accurate observations can be made that changes occurred as a result of a fellowship experience, evaluators must establish the fact that changes in individuals who held fellowships are significantly different from those of non-fellows.

7. It is easy to add as a final note that, while a great deal of study and some progress has been made in the study and evaluation of fellowships, especially in cross-cultural situations, there are many further studies to be made and a need for both the standardization of present methods and for the invention of better techniques.