EXTERNAL REVIEW MECHANISMS

—A Study of Their Role in Program Development and Grant Review—

CASE STUDIES

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CASE STUDIES

by

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PREFACE

The Law Enforcement Assistance Administration has been reviewing its procedures for program development and grant review to assess whether changes might increase the overall effectiveness of agency programs. One area of particular interest has been whether revised external review mechanisms would be of value. To increase its knowledge of these mechanisms, LEAA commissioned The Lazar Institute to study the use of external advisors by selected Federal agencies and private foundations.

The specific objectives of the study were:

- to ascertain how external review mechanisms are used by selected institutions;

- to describe alternative models for using external advisors in both program development and grant review, along with the advantages and disadvantages of these models;

- to assess the potential utility of these various external review mechanisms to LEAA; and

- to provide suggestions to LEAA concerning possible revisions in present program development and grant review mechanisms.

The study has led to the development of two documents, a final report and this compilation of case studies. The final report, entitled "External Review Mechanisms: A Study of Their Role in Program Development and Grant Review,":

- describes alternative models for external review mechanisms in both the program development and grant review areas;

- considers several major policy issues related to adoption of any external review mechanism;

- discusses possible external review mechanisms within
  the context of LEAA activities; and

- presents suggestions concerning program development
  and grant review for LEAA consideration during imple-
  mentation of any revised advisory mechanisms.

These case studies analyzed the specific external review mechanisms

used by seven organizations:

- the National Institute of Mental Health's Center for
  Studies of Crime and Delinquency;

- National Science Foundation, particularly the Research
  Applied to National Needs (RANN) program;

- Environmental Protection Agency, especially the programs
  conducted by the Office of Research and Development;

- Rehabilitation Services Administration;

- Police Foundation;

- Ford Foundation's National Affairs Program; and

- Carnegie Corporation (foundation), particularly its Public
  Affairs Program.

For each organization Lazar considered such areas as:

- the way in which programs are developed and priorities
  among programs are established;

- the administrative regulations for submission, review,
  approval and award of specific grant projects;

- the use of external reviewers in the program develop-
  ment and grant selection processes;

- the structure of the external review mechanisms used; and

- the advantages and disadvantages resulting from the external
  review mechanisms.

To analyze these topics, Lazar conducted interviews with a variety of

people having different perspectives on the external review processes.

These individuals included the directors of the organizations or know-

ledgeable intermediate level officials, program officers, external ad-

visors and grantees. In addition, each organization designated a liai-

son who provided detailed information on external review procedures as

well as relevant background data on the institution and its program.

The authors would like to thank all those who tried to help us develop accurate, useful case studies. If we succeeded, it is largely due to their efforts. Any remaining errors of fact or judgment are solely our responsibility.

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CENTER FOR STUDIES OF CRIME AND DELINQUENCY

NATIONAL INSTITUTE OF MENTAL HELATH

INSTITUTIONAL SETTING

The National Institute of Mental Health (NIMH) is part of the Alchohol, Drug Abuse, and Mental Health Administration of HEW's Public Health Service. The mission of NIMH is to develop scientific knowledge of factors which affect mental health and apply this knowledge in treatment and preventive services. To carry out this mission, NIMH plans and administers a national program which includes a wide range of biomedical and behavioral science fields.

NIMH's Center for Studies of Crime and Delinquency was created in October 1968 to unify and focus the research on crime and delinquency which had been supported by various agency divisions for nearly twenty years. The Center supports efforts to understand and deal with mental health problems reflected in deviant, maladaptive, aggressive and violent behaviors that frequently result in criminal and juvenile offenses. Current Center priorities include:

- development of treatment models in a variety of
  community settings for children who persistently
  engage in delinquent and related problem behaviors;
- support of studies leading to development of improved
  criteria for decision-making related to difficult law
  and mental health issues, such as determination of
  competency to stand trial, handling of mentally ill or
  defective juvenile and criminal offenders, and invol-
  untary civil commitment of the mentally ill;

- support of basic research contributing to understanding individual violent behavior; and

- support of longitudinal studies to explore the relation-ship between delinquent behaviors and adjudicated delinquency, to determine points of intervention which could avert progress toward serious crimes.

The Center has six professional staff members, and awarded $3.6 million in research grants and $1.6 million in training grants in fiscal year 1975. It awards grants to educational institutions, public and private non-profit agencies, mental health facilities, and hospitals. Individuals enrolled in graduate programs in crime and delinquency are eligible for the Center's research training fellowships.

ADVISORY COMMITTEES

There are two advisory committees which are formally charged with participation in grant application review:

- the Crime and Delinquency Review Committee; and

- the National Advisory Mental Health Council.

While program development at the Center is a staff function, the review committee, as noted below, has some input into that process. The Crime and Delinquency Review Committee meets three times a year to perform the key role of conducting a scientific and qualitative review of grant proposals. The Committe usually consists of ten members who serve overlapping terms of up to four years. A list of current members is included in Appendix C. Since the Center receives proposals from a wide range of academic disciplines, including law, psychiatry, sociology, psychology, criminology, education, and others, the Committee includes experts from several fields.

Committee members are formally nominated by the Executive Secretary, a professional staff person at the Center who assumes responsibility for the operation of the Committee in addition to other duties. The Executive Secretary receives suggestions for nominees from a variety of sources, including other Center and NIMH staff, professional publications, and professional contacts. While factors contributing to a diverse membership are important at the Center, all nominees must meet high standards of scientific and professional competence.

Nomination packages are submitted for each nominee. These include the expert's resume and other documentation which justify the nomination. The Center's nominees must be approved by a committee of NIMH deputy directors and are formally appointed by the Secretary of Health, Education, and Welfare. Nominees who are members of another NIMH standing committee, or who have served in that capacity within the past year, are ineligible for appointment to the Center's review committee.

The Center seeks to avoid control of the Committee by any group by including qualified men and women from a variety of universities, geographic areas, and minority groups. In the past the Crime and Delinquency Review Committee members were the most prestigious and best-established people in the crime and delinquency fields. More recently, the Center has moved away from that bias to include very competent people in the early and middle years of their careers who may be more sympathetic to unknown researchers and innovative proposals.

For the past three years, people holding Center grants have not been appointed to serve on the Committee, although people who received grants in the past have been eligible. Few Committee members have submitted grant applications during their tenure. When applications have been submitted by

members, the Executive Secretary has formed a special committee to review them. Committee members may not participate in review of applications from their own universities. When other conflicts of interest arise, members are expected to inform the Executive Secretary of the problem and exclude themselves from the proceedings.

The National Advisory Mental Health Council advises the Director of NIMH, the Administrator of the Alchohol, Drug Abuse and Mental Health Administration (ADAMHA) and the Secretary of the Department of Health, Education and Welfare regarding the policies and programs of the Department in the field of mental health. All projects approved for funding by the various NIMH review committees, including the Crime and Delinquency Review Committee, must also be approved by the Council before they are eligible for funding. The Council rarely reverses a Review Committee decision. However, the Council members may give special attention to proposals on which the Committee's vote represents a strong split, or which raise important policy issues or which may be of special interest to them.

The Council consists of the Director of NIMH, the Chief Medical Officer of the Veterans' Administration or his representative, and a medical officer selected by the Secretary of Defense, as ex officio members; six outstanding medical or scientific experts on the study, diagnosis, or treatment of psychiatric disorders, and six other leaders in fundamental sciences, medical sciences, or public affairs. Current members are listed in Appendix D. Members are appointed for overlapping four-year terms, and are ineligible for reappointment within one year after completing a term.

PROGRAM DEVELOPMENT

Determination and periodic review of the Center's research priorities are staff functions, with considerable input from research producers and

users. Although no formal process guarantees that opinions of experts out-
side the Center will be solicited during program development at the Center,
several means are employed to secure these opinions. For example, part of
the agenda of each Crime and Delinquency Review Committee meeting is set
aside for discussion of the Center's research priorities. Consideration of
individual grant applications may lead to a discussion of the "state of the
Art" and areas where research efforts should be pursued.

Committee members may also notice gaps among the proposals the Center
has received where existing research is inadequate or where there is a lack
of interest. In these instances a member may encourage submission of needed
proposals, or suggest the names of researchers who may be interested in
these areas to the Center's staff so that they may encourage applications.
In addition, opinions of experts who are not Committee members are solicited
on an ad hoc basis in letters sent out periodically by the Center's Director.

GRANT SELECTION PROCESS

At the Center for Studies of Crime and Delinquency, prospective
applicants are encouraged to consult with Center staff, and to submit
outlines or draft proposals, before submitting formal grant applications.
During this pre-application phase professional staff members discourage
proposals of poor quality or outside the Center's areas of interest, and
encourage and assist in developing promising proposals.

All formal proposals are received by NIMH's Division of Research
Grants. This office refers grant applications concerning crime and
delinquency, law and mental health, and individual violent behavior to
the Center. There, the professional staff review the applications for
completeness and form. The Executive Secretary assigns primary and
secondary reviewers from among interested and qualified Review Committee

members to prepare detailed critiques of the proposed project. When the subject area of an application is outside the expertise of any committee member, consultants may be hired to act as primary and secondary reviewers. Approximately one month before the Committee meeting, each member receives copies of all applications to be considered.

At the meeting each proposal is considered in detail by the Committee members, with the primary and secondary reviewers leading the discussion. Center staff may answer questions from Committee members about proposals, but staff members do not act as advocates for proposals and have no formal role at the Committee meetings. However, staff does provide guidelines to be used by the reviewers in considering proposals (see Appendix A).

When an application has been discussed sufficiently to provide a basis for consensus, a member moves for a recommendation for approval, disapproval, or deferral of the proposal. Members vote on the motion. Applications approved by the majority receive a numerical rating by the Committee members, according to their own ideal scales of merit and overall quality, not in comparison with the other applications.

A vote to defer the application occurs when the available information provides an inadequate basis for decision. In these cases, further information or clarification is obtained from the applicant or through a site visit, and the application is considered at the next meeting. If the Committee believes that the required information can be obtained in time to make a recommendation for the next National Advisory Mental Health Council meeting, they may defer the application for a mail ballot.

The Center's professional staff prepares summaries of the applications considered by the Review Committee and Committee members' criticisms. Summaries of applications receiving split votes must include strengths and weaknesses pointed out by majority and minority reviewers. These summaries

are sent to the National Advisory Mental Health Council, whose approval
is a statutory requirement for funding of a project. After the Council
vote, applicants whose proposals have been rejected are notified of that
outcome and of the reasons for the decision. Reviewers' suggestions for
improving an approved project are provided to successful applicants.

Approved projects are usually funded in order of the Review Committee's
numerical scores. However, the staff may recommend changes in this order,
due to programmatic considerations. Such changes must be approved by the
Director of NIMH's Division of Special Mental Health Programs, of which
the Center is a part. A project may be approved but not funded, as a
result of Center Budgetary constraints. Such a project remains eligible
for funding during the next three review cycles (about one year).

PROCESS ASSESSMENT

There are a number of advantages and disadvantages to the mechanisms
used by the Center for Studies of Crime and Delinquency to solicit advice
from outside experts concerning program development and grant review. Major
advantages include:

- The interdisciplinary nature of the Crime and Delinquency
  Review Committee permits each proposal to be considered
  from a wide breadth of perspectives.

- All applications receive an outside review by a committee
  with diverse membership, reducing the opportunity for
  arbitrary treatment of potential grantees.

- The use of a committee format provides opportunities
  for experts to educate each other and resolve disagree-
  ments about the worth of specific studies to an extent not
  possible if only individual reviews are made, with no
  opportunity for exchange of ideas.

- Outside advisors often have greater technical expertise than in-house staff.

- Collaboration among expert reviewers during the review process and site-visits frequently results in suggestions for improving an approved project.

- The use of a committee filter provides a buffer against attempts by members of Congress and other partisans to apply political pressure in the grant selection process.

Major disadvantages include:

- The process is a lengthy one, about eight to ten months from submission of formal application to receipt of first check. Therefore, it is difficult to support any project which must be initiated quickly in order to be completed successfully.

- The experts who are best qualified to evaluate proposals as Review Committee members are often also the best researchers. As a result, advisors and grantees are usually well-known to each other, and are sometimes the same people. Therefore "clubbiness" and possible conflicts of interest could result.

- It is difficult to implement program priorities, since the funding process is oriented toward selecting the best of the grant applications which are received. Consequently, a proposal of crucial substance may not be funded. if its quality score is not a high one.

- Academically rigorous types of research are more likely to be funded than less rigorous projects.

CRIME AND DELINQUENCY REVIEW COMMITTEE

REVIEWER'S GUIDE

Reserach Grant

DESCRIPTION (Prepared by the Primary Reviewer)

The description should provide a clear and concise summary of the proposal, as presented by the applicant. This would usually include a summary of the rationale, specific aims and objectives, sampling procedures, research design and methods, data analysis plan, and purported relevance and significance. It should also include pertinent information regarding the background and experience of the investigators, related research conducted by the applicants, and budget.

HUMAN SUBJECTS (Prepared by Primary and Secondary Reviewers)

This section should summarize the proposed procedures as they may involve the use of human subjects and specifically address the adequacy of procedures relative to the protection of the rights and welfare of these subjects. (the Human Subjects Review form ADM-440 outlines some of the relevant considerations, elgl, risks, informed consent, special populations, etc.)

CRITIQUE (Prepared by Primary and Secondary Reviewers)

The critique should present a critical discussion of the relative strengths and weaknesses of the proposal. This would include (but not be limited to) such considerations as conceptualization, evidence of knowledge of the related literature and research, adequacy of the research design and methods, qualifications of the investigator and project staff, adequacy of resources and facilities, appropriateness of the budget, and general relevance to the crime and delinquency field. If the application is for renewal of a grant, the critique should include an evaluation of progress.

RECOMMENDATION (Made by Primary and Secondary Reviewers)

APPENDIX B

SUMMARY OF GRANT REVIEW DATA

FISCAL YEAR 1975

Item	Center for Studies of Crime & Delinquency	National Institute of Mental Health
Number of applications received	76	1600
Number of applications reviewed by outside advisors	76	1600
Number of applications approved	16	700
Total dollar value of approved grants	$1.4 million*	$24.7 million
Smallest grant	$13,000*	$5,000
Largest grant	$222,000*	$310,000
Number of external reviewers	19 (approx.)	180 (approx.)
Number of outside advisors on standing review panels	9	150 (approx.)
Number of standing review panels	1	16
Number of panel meetings per year	3	3
Length of each meeting	3 days	2 1/2 days
Term of panel members	2 to 4 years	2 - 4 years

* First year total direct costs.

APPENDIX C

CRIME AND DELINQUENCY REVIEW COMMITTEE MEMBERS

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APPENDIX D

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NATIONAL INSTITUTE OF MENTAL HEALTH
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RESEARCH APPLIED TO NATIONAL NEEDS PROGRAM

NATIONAL SCIENCE FOUNDATION

INSTITUTIONAL SETTING ·

The National Science Foundation (NSF) was established in 1950 to
initiate and support basic research in the sciences. The National Science
Foundation Act, as amended, charges NSF with responsibility to support
fundamental scientific research, support and oversee large-scale research
facilities and programs, support research applied to national needs,
strengthen the infrastructure of science, improve science education, and
support analyses to aid in developing policy recommendations.

NSF has one administrative directorate, and six with specific scientific
fields. The Research Applied to National Needs program (RANN), part of
NSF's Research Applications Directorate, was established in 1971 to:

- increase the use of science and technology in solving selected
  national problems:

- improve the return on the nation's investment in government-
  sponsored scientific research and promote greater utilization of
  research results;

- shorten the lead times between basic scientific discoveries and
  relevant applications;

- provide early warning of potential national problems, and initiate
  research useful in avoiding, minimizing or solving such problems; and

- provide experimental results, information, and policy options to
  potential users in both the private and public sectors.

Of NSF's $775.4 million budget in FY 1976, $75.5 million was allocated
to the RANN program. RANN's emphasis on utilization of project results,
and the interdisciplinary character of its undertakings, distinguish it
from other NSF programs.

RANN currently includes four program divisions, each concerned with a
major problem area:

- Advanced Energy Research and Technology--The energy program
  focuses on development of alternative resources to meet national
  energy requirements.

- Advanced Environmental Research and Technology--RANN's environmental
  concerns include determining the environmental effects of energy
  production and consumption, developing environmental management
  concepts and tools, and alleviating threats to natural and man-made
  environments.

- Advanced Productivity Research and Technology--The productivity
  division concentrates on providing new and improved technology
  to improve delivery of goods and services, particularly in the
  public sector.

- Exploratory Research and Problem Assessment--The principal concerns
  of this program are the study of the immediate and long-range effects
  of technology introduction, extension, or modification; and examina-
  tion of the potential of scientific and technical advances in order
  to promote their development and utilization by users.

More specific descriptions of these RANN program elements are listed in
Appendix A.

In addition to these divisions, the Research Applications Directorate's
Intergovernmental Science and Research Utilization Program complements

RANN's activities by increasing State and local capability to use science
and technology in decision-making processes, providing user perspective
on RANN programs, and developing procedures and programs to promote
utilization of RANN research results.

The RANN program is conducted primarily through grants and contracts
to colleges, universities, public or private laboratories, State and
local governments, and other profit and non-profit organizations. Researchers
without organizational affiliation may also submit proposals, but awards
to individuals are rare.

Figure 1 illustrates the organization of the RANN program. The
program managers, who are primarily responsible for awarding and managing
grants and contracts, are highly educated and generally have had considerable
work experience in government, industry, or academic institutions.
Appendices B and C present the findings of the General Accounting Office's
1974 study of the educational level and work experience of RANN's "key
personnel", including the Assistant Director for Research Applications
(AD/RA) and deputies, division directors, office directors, and program
managers. The AD/RA who is assisted by the deputies, is responsible for
the overall activities of the Directorate and supervises the division and
office managers. These staff in turn direct the work of the program managers.
Although the divisions and offices listed in Appendix C do not represent
RANN's current organization, the findings concerning the qualifications
of the professional staff remain substantially accurate according to RANN
officials.

ROLE OF ADVISORS

Three types of standing committees are instrumental in program develop-
ment and/or grant application review in the RANN program:

- The National Science Board;

- The RANN Advisory Committee; and

- The Advisory Panels to each program division.

The National Science Board

This board was created by the National Science Foundation Act of 1950 to determine the Foundation's policies. In practice, the Board has reserved policy-making authority in some areas, and delegated this responsibility to the Director in others. The Board is composed of the Director of the Foundation as an ex officio member with full voting privileges, and twenty-four distinguished professionals in the basic sciences, medicine, engineering, agriculture, education, public affairs, and industry. Members are appointed for six-year terms by the President, with the advice and consent of the Senate. Appendix D lists the current members of the National Science Board.

In fulfilling its legislated responsibility to determine Foundation policy, the National Science Board reviews plans for new programs, and grant applications requiring minimum annual support of $500,000 or total support of over $2 million. In addition to attending the two-or three-day monthly Board meetings, each member spends approximately one and one-half months per year doing Board-related work. This may include serving on Board subcommittees, attending and testifying at Congressional hearings, or visiting Foundation-sponsored projects. Members of the Board receive a $100 per day consultants' fee.

The National Science Board may use the entire Foundation as its staff, by, for example, asking offices or individuals to provide technical infor-mation concerning a proposed program area, or an assessment of Foundation activities in a given field. The Board has its own support staff which includes three full-time and two part-time clerks and secretaries under the

supervision of an executive secretary. In addition to supervising the work of others, the executive secretary monitors Congressional activities of interest to the Board, and acts as the Board's chief secretary and liaison with the rest of the Foundation.

RANN Policy Advisory Committee

The RANN Policy Advisory Committee advises the Assistant Director for Research Applications on policy issues which are not confined to a single RANN program, such as whether to terminate or undertake activities in a particular area. It does not participate in grant application review. The Committee meets twice per year for two days. Its members include a national representation of researchers and research users in all RANN program areas, who are selected by the Foundation's Director and Assistant Director for Research Applications with the concurrence of the National Science Board. RANN's division and office directors and program managers play an active role in suggesting candidates to the Assistant Director. In addition, they make annual presentations to the Committee concerning their programs' directions and achievements, and suggest issues for consideration by the Committee to the Assistant Director. The RANN Policy Advisory Committee provides feedback on the program presentations, and makes general recommendations concerning the issues before it.

Advisory Panels

The Advisory Panels to each program division are the third type of standing committee within RANN. These panels, which vary in size, meet twice per year primarily to address program development issues. Their main activities are reviewing and making recommendations concerning the program's portfolio of projects in light of program objectives. The division directors

may refer grant applications to them for review when consensus on the merits of the proposal has not been reached. Each division director, in consultation with the program managers, selects the Advisory Panel members from among researchers and research users in the program area.

In addition to these committees, RANN uses researchers and research users in a variety of ways:

- RANN staff members participate in and organize conferences of knowledgeable professionals to assess program options in new areas.

- Individual experts are frequently called upon informally for opinions concerning prospective programs and for comments on proposed projects and/or applicants' qualifications.

- Researchers and research users also complete written reviews of grant proposals, either individually or as members of panels evaluating several applications in a single area.

- Many RANN program managers encourage applicants to include advisory panels in designs for projects requiring in excess of a particular dollar amount. One program manager, for example, includes advisory panels to establish intermediate research targets and periodically
- assess the grantees' progress in most projects costing more than $75,000.

In addition, grants or contracts may be awarded to organizations to complete state of knowledge reviews in prospective research areas and possibly to devise research agendas. These organizations frequently use panels of experts to assist them with these tasks.

PROGRAM DEVELOPMENT

Primary responsibility for program development rests with the program managers, subject to review by the division directors and the Assistant Director for Research Applications. The division's budget represents one

constraint on the program manager's program development activities. Although division directors are relatively free to allocate funds to individual program elements, they must choose among the competing priorities of their program managers. In making program allocation decisions, division directors consider:

- the relative success of existing programs in meeting their objectives;
- the ability of existing and proposed programs to maintain a satisfactory relationship between researchers and users;
- the time frame for proposed research;
- the number and quality of unsolicited proposals received, and
- recommendations from conferences and studies.

The last four of these criteria influence the program manager in formulating program priorities which compete for the division funds. Additional constraints influencing the program manager in this process are the opinions of the National Science Board concerning research needs, and the consensus of opinion in the program manager's field as to which issues should be addressed in RANN programs.

The General Accounting Office's study of RANN revealed that approximately 35% of the fiscal year 1974 programs originated in another National Science Foundation Directorate; 14% were outgrowths of the interest and past experience of RANN staff; 8% resulted from the solar energy research agenda sponsored by RANN and NASA; 8% of the programs stemmed from miscellaneous sources; and 35% resulted from interrelated factors, particularly consideration of unsolicited proposals and discussions with other Federal agencies. Outside advisors participate in the formulation of program concepts which are not specified in this breakdown in the following ways:

- the program managers hold informal conversations with experts knowledgeable in their areas of interest, particularly at professional meetings;

- award of grants or contracts can be awarded to organizations to
conduct a conference to define researchable issues, or to com-
plete a state of knowledge review, frequently with the assistance
of outside advisors; and

- conferneces are sponsored by the National Science Foundation, often
in partnership with another agency or organization, to discuss po-
tential research subjects in a new field of interest.

In keeping with the program's emphasis on research utilization, RANN's ad-
visors include research users as well as researchers.

When conferences are used to assist in program development the result
is publication of the proceedings which suggest priority issues for RANN's
support. The product of a grant or contract to help define the research
issues is considerably more elaborate. It usually consists of a compre-
hensive state of knowledge review, and the evaluations of prospective
RANN research areas. The final report may even include a detailed research
agenda, with a list of projects to be completed and suggested researchers
to conduct them.

The opinions of outside advisors concerning production and utilization
of research, whether gleaned through conversations or formally presented in
proceedings or research agendas, provide one input for the program manager's
draft program plan. When the RANN revenue sharing program was developed, for
example, the draft plan was based on RANN's assessment of related research
already in progress; research subjects recommended by a revenue sharing con-
ference of researchers, Federal officials, and interested community groups,
sponsored by an NSF grant to the National Planning Association; and the avail-
ability of data. Proceedings and final reports may be published in profes-
sional journals to encourage feedback from potential researchers and research

users, and to alert prospective applicants to RANN's interest in receiving proposals in a specific area. Conferences and grants for program development may be used as the basis for a published RANN program solicitation, inviting proposals for specific projects, or a program announcement identifying high priority research issues in a general area.

Once the program plan has been completed, it is reviewed by the division director, who allocates division funds to support the new projects. The Assistant Director for Research Applications and the National Science Board may review new programs as they are developed in addition to reviewing all programs during the annual budget preparation process. The RANN Advisory Committee also participates in the program development process through its response to the annual presentation of activities by the program managers.

GRANT SELECTION PROCESS

Prospective grantees are encouraged to submit preliminary proposals before completing formal applications. Preliminary proposals are reviewed by the appropriate program managers, who may solicit comments on them from outside experts. The program manager assesses the merits of the proposed project, and encourages or discourages submission of a formal application.

Formal applications are submitted to the program managers who have had prior experience with the proposed projects, or to the Assistant Director for Research Applications' Office of Programs and Resources where they are logged in and distributed to the appropriate RANN division. The division director assigns these proposals to program managers who are responsible for completing technical reviews of the proposed projects. Program managers send applications submitted directly to them to the Office of Programs and Resources for necessary processing, and then assume responsibility for reviewing them.

The program managers' primary concerns in proposal evaluation are the quality of the applications and the anticipated utilization of the results. The following criteria guide the program manager throughout the proposal evaluation process, and usually provide the frameword for comments by reviewers:

- applicability to RANN program needs and objectives;

- scientific merit;

- the plan for managing the research project;

- plans for distributing and utilizing results;

- qualifications of the research team;

- relationship to other RANN projects within a given program area;

- reasonableness of costs to benefits; and

- funds available in the program area.

Program managers review the proposals themselves, and seek reviews from at least two people familiar with the area of concern from within or outside the Foundation. All "reasonable" proposals are reviewed. "Unreasonable" proposals, which are not reviewed, are those which are too general to warrant the program manager's serious consideration, including, for example, those which state areas to be addressed but lack detailed methodologies.

Reviews by researchers and research users are usually completed by mail. When a large number of applications have been submitted in a single subject area, a panel of reviewers may be formed to hear presentations by the grantees. Advisors and NSF staff may also make site visits to prospective grantees to assist them in assessing the quality of proposed projects. The program managers may solicit additional outside reviews at their discretion, and are likely to do so unless there is unanimous agreement that a proposal is of poor quality and should be rejected. The written reviews may also be supplemented by experts' opinions, obtained through telephone conversations or other contacts.

When the outside reviews have been completed, the program manager makes an overall evaluation of the proposal and recommends to the division director that the proposal be approved or rejected. If the division director agrees that a proposal should be rejected, a rejection notice is prepared, subject to the approval of the executive committee of the AD/RA Grant Review Board. When the division director concurs in an award recommendation, a grant review package is prepared, summarizing the proposal and the evaluations. The package is submitted to the AD/RA Grant Review Board which provides final substantive review and approval prior to NSF's administrative process of negotiation and award. The Board is composed of the Research Applications Directorate's Deputy Assistant Director for Science and Technology; the Deputy Assistant Director for Analysis and Planning; the Director of the Office of Programs and Resources; and designated representatives from the Office of General Counsel, the Grants and Contracts Office and the Office of Government and Public Programs. Grants requiring support of more than $500,000 in a given year, or total support of $2 million or more, must be approved by the National Science Board. When the necessary approvals have been secured, NSF's Office of Grants and Contracts completes the negotiation and award process.

As this description of the grant review process indicates, the division director may reverse the program manager's decision on a proposed project, or may return it to the program manager with a request for clarification or additional reviews. Since the National Science Board reviews only the applications that the program manager believes should be approved, its authority to review the program manager's decisions does not really apply to rejected applications. In practice, however, decision-making authority with regard to grant applications is usually exercised by the program managers, whose selection of proposals for funding is influenced by their awareness of budget constraints and the interests and standards of the division directors and the National Science Board.

PROCESS ASSESSMENT

The RANN program's use of outside advisors in its program development and grant review processes results in the following advantages and disadvantages:

Advantages

- RANN staff may use outside researchers and research users to supplement in-house expertise when determining which areas of concern should be pursued, and designing specific programs.

- By obtaining at least two reviews of each proposal the possibility of arbitrary treatment of applications is reduced.

- Since no review by a standing panel of outside advisors is required, problems of scheduling meetings are avoided.

- Review of applications by outside experts provides a buffer against political pressure on Foundation staff to fund specific projects.

- Proposals may be processed more quickly with an ad hoc review system than with a process that must be phased with infrequently scheduled peer review committee meetings.

- Since outside experts are used in an advisory capacity, RANN staff retain control over program development and grant selection decisions.

Disadvantages

- There is no formal process to insure that input from concerned outsiders will be obtained and considered by RANN staff in the program development process.

- Conflicts of interest may result when experts involved in program development or proposal review have applied, or are likely to apply, for support for a project in the same area.

APPENDIX A

RANN PROGRAM ELEMENTS

Energy

Exploration

Conversion

Distribution

Storage

Conservation

Environment

Environmental Effects of Energy

Environmental Aspects of Trace
Containments/Chemical Threats
to Man and the Environment

Regional Environmental Management/
Technological Strategies for
Environmental Risk Management

Regional Environmental Management/
Measurement and Prediction of
Environmental Risk

Regional Environmental Management/
Institutional Methods

Disasters and Natural Hazards/
Weather Modification

Disasters and Natural Hazards/
Fire Research

Disasters and Natural Hazards/
Earthquakes

Disasters and Natural Hazards/
Social Impact of Natural Hazards

Productivity

Public Sector Technology/Advanced
Urban Technology

Public Sector Technology/
Excavation Technology

Public Sector Technology/
Instrumentation Technology

Public Sector Technology/
Communications Technology and
Public Services
Technology
Regulatory and Policy Research

Productivity Measurement
Service Productivity and Inter-
governmental Structure

Regulation

Public Policy and Human Resources/
Disadvantaged

Public Policy and Human Resources/
Consumer Policy

Exploratory Research & Problem Assessment

Technology Assessment

Advanced Industrial Processing

Resources/Food Policy Analysis

Resources/Food Delivery System

Resources/Alternative Agricultural
Techniques

APPENDIX A
Exploratory Research & Problem
Assessment (Continued)

Resources/Agricultural and Forest
Biomass Utilization

Resources/Nonconventional Protein

Resources/Nonrenewable

APPENDIX B

Degrees Held By Field of Study

For RANN Key Management

Officials

Field of study	Type of Degree			Total	As a percent
	Ph.D's	Master's	Bachelor's		
Physics	6	9	7	22	12
Chemistry	2	1	5	8	4
Biology	2	1	3	6	3
Other physical sciences	6	8	8	22	12
Aeronautical Engineering	1	2	2	5	3
Other engineering	13	18	25	56	30
Economics	5	6	6	17	9
Sociology	3	4	3	10	5
Other social sciences	2	-	3	5	3
Business or public administration	1	4	4	9	5
Other	3	6	15	24	13
Total	44	59	81	184	100

From: Report of the Comptroller General of the United States, Opportunities for Improved Management of the Research Applied to National Needs (RANN)Program, p. 117.

RANN Key Management Officials
Work Experience by Type of Organization

Division or office	Number of key management officials	Federal Government	Indus-trial	Academic	Research perform-ing	State and local govern-ment	Consult-ing	Other organizations	Total
					(years)				
Office of the Assistant Director	5	35	25	17	3	-	-	-	80
Advanced Technology Applications	9	33	50	59	5	-	1	-	148
Advanced Energy Research and Technology	17	100	69	84	37	1	-	-	291
Public Technology Projects	5	4	81	12	-	-	-	-	97
Environmental Systems and Resources	11	80	21	45	27	-	4	-	177
Social Systems and Human Resources	10	33	11	22	20	8	-	-	94
Exploratory Research and Problem Assess-ment	5	30	9	12	16	-	-	4	71
Programs and Resources	2	19	-	5	-	-	-	-	24
System Integration and Analysis	7	13	28	44	3	-	-	-	88
Intergovernmental Science & Research Utilization	9	66	33	8	-	31	-	-	138
Total	80	413	327	308	111	40	5	4	1208

APPENDIX D

NATIONAL SCIENCE FOUNDATION

NATIONAL SCIENCE BOARD

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RANN Key Management Officials
Work Experience by Type of Organization

Division or office	Number of key management officials	Federal Government	Industrial	Academic	Research performing	State and local government	Consulting	Other organizations	Total
		(years)							
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Total	80	413	327	308	111	40	5	4	1208

APPENDIX D

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NATIONAL SCIENCE BOARD

APPENDIX D, continued

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ENVIRONMENTAL PROTECTION AGENCY

INSTITUTIONAL SETTING

The Environmental Protection Agency (EPA) was formed in December 1970 to consolidate Federal environmental activities into a single independent agency. It combined fifteen sections from various departments and independent agencies concerned with environmental issues. EPA's principal areas of concern include water quality, air, water supply, solid waste, radiation, noise, pesticides, and toxic substances. The legislation which defines EPA's authority requires the agency to:

- develop and analyze scientific information to be used in determination of standards, enforcement, and other EPA activities;
- establish national standards and regulations for pollution control;
- provide grant and technical assistance to State and local governments for planning and implementing environmental requirements and programs;
- enforce standards and regulations in environmental areas of concern for which the Federal government has primary responsibility; and
- provide stimulus and support for State enforcement efforts.

EPA determines specific priorities annually in each of its program areas. Agency research projects are designed to solve problems defined by the various program offices. Research priorities for the current fiscal year focus on providing a basis for setting standards concerning the impact of various pollutants on human health, and developing the technology necessary to develop and enforce feasible regulations in accord with the agency's mandates.

EPA's research program is conducted through four mechanisms: in-house projects, interagency agreements, contracts resulting from formal requests for proposals (RFP), and grants or contracts resulting from unsolicited proposals. The proportion of research carried out through each of these mechanisms varies considerably among EPA research groups, depending on the nature of the research conducted. While this case study considers the role of outside advisors in developing research programs using all of these mechanisms, the primary focus is on the procedures governing award of grants and unsolicited contract proposals.

EPA research groups currently conduct as little as 15% or as much as 90% of their extramural research though unsolicited grant and contract proposals. These include proposals that are outgrowths of work completed under previous contracts.

ROLE OF ADVISORS

EPA uses outside advisors in two capacities:

- to review applications for grants and contracts; and
- to serve on the Science Advisory Board which advises on and assesses the agency's scientific programs.

Grant applications are reviewed by experts selected by EPA's laboratory and headquarters personnel and the Office of Research and Development (ORD). Reviewers may be employees of other Federal agencies, private industries, or universities. Applications for contracts are reviewed by panels consisting of experts from EPA and other Federal agencies. Grant applications are ordinarily reviewed by three experts outside EPA. The program officer selects two reviewers from industry and academia who are considered

qualified to evaluate the application. ORD chooses a "random" reviewer from a list of approximately 1000 experts in various fields who were initially recommended as reviewers by program staff, and who agreed to serve in that capacity.

The Science Advisory Board (SAB), composed of between 75 and 100 eminent scientists and engineers, provides expert, independent advice to the Administrator on scientific issues, and acts as an important link between the agency and the scientific community. In general the SAB's role is limited to addressing scientific, technical, and utilization issues of concern to the agency. It consists of an Executive Committee, advisory committees with specified areas of concern, and a Secretariat.

The Executive Committee includes the Assistant Administrator for Research and Development as an ex officio member and between five and twenty experts in the environmental or engineering sciences, including the chairmen of the advisory committees, and a few members-at-large appointed by the Administrator. It coordinates the activities of the SAB advisory committees, meets with the Administrator to discuss scientific issues, reviews the work of the committees to set their priorities and to insure that issues studied are properly assigned to committee(s), and undertakes special studies as necessary. The group meets six times per year, or as necessary, at the call of the chairman and with the approval of the executive secretary.

Originally SAB included seven ad hoc advisory committees. In 1974, in order to provide more comprehensive coverage of environmental issues by advisory committees, and to minimize the possibility of endless proliferation of committees, EPA decided to structure the committees along functional lines. To implement that decision five new committees have been established:

- Environmental Health Advisory Committee,

- Ecology Advisory Committee,

- Environmental Measurements Advisory Committee,

- Environmental Pollutant Movement and Transformation Advisory

  Committee, and

- Technology Assessment and Pollution Control Advisory Committee.

The ad hoc committees will eventually be terminated and their members

incorporated into the functional committees.

The functions, authority and characteristics of the committees are

determined by their charters. The charters and available membership lists

are attached as Appendix A. Generally, each committee has 12-15 members

appointed by the Administrator for one to four year terms, and meets

quarterly or as necessary at the call of the chairman with approval of

the committee secretary. With the consent of the Executive Committee, a

committee may establish subcommittees, and also may sponsor investigative

panels of scientists to examine and report on specific topics for the

committee's consideration. Some committee activities are generated by

the committees themselves; others result from Executive Committee decisions

and requests from Agency officials. Examples of studies undertaken by the

SAB include:

- a critique of the quality of Agency scientific programs;

- an assessment of the health risk due to organics in drinking water;

- definition of scientific issues relating to airborne sulfates;

- review and critique of a preliminary Agency technical guidance

  document on municipal wastewater treatment sludges; and

- a review of the CHESS (air pollutant epidemiology) program.

The SAB Secretariat, a single organizational unit composed of EPA

staff, is the support group for the Executive Committee and the advisory committees. The Secretariat's Director serves as executive secretary of the Executive Committee, supervises the secretariat staff, and coordinates the activities of the executive secretaries of the advisory committees. The Secretariat, with fourteen full-time staff positions, develops and maintains SAB records, collects and distributes pertinent materials prior to committee meetings, prepares agendas and reports, arranges meetings, handles reimbursements to committee members, and is responsible for the flow of information to and from SAB members.

Program Development

EPA's research program is designed to assist the Agency in fulfilling its regulatory responsibilities. The supportive function of the research program necessitates close contact between the Office of Research and Development and the various Agency components in order to insure that the research undertaken is responsive to Agency requirements and priorities.

EPA emphasizes the importance of personal communication concerning research issues with its research users during the program development process. Inputs from other Federal agencies, State and local regulatory agencies, academia, scientific and professional organizations, trade associations, industry and environmental groups are sought formally by comments on ORD's five-year research plan and informally by EPA's regional offices and the Agency's research scientists. Ordinarily the ongoing contact between these groups and the Agency's staff provides the channel for communication about possible research projects. ORD also seeks advice from the Science Advisory Board on long-term research needs and short-term research problems. SAB reviews ongoing program areas and comments on the draft year research plan at ORD's request.

The specific steps in the research program development process are designed to insure that detailed input is received from the Agency components. The fact that formal planning procedures emphasize intra-agency views does not relegate the views of outside groups to a minor role since the Agency components which participate in devising the research plan have contact with, and are expected to be responsive to, the outside groups concerned with EPA's program.

The steps in EPA's research program planning process are enumerated in Appendix B. The detailed procedures indicate that the entire process is characterized by close contact between EPA headquarters and field offices. The procedure may be summarized as follows:

- The Assistant Administrator for Research and Development (AARD) provides resource target levels, a summary of research accomplishments of the previous year, and a list of major problem areas to be included in the research program to the Deputy Assistant Administrators (DAAs). SAB may assist AARD in this task, particularly by commenting on problem areas to be addressed.

- The DAAs in conjunction with the laboratories, prepare a basic multiyear research plan for submission to the Office of Planning and Review (OPR).

- With the assistance of the DAAs, OPR develops a number of program options, related to the resource target and higher and lower resource levels, and submits them to the AARD for a decision.

- OPR formulates the Agency Research Statement based on the resource option approved by the AARD and the related program submissions. This statement documents research directions and related outputs for at least the next five years. SAB may comment on this statement at ORD's request.

- The DAAs assign the objectives specified in the Agency
  Research Statement to the appropriate Laboratory Directors,
  who prepare detailed plans for achieving them.
- Extensive communication between the field and headquarters continues,
  objectives are clarified, work plans and resource levels are
  approved, and the annual research plan is finalized.

GRANT AND UNSOLICITED CONTRACTS SELECTION PROCESS

Applications for grants and unsolicited contract proposals are
submitted to EPA's Grants Administration Division (GAD). A decision to
fund or reject an application must be made within 90 days after GAD receives
it. The detailed procedures for processing grants and the number of days
allocated for each step are included in Appendix C.

Each grant application or unsolicited contract proposal undergoes:

- a relevance review to screen out applications for which ORD has
  no authority or interest.
- a regional policy review to consider the proposed project in light
  of regional priorities; and,
- if the proposal is relevant, a technical/scientific review.

Extramural reviewers are normally used only for technical/scientific
review of new grant applications, and not for unsolicited contract
proposals or requests for continuation grants.

Upon receipt, GAD refers Rand D proposals to the Office of Research and
Development (ORD). ORD then selects the appropriate staff to perform a
relevancy review. These in-house reviewers assess the relevancy of the
proposed project by making the following kinds of determinations:

- Does the proposed project fit into the research program?
- Does all or part of it represent a duplication of earlier or current
  research efforts?

● Has an RFP been announced for a similar project?

● Are funds available for the proposed research?

The regional review is completed by the EPA regional office in the geographical area where the proposed research would be conducted. In addition to considering the proposed project in light of regional priorities, the reviewers may comment on the reputation of the researcher and institution submitting the application, particularly if they are well known in the region and have done research for the Agency in the past.

If funds are available for the proposed research and the project is deemed relevant, a technical review is conducted. The Director of the Laboratory responsible for research in the proposed area arranges the technical review. Qualified reviewers are selected from the laboratory and other EPA offices. In addition, the Laboratory Director selects two extramural reviewers. No formal procedures govern the Laboratory Directors' selections, but they are ordinarily made in consultation with laboratory staff. A "random" extramural reviewer is selected by the Policy and Procedures Section of ORD from a computerized roster of reviewers classified according to subject areas. This procedure is designed to minimize the possibility of bias by at least one of the extramural reviews.

The Laboratory Director and/or the Policy and Procedures Section (PPS) contact the extramural reviewers they have selected and ask them to review the application. Prospective reviewers are expected to refuse the request if any conflict of interest exists. If they agree to conduct the review, PPS sends them copies of the proposal and guidelines to assist them in this task (see Appendix D). Extramural reviewers return their reviews to the Laboratory Director within seventeen working days after agreeing to review the application and are not compensated for their work.

The Laboratory Director, or other responsible program official, assembles and evaluates the intramural and extramural reviews and the regional comments and prepares a recommendation for each application. The recommendation will be to reject the application, or to fund the project as it is or with modifications. If an award is recommended, the program officer returns the application reviews and the written justification for the recommendation to GAD of the Contracts Management Division where the legality of the project is reviewed and a formal grant or contract offer is made. If the applicant is a profit-making organization, or the award exceeds $100,000, an analysis of the funds requested in the application will be conducted as soon as the proposal is declared relevant and eligible for funding. A budget analysis may be completed in other cases when requested by GAD or LD.

PROCESS ASSESSMENT

The Environmental Protection Agency's use of outside advisors in program development and grant selection procedures results in the following advantages and disadvantages;

Advantages:

- Review of a proposed project's relevance in terms of research priorities and funds available prior to conducting a technical review avoids processing and substantive review of a project which the Agency could not support regardless of its scientific merit.

- Technical expertise within the Agency is tapped to assess the scientific merit of an application.

- Use of extramural reviewers to evaluate grant applications provides critiques from a non-agency perspective for consideration by Agency officials. It also enables EPA officials to secure expert review of applications in areas of concern outside the expertise of Agency staff.

- Mail review by outside experts allows reviewers to complete their evaluations at their convenience, and avoids problems concerning scheduling and location of meetings encountered when a panel format is used.

- The 90-day schedule for processing grant applications insures that decisions will be made in a reasonable amount of time.

Disadvantages include:

- The mail review process minimizes the opportunity for exchange of viewpoints and wide breadth of criticism which the panel format provides.

- Conflicts of interest may result when experts selected to review a proposal have applied, or are likely to apply, for support for a project in the same area.

APPENDIX B

SUMMARY OF GRANT REVIEW DATA

July 1, 1974 to June 30, 1975

Item	Rehabilitation Services Administration Office of Research and Demonstration
Number of applications received	115
Number of applications reviewed by outside advisors	30
Number of applications approved	19
Total dollar value of approved grants	$1,720,000
Smallest grant	$ 45,000
Largest grant	170,000
Number of external reviewers	50
Number of outside advisors on standing review panels	0
Number of standing review panels	1*
Number of panel meetings per year	3
Length of each meeting	2 days
Term of Panel members	Not Applicable

* This standing panel has no permanent members.

REHABILITATION SERVICES ADMINISTRATION

INSTITUTIONAL SETTING

The Rehabilitation Services Administration (RSA) is part of the Department of Health, Education, and Welfare's Office of Human Development. The general mission of the program as stated in the 1975 RSA Goal Strategy, is:

"Through national leadership, technical assistance and financial support, and in conjunction with State rehabilitation agencies and other public and voluntary agencies, to stimulate, develop, implement, and assist in the administration and maintenance of rehabilitation programs which provide services for handicapped individuals leading to maximum participation in gainful employment."

The program engages in three distinct types of activities in pursuit of this mission. The majority of program resources are devoted to the actual provision of rehabilitation services to clients. The second activity is program evaluation: the assessment of the effectiveness of the service provision process and the extent to which specific program goals are achieved. Research into new technologies and methods for service provision and for program evaluation constitutes the third major activity.

The vocational rehabilitation program is a three-party partnership between the State, voluntary and Federal sectors to assure that quality services are provided to handicapped persons. It is the State and voluntary agencies that provide the services and the Federal role is one of leadership and the provision of resources.

The Federal-State program of Vocational Rehabilitation was created in 1920 with the signing of the Smith-Fess Act. It arose out of public concern over the plight of persons who were either unemployed or underemployed,

because of disability. Since that time, the scope of services provided to handicapped individuals has increased, as has the extent of Federal participation in the program. Currently, the Federal share of the cost of basic services is 80 percent with the States providing 20 percent.

The program's goal strategy includes six primary areas with specific aims. They are:

- Program Operations--To assure that program policies, practices, services, and systems are developed and/or implemented to improve and support the operation of the vocational rehabilitation program.

- Employment--To provide increased opportunities for employment to the client population requiring competitive employment, sheltered employment, homebound employment, or homemaker and unpaid family worker status, particularly for the severly handicapped, through actions to improve job accessibility, to increase job availability, and to expand placement services.

- Physical and Mental Restoration--To assure the development, maintenance, improvement, and availability of a physical and mental restoration process as an integral part of the total vocational rehabilitation process.

- Consumer Involvement--To develop and implement a program of consumer involvement, as a partnership between the provider and consumer, in identifying needs, in ascertaining reaction, and in assuring provision of quality and timely services to the handicapped.

- Environmental Improvement--To assist public and private agencies to improve the environment of the handicapped so that they may participate more fully in society, contribute as citizens, and, to the extent individually possible, become productive in the economy.

● Discretionary Assistance--To use discretionary program support, along with technical assistance, as a principal means for improving and/or expanding the program of vocational rehabilitation services for the severely handicapped.

The RSA staff includes specialists in medical services, supportive counseling, facilities planning, manpower, legal barriers, and research and planning. Additionally, three program officers operate from two research utilization laboratories in New York City and Chicago.

Money is allocated to State Vocational Rehabilitation Agencies on the basis of annual State plans submitted by the States to RSA. Additionally, money is expended on several basic types of research:

● Domestic projects are distinct research projects funded to generate new knowledge which will bear directly on the development of methods, procedures and devices to assist in provision of vocational rehabilitation services to handicapped individuals.

● Research and Training Centers and Rehabilitation Engineering Centers emphasize research related to the rehabilitation of severe disability. This research is focused on solving complex problems relating to the management and reduction of chronically disabling conditions and dependency. All research is conducted in conjunction with the training of medical and vocational rehabilitation personnel and in a milieu of patient services.

● Rehabilitation Research Institutes (RRI) are programmatic research grants funded under a specific section of the Rehabilitation Act of 1973. Grantees consult with State personnel about areas of possible research and provide assistance in research techniques.

RSA currently has $20,000,000 available for research, $10,000,000 of which is allocated to the university-based Research and Training Centers. Twenty-five percent of the funds must go to the Rehabilitation Engineering Centers. Therefore, $5,000,000 is available for "other" research. Only $1,000,000 is available for new research each year.

ROLE OF ADVISORS

The RSA currently has relatively informal mechanisms for external review, although more formal mechanisms existed in the past. Legislation in 1954 set up a National Advisory Council which operated through 1973. Study sections were also established consisting of external experts who reviewed grant applications for technical merit. Several internal reviews were also conducted. Each project concerning services to people had to have the appropriate State Director's approval. Appropriate Regional Directors also were asked to respond to a set of specific questions regarding a proposed project, and every application was reviewed by the appropriate RSA project officer. If there was agreement between study section and staff recommendations, those recommendations were accepted. The National Advisory Council only reviewed those applications for which there were differences between study section and staff recommendations. The Department abolished the study sections in 1968-1969, because of a belief that their functions could be performed in-house.

The Vocational Rehabilitation Act of 1973 abolished the National Advisory Council and did not mention external review. However, as a result of demands by some Congressmen, the Department agreed to reinstitute external review through administrative regulations. One year later, regulations were promulgated which included the requirement for external review by non-government specialists.

In the interim, RSA has operated with internal review and mail review on a voluntary basis by experts. For project grants, after study sections were

abolished, RSA, with the Office of the Secretary, compiled rating criteria to be utilized by experts rating prospective projects. Three overall standards were most important: relevance, soundness, and transferability.

Research and Training Center projects have undergone review by groups within the universities at which they are located. Each university-based group includes a person from the RSA Regional Office to comment on "relevance". Applications then undergo staff review by RSA, State Agency and Regional Office personnel. These staff gather for all-day meetings to review projects for one of the Research and Training Centers and the group then makes recommendations to RSA. The appropriate program officer then does a synthesis and prepares a position paper for the Executive Director of Research. The Director makes a recommendation and forwards it to the Commissioner, who makes the final decision.

In the area of Rehabilitation Engineering, RSA has had a contract with the National Academy of Sciences (NAS) to monitor these projects. The NAS established a standing review group. This group, which has no permanent members, has continued to review Rehabilitation Engineering projects and consider long-range planning.

The selection of outside reviewers varies. For individual research grants, the appropriate project officer will choose persons to perform reviews. For the Research and Training projects, RSA staff and the appropriate university together designate reviewers. In the Rehabilitation Engineering area, the National Academy of Sciences selects the reviewers.

Selection criteria also vary. Appropriate State Vocational Rehabilitation personnel always review projects, as do Regional Office personnel. If a project will have some national significance or if it will affect more than three states, people from national organizations are asked to do reviews. Other reviewers are chosen on the basis of their experience and standing in the field. Outside

advisers reviewing grants are accountable to the appropriate RSA project officer. By law, they can only make recommendations.

Outside reviewers do receive grants from RSA, and this fact is viewed as inevitable by Federal staff. It is very difficult to find experts outside of the Federal-State Vocational Rehabilitation Program. A problem of possible lack of objectivity also exists when reviewers know an applicant. However, experience has shown that people who have the longest experience of grants with RSA are the most critical reviewers with the highest standards and the most expertise.

PROGRAM DEVELOPMENT

Two sets of priorities are always being developed at RSA. One involves overall RSA goals and the other includes priorities for the specific RSA programs: Training, Facilities, and Research and Evaluation.

The overall RSA priority development process receives input from a number of sources. Each year RSA reviews the previous year's national plan and identifies "issue areas" where there are knowledge gaps. The staff then writes draft papers which are sent to all State agencies for comments. Other field staff are also asked to review the papers. Others whose comments are solicited include current or past grantees, State planners, staff at service agencies or universities, and other appropriate Federal personnel. The papers are then revised and sent to the Office of Human Development for approval.

One area which develops its own set of priorities is Research and Evaluation. The development of the fiscal year 1976 Research and Evaluation plan was based on the fiscal year 1975 plan. It was reviewed by all State Agencies and by national rehabilitation organizations, regional offices, and program specialists. Fifty-eight reviews were received of approximately 100 requested. These were divided up by strategy areas and reviewed by internal staff. Two areas were substantially revised based on these reviews. Various people then came to

Washington, D.C. to work with RSA issue writers in developing strategies for the
various areas. These included representatives of State agencies, Research and
Training Centers, and Council of State Administrators, and Regional Research and
Development staff. (Approximately 50-75 percent of the issues had this input.)
These outsiders were assigned to issues and worked with the issue writers, although
they wrote some of the paper themselves. It was an open process consisting of
continuing dialogue between in-house staff and outside people.

These framework papers describing strategy areas are approved within the
Office of the Secretary. An administrative summary then summarizes each strategy
area. Each area has prioritized objectives based on a state of the art study con-
ducted by RSA staff. Each also has a parallel set of evaluation objectives.

For the development of the fiscal year 1977 Research and Evaluation Plan,
administrators planned to institute a participatory planning process in each of
the ten RSA regions to develop prioritized objectives. Each region was to hold
a three-day conference of Federal staff, State personnel, medical people, and
consumers. However, because of funding shortages, plans were altered to allow
for two conferences, one each in the East and West. Participants will include
members of the Research and Evaluation Committees of the Council of State Admin-
istrators of Vocational Rehabilitation, Representatives of the Congress of Re-
habilitation Medicine (doctors working in medical rehabilitation), and know-
ledgeable consumers drawn from handicapped people on the Boards of the Research
and Training Centers. RSA will specify goals and products of the conference and
local sponsors will operate them.

Each conference will send RSA a report indicating prioritized Research and
Evaluation objectives. Additionally, the two reports will be combined into one
by RSA staff. This will go into the fiscal year 1977 Research and Evaluation
Plan as an input. Another input into the plan will be the fiscal year 1976 plan.

People at RSA will also do a literature review. After a draft plan is developed it will be sent back to the same participatory groups (all the individuals who attended the conferences), to national organizations, and to Regional Offices for comments. Based on received comments, the draft plan will be revised and a final plan developed.

GRANT SELECTION PROCESS

Until 1971, 95 percent of the applications RSA received were unsolicited. Now the majority received are solicited. In certain areas, RSA will invite pre-proposals or concept papers. In research issue areas where the agency has specific needs, it will write an RFP or grant guideline and request competitive applications. Unless an application is submitted in response to a notice requesting fully developed applications, the initial application must be in the form of a pre-application. Copies of pre-applications are sent by RSA to the State Director of Vocational Rehabilitation Agency in the State where the project is located and the appropriate Regional Office. After review, RSA will either request or discourage the submission of a full application.

When applications are received in the Division of Grants and Contract Management (DGCM), an official file is prepared if one has not already been prepared on the basis of a pre-application. One copy of the application is sent to the Office of Rehabilitation Research and Development in RSA for initial program review. If the application is considered relevant to RSA, the assigned project officer asks DGCM to send it for comments to:

- the appropriate Regional Office or Offices;

- the appropriate State Director of Vocational Rehabilitation;

- the appropriate program persons in RSA Central office who have expertise in, or responsibility for, the topic to be researched;

- other Federal employees, as appropriate, in other agencies who could assist in evaluation; and, if necessary,

- non-government experts who could add coverage to the review process in specialized topic areas.

When these reviews are received, the project officer prepares a staff summary giving a consensus of the recommendations, criticisms, and suggestions for improvement.

The 1973 Vocational Rehabilitation Act set up a process of evaluation parallel to staff review: review by an Initial Peer Review Group (IPRG) of outside consultants. An IPRG, when established, will meet twice a year. There will be three IPRG's in RSA's program: Rehabilitation Engineering; Medical Rehabilitation; and Psychosocial and Vocational. The Standards for Evaluating Research Projects (see Appendix A) are guides to reviewers as to the relevance, soundness, and transferability of the project.

This process (reviews by the Region, State, Central Office and Peer Review Group) will also be used to consider the annual progress reports and continuation requests each project must submit before funds are released for each succeeding budget period. Letters posing specific questions will be sent to reviewers, along with a copy of the report.

RSA is now in the process of trying to develop a mechanism for the National Academy of Sciences (NAS) to establish the mandated Peer Review Groups. According to current plans, NAS will pick members of the groups, and RSA and NAS will jointly establish specific review criteria. RSA may perhaps suggest a roster of candidates for possible inclusion in the groups, and the process will probably be done under a contract from RSA to NAS.

PROCESS ASSESSMENT

It is difficult to assess RSA's use of external review mechanisms, since these mechanisms are now being revised. However, past experiences have indicated advantages

and disadvantages to various types of external review.

One perceived advantage of using past grantee advisers is that they all are usually very knowledgeable. The RSA has developed a body of expertise through its own training programs and takes advantage of it by using unpaid consultants.

Mail review has proved disadvantageous because no consensus is possible, and the ability to draw a consensus is viewed as one of the best attributes of external review groups.

However, peer review groups conducted by an outside body can also possess an inherent disadvantage. There may be less of a relationship between the reviewers and RSA staff. In comments on recent RSA procedures, one administrator said that the primary problem has been not a lack of desire to get independent opinion, but the cost of securing independent opinion. Only people who had money to send staff to Washington could be contacted, since RSA has no consultation money. His conclusion was that more independence is a product of more money.

The primary advantage of using outside peer reviewers is practicality. With decreased money for in-house evaluation, one administrator said it is unrealistic to think RSA could do all review in-house. Additionally, outsiders are seen to be more objective. A main problem in government is the difficulty in keeping up with what is occurring in various areas.

However, study groups, said this administrator, should not have final authority because technical merit is not everything. Relevance, prospective long-range change, and political judgments also must be considered.

APPENDIX A

Standards for Evaluation of Research and Demonstration Projects

I.   Relationship to State-Federal VR Program Goals and Policies

Each application must show:

A.   Clear relationship to one or more RSA "Research Issues" and issue-related "research goals."

Examples of some items that should be considered under this standard are:

1.   Does the application identify a specific RSA research issue, and from the issue or issues does the application select a specific "research goal" (stream of research), the attainment of which would be greatly enhanced by successful outcomes of the project?

2.   Does the application show a logical relationship between successful attainment of the project objective(s) and attainment of a significant portion of the relevant research goal?

3.   Is there a clear awareness reflected in the application that the purpose of the project is improved VR services to handicapped persons and attainment of a relevant RSA program goal?

B.   A clear relationship to one or more RSA program goals.

Examples of some items that should be considered under this standard are:

1.   Is there a specific RSA program goal cited?

2.   Does the application show an awareness of how the knowledge generated by the project will contribute to achievement of the RSA goal, in an operational sense?

C.   A clear identification of the decision-making potential of the project for policy-making in management, professional practice, or program evaluation.

Examples of some items that should be considered under this standard are:

1. Does the application identify some decision-making point(s) in the rehabilitation system and give a clear and reasonable exposition of how the project results will improve VR services to individuals by providing information that will improve policy decision-making?

2. Does the application identify other knowledge gaps that need filling in order to maximize results of this project? If so, are there already research efforts underway to fill the gap or would it be feasible to undertake the other research?

II. Methodology

Each application must show:

A. A sound conceptualization of the problem to be investigated.

Examples of some items that should be considered under this standard are:

1. Definition of population being considered.

2. Discussion and citation of germane literature.

3. Definition of main concepts.

4. Discussion of assumptions.

5. Specification of dimensions or variables of the problem (dependent variables, independent variables, intervening variables).

6. Statement of hypothesis.

7. Specification of units of analysis.

8. Etc.

B. A clear description of project objectives.

Projects supported under Section 202 of the Rehabilitation Act of 1973 must have some knowledge building function. The following might be considered broad categories of knowledge building functions:

1. Description of characteristics of clients, population served, program, etc.;

2. Development of new knowledge of needed service;

3. Development of new administrative knowledge (staffing needs), new patterns of service, costs, etc.;

4. Assessment of effectiveness, efficiency and/or impact of a program;

5. Development of new methodological knowledge;

6. Tests of specific hypothesis or ideas;

7. Exploring the relationship between measurable variables;

8. Development of new substantive knowledge;

9. Development of a new device;

10. Testing the usefulness of a new device, etc.

In stating the project objective(s) care should be taken not to confuse the project objective(s) with goals and objectives of the Rehabilitation Services Administration (RSA) or of the applicant agency. The objective(s) should be stated in such a way that the degree of its achievement may be determined (measured) and the relationship of its achievement to the furtherance of RSA program goals understood.

C. An adequate project design.

The adequacy of a project's design depends greatly on the category of knowledge building activity to be undertaken. Examples of items to be considered under this standard include:

1. Degree of generalizability of results to other individuals, projects or institutions as shown by (a) a clear definition of the target population to be studied for the dimension under consideration; (b) suitable procedures to insure that the sample selected is representative of the target population.

2. Suitability of sampling design as shown by: (a) selection of a range of contrasting situations, conditions, cases, etc. to study, i.e., control groups, use of outside standards; (b) appropriateness of sampling unit, i.e., client, organization, etc.; (c) appropriateness of sample size, including allowance for loss of subjects; (d) use of probability sampling procedures, or other appropriate methods.

3. Applicability of design to project objective(s).

4. Adequacy of operationalizing project concepts such as: (a) quantification of variables or dimensions with provision for variance; (b) use of scaling procedures; (c) handling of validity and reliability issues; (d) appropriate selection or development of data gathering instruments; (e) pretest of procedures/instruments.

D. Appropriate methods of data collection.

Examples of items to be considered under this standard include:

1. Appropriateness of data sources.

2. Efficiency, orderliness and objectivity of data collection procedures.

3. Reliability of procedures.

E. Suitable procedures for data analysis.

Examples of items to be considered under this standard include:

1. Accuracy, orderliness, care of analysis.

2. Computerization (or other optimal form) of data processing.

3. Appropriate statistical techniques, i.e., measures of association, analysis of variance, tables, cross tabulations, confidence limits, qualitative analysis, content analysis, etc.

4. Use of statistical controls.

5. Examination for possible biases.

6. Completeness of analysis of available data.

7. Logic of data/statistics/conclusions linkage.

F. A method for clear presentation of findings.

Examples of items to be considered under this standard include:

1. Completeness of report.

2. Readability, clarity of report.

3. Presentation of relevant data, pro and con.

4. Explanation of outcomes in terms of research evidence.

5. Statement of possible sources of bias/error affecting the interpretation of findings.

6. Statement of conditions under which findings are expected to hold.

G. A clear exposition of project plan.

Examples of items to be considered under this standard include:

1. A specification of the operational phases of the project.

2. A specification of project milestones, i.e., completion of literature search, pretest of new instrumentation, full staffing, etc.

3. Provision for adequate research resources.

   a. Sufficient and appropriate staff.

   b. Budgeting appropriately for the project, i.e., travel, supplies, equipment, data analysis, research utilization function, etc.

4. Adherence to RSA instruction for R&D project narrative.

III. Research Utilization

Each application must show:

A. Relevance to some significant group(s) in rehabilitation.

Examples of items to be considered under this standard include:

1. Types of expected product or outcomes in terms of their potential for acceptance and implementation.

2. Types of potential consumers of products or outcomes, i.e., service providers, State VR directors, counselors, clients, legislators, educators, general public, etc.

3. Plan for participation of some potential users in the R&D process.

B. A clear plan to overcome resistance or make change (if necessary) to enhance use of R&D product or outcome.

Examples of items to be considered under this standard include:

1. Possible modifications of the R&D product to make it maximally useful for particular groups.

2. Possible changes in policy, professional practice, or organizational structure required to implement the potential findings.

C. A workable dissemination and diffusion plan.

Examples of items to be considered under this standard include:

1. Specific actions to be taken to disseminate and implement the research results, both during and after the project.

2. Tasks within the project which were selected specifically to test, review and modify the solution's relevance to user's needs.

3. A cost projection of R&D funds placed in the project budget, necessary to develop the research utilization techniques for enhancing the utilization of project findings.

4. Methods of packaging results, kind of media to be used in transmitting results to users.

5. Method of maximizing project setting to facilitate utilization.

6. What post-research research utilization activities are expected.

7. A project summary as required by the Science Information Exchange.

INSTITUTIONAL SETTING

In June 1970 The Ford Foundation established the Police Development Fund with an allocation of thirty million dollars to be spent over a five-year period.[*] The Fund was designed to develop new approaches to the problems of crime, disorder, and police-community relations, and to provide a force for constructive change in police work. The Board of Directors, selected by The Ford Foundation, named the new organization The Police Foundation. Although it is supported by Ford Foundation funds, the Police Foundation is directed solely by its Board of Directors.

The Police Foundation's objective is to increase police effectiveness in community service and crime control. It supports development, evaluation and dissemination of new knowledge leading to innovation and improvement in police work; and is particularly concerned with the police problems of large, urban areas. Foundation supported projects have addressed a wide range of police problems including:

- evaluations of women in policing and of various patrol strategies;
- development of "model rules" for police activities in key areas such as searches and seizures, and eyewitness identification;
- use of task forces composed of civilians and police officers to formulate police policies;
- introduction of management teams into police department administrations;
- formulation and validation of an entrance examination for prospective

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[*]Cutbacks in The Ford Foundation's program budgets have necessitated extending the initial allocation over eight years rather than five.

police officers, and guidelines for other personnel selection

procedures; and

- development of nonpunitive alternatives to arrest for drug abusers

and alcoholics.

The Foundation promotes increased understanding of shared problems
by publishing its study findings, and by sponsoring seminars, conferences and
workshops, addressing specific police problems, for police experts and
municipal officials.

The Police Foundation carries out its research program through in-
house studies, grants and projects conducted by or in cooperation with research
organizations. The latter alternative is commonly used to evaluate Foundation-
sponsored demonstration projects.

The Foundation's Program Director and two assistant directors play the major
role in selection of areas to be studied and development of specific projects.
The President and Board of Directors, who provide over-all guidance for
Foundation activities, exert significant influence over their activities.
Program officers work with the Program Director and assistant directors,
monitoring projects, completing literature reviews, and carrying out other
assignments.

ROLE OF ADVISORS

The Police Foundation uses consultants to assist staff in project devel-
opment. In the first phase of project development the assistant director
contacts experts in the field, as well as Foundation staff, to assess whether
the project idea is worth pursuing. Once this determination has been made,
the assistant director may use consultants in a variety of ways, depending
upon individual work style and the nature of the project, to develop the
project further. For example, one assistant director, interested in developing
a study of factors which influence the number of arrests made by individual

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officers, hired a consultant with expertise in that area to collaborate on
the project design. The advisor became, in effect, a staff person, sharing
responsibility with the assistant director for selecting police departments for
case study, gathering the necessary data at the departments in preparation
for the study, and ultimately assuming a major role in completion of the
project itself.

The Police Foundation's Board of Directors approves project development
efforts requiring budgets above $5000, and all grant applications. The
Board consists of the President of the Police Foundation, and twelve members
selected from among police officials, academic authorities, and urban
specialists in police problems. (See Appendix A). Board members serve
indefinite terms, and they select people to fill vacancies on the Board as
they occur. :Board members ordinarily receive an annual stipend of roughly
$2000. However, because of Internal Revenue Service regulations, no stipend
is paid to members who are State and local officials, such as police chiefs,
with salaries over $15,000.

The Police Foundation's Board of Directors meets for one day four times
each year. Approximately two-thirds of each meeting is devoted to reviewing
projects for funding. Three of the Board's four committees review projects
in specific areas, including police personnel and training, research and
experimentation, and evaluation and dissemination, prior to the Board's
vote on whether to fund each project. The fourth Board committee deals with
administrative matters.

PROGRAM DEVELOPMENT

The Police Foundation's three assistant directors develop and administer the research program. The program is an accumulation of individual projects initiated by the assistant directors who are influenced in their selection of potential research subjects by the interests of the Foundation President and Board of Directors, and, to a lesser extent, by the opinions of knowledgeable people outside the Foundation concerning what research is needed and feasible in the police field. The projects comprising the Police Foundation's program are developed in stages. Projects which require development budgets of over $5000 must be approved by the Board.

GRANT SELECTION PROCESS

All Police Foundation projects, whether conducted through grants, in-house research, or other arrangements, are developed and approved through a series of standard procedures. The assistant directors, who play the major role in developing projects, are primarily guided in their selection of projects by the perspective of the Board of Directors concerning important, researchable issues in the police field; and by the following six questions formulated by Police Foundation staff as a guide for project selection:

- Does a proposed project address a critical problem of a police department?
- Is it likely that the project's results, if successful, will be integrated into the department's operations?
- Does the department have the management skill to design a project and insure its continuing quality?
- Is the project likely to be evaluated objectively?
- Could the proposed project advance overall police improvement?
- Is there a good chance that the project's basic approach, if

successful, will be adopted by other police departments and

made a part of their operations?

Most Police Foundation projects originate with a brief concept paper drawn up by an assistant director, and circulated among Foundation staff and outside experts considered knowledgeable in that area. This initial consulting is done informally, with the only restriction on selection of reviewers being that members of the Board of Directors should not review a concept paper unless their expertise is necessary to assess whether the idea is worth pursuing.

If the reviewing staff and outside experts believe that the concept warrants further development the assistant director addresses a one- or two-page memorandum to the Foundation's President summarizing the project idea and requesting that a "Foundation-administered project" (FAP) be set up. If the President approves, an account not exceeding $5000 is established to support development of the idea presented in the memorandum.

Further development of the concept may employ outside advisors in a variety of ways. The assistant director may select one expert to work as a paid consultant. A group of experts may be invited to meet and "brainstorm" on the project idea, or one or more people might be asked to write "think pieces". The purpose of establishing the FAP account, and utilizing outside advisors at this point, is to devise a research project based on the concept which was thought to be worth pursuing. The concept is further developed, a methodology is formulated, and the feasibility of carrying out the project is assessed. This phase might include visits by the assistant director and advisor(s) to police departments to determine whether data or departmental cooperation, necessary to conduct the proposed research, are available.

If the project design cannot be completed without exceeding the $5000 FAP authorized by the President, the assistant director will ask the Board of Directors to authorize a FAP of up to $50,000. In some instances, projects can be fully developed with a President-approved FAP. These are considered by the Board for full funding without the intermediate step of a Board-approved FAP. The assistant director will submit a brief to the Board elaborating what has been done to develop the project, the findings thus far, what still needs to be done and why, and how much money will be needed to accomplish defined tasks over a specific period of time. If the project development has been completed, a proposal stipulating what the project entails and a budget are submitted by the assistant director or applicant.

The project brief or proposal is sent to the Board about two weeks before their meeting. Roughly five projects are considered for full-funding or Board-authorized FAP's at each of the Board's three meetings per year. One of the Board's three committees which review projects in a specific subject area meet with the assistant director sponsoring the project for discussion and possible clarification of the proposal. The assistant director makes a brief presentation concerning the proposed project to the entire Board, and the committee either endorses the project or indicates why they believe the application for support should be rejected. The Board votes on whether to fund each project, usually in accordance with the committee's decision.

The assistant directors who develop projects, and work closely with applicants who propose projects for funding, are cognizant of the Board's interests, and see to it that projects submitted to the Board reflect these interests. As a result, almost all projects submitted to the Board are approved.

PROCESS ASSESSMENT

· The Police Foundation's use of outside advisors on an ad hoc basis

by the assistant directors, and the review conducted by the Board of Directors, result in a number of advantages and disadvantages. The advantages include:

- The Foundation's staff and its Board of Directors have the ability to pursue projects of interest to them, without institutionalized pressure from experts and grant applicants outside the Foundation to fund "good" projects which may not be in line with the Foundation's interests and priorities.

- Use of consultants to develop researchable ideas and criticize projects as they are developed minimizes the time and funds spent on unrewarding or infeasible projects.

- The assistant directors, who play the major role in developing projects, have professional responsibility for being familiar with research needs in the police field and the interests of the Foundation, and as such are well-suited to develop projects which are responsive to both these areas of concern.

Disadvantages include:

- The lack of a structured review system for applications submitted by groups and individuals outside the Foundation increases the possibility of arbitrary treatment of prospective grantees.

- Conflicts of interest may result when a consultant or a member of the Board of Directors may participate in a project if it is approved.

APPENDIX A

THE POLICE FOUNDATION BOARD OF DIRECTORS

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Attorney
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National Association for the Advancement
  of Colored People

APPENDIX B

SUMMARY OF GRANT REVIEW DATA

July 1, 1974 to June 30, 1975

Item	The Police Foundation
Number of applications received	50
Number of applications reviewed by outside advisors	6
Number of applications approved	20
Total dollar value of approved grants	$3,382,663
Smallest grant	$ 7,000
Largest grant	$ 250,000
Number of external reviewers	10
Number of outside advisors on standing review panels	0*
Number of standing review panels	0
Number of panel meetings per year	Not Applicable
Length of each meeting	
Term of Panel members	Not Applicable

*See case study section concerning grant review process for review
 role of Board of Directors.

INSTITUTIONAL SETTING

The Ford Foundation was established in 1936 by Henry and Edsel Ford largely to provide support for Michigan educational and charitable organizations. In 1950 the Foundation became a national organization dedicated to seeking solutions to problems of national or international importance. Most of the Foundation's programs are conducted through grants to organizations for research, demonstration and development projects that represent potentially significant contributions in various fields. In addition, the Foundation makes grants to individuals and occasionally administers projects itself.

The Ford Foundation's program offices include three major divisions-- International, National, and Education and Research--and three small offices-- the Arts, Communications, and Resources and the Environment. This case study focuses on the use of outside advisors in program development and grant review by the National Affairs Division, which generally reflects Foundation-wide practices in the United States.

The two primary concerns of the National Affairs Division are:

- improving the status of, and expanding opportunities for, minorities through support for civil-rights organizations and other groups working to eliminate discrimination; and

- reducing the size of the severely disadvantaged population through experiments in supported work, housing management, community development, and reform of criminal justice.

The Division also supports projects in such other problem areas as public interest law; working class problems; drug abuse; performance of government; opportunities for and rights of women; and resolution of social and economic conflicts.

The activities of the Ford Foundation, including the National Affairs Division, are directed by its fifteen-member* Board of Trustees, which approves Foundation priorities and budgets. The Foundation's professional staff members, including program officers, officers in charge of each program, and the division vice-presidents, bear the primary responsibility for developing individual projects and areas for Foundation activity, and evaluating grant applications.

ROLE OF ADVISORS

The Ford Foundation has no standing panels which participate in program development or review applications from prospective grantee organizations. Individual consultants are hired to work under the direction of the program staff when they lack the expertise to handle specific problems. They are generally used in two capacities: to advise the Foundation on programs, and assist Foundation grantees with specific problems. In addition, consultants are occasionally called upon to review grant applications when in-house expertise is inadequate for this purpose. Program officers determine whether advisors should be used, and in what capacity. The selection process for consultants varies with the assignment. In most cases an individual staff member or group of program staff decide to contact someone they know and believe to be qualified to perform the needed task(s). In other instances staff may conduct a talent search by making inquiries among people knowledgeable in the area, and thus devise a list of possible consultants.

Consultants are paid by the Foundation according to the value of their time. Individuals working on Foundation grants may not concurrently act as consultants although they may be called upon informally for advice.

The Foundation's Board of Trustees, comprised of the Foundation's President and fourteen other prominent people interested in the Foundation's activities, meets

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*The Board has an authorized strength of nineteen.

quarterly for two and one-half days. Its executive committee meets an additional three or four times per year. New trustees are selected by other Board members as vacancies occur. Current trustees are listed in Appendix A.

Unlike consultants, who function in a purely advisory capacity, the trustees are legally vested with authority to approve Foundation policies and budgets. In rare instances, when a grant involves particularly sensitive or controversial issues, the President may refer the proposal to the Board of Trustees for approval. Of approximately 15,000 proposals the Foundation receives each year that are within the scope of its regular programs, fewer than ten are submitted to the Board for consideration.

PROGRAM DEVELOPMENT

Program staff members are usually responsible for identifying possible areas for Foundation activity. Although ordinarily they make the initial determination of whether an area is one in which the Foundation should and could become involved, this initiative is occasionally taken by the Board of Trustees. Once the area is assessed as potentially worthwhile and appropriate for Foundation activity, the Foundation's approach to the area must be defined. During this phase of the program development process, consultants may be used by program staff in one of the following ways.

- An individual consultant is hired to complete a "state of the art" review, identifying specific areas that warrant attention, and, possibly, suggesting ways in which the Foundation could become involved.
- A conference of experts is organized, by Foundation staff or an outside agent contracted for this purpose, to consider possibilities for Foundation activity in the area. The outcome may be a report indicating several such possibilities, or a specific recommendation for a Foundation-sponsored activity.

. A group of consultants is assembled to assist Foundation staff in developing a program. For example, a program in New York City provided a prototype for the supported work experiment the Foundation wished to undertake. Consultants worked with Foundation staff to devise ways Ford could test the prototype in different settings. In this case the consultants' assistance included providing concept papers as a basis for feedback from Federal Agencies and other institutions which would be involved in the large-scale program, and acting as liaisons between those institutions and the Foundation.

These are the three most common modes of consultant use in program development at the Ford Foundation. Programs are also developed through "planning grants" to groups working in a field where the Foundation is interested in developing a new concept or program. The work of the grantee provides the basis for the Foundation's new program. The Foundation's public interest law program was developed in this way.

In addition to these uses of outside advisors in the program development process, Foundation staff consult informally with knowledgeable professionals in their fields of interest on an ongoing basis regarding areas which the Foundation should consider supporting. The degree of advisors' influence in the program development process varies with the circumstances. In cases where staff expertise in the area is minimal, for example, advisors are likely to be more influential than when staff are knowledgeable, though not expert in the area.

The role of the outside expert in program development, regardless of structure, is to advise Foundation staff. The outcome of the program development process usually represents a consensus among staff knowledgeable

about the general area of proposed activity and the Foundation's interests, and experts in the specific field under consideration.

When a new initiative has been developed to the satisfaction of the proper staff, a position paper recommending appropriate Foundation action is prepared and presented to the Board of Trustees for its approval. Usually, the consultants and staff who participated in the development of the program meet with the Board to discuss the position paper. In addition to reviewing new program initiatives as they arise, the Board, in effect, reviews the entire Foundation program semi-annually when it approves appropriations of new funds.

GRANT SELECTION PROCESS

Proposals for grants to organizations originate in a variety of ways. Most are initiated by prospective grantee organizations, either through sub- mission of full written proposals or through letters or telephone calls request- ing a preliminary Foundation appraisal of current or planned activities. Other proposals may begin as suggestions by Foundation staff members to prospective grantee organizations, or may emerge during discussions with such organizations of problems of joint concern. In a few instances, the Foundation may play a major role in establishing an organization to undertake, with Foundation support, specific charitable, scientific, or educational activities.

Regardless of the origin of a proposal, the formal grant process begins with the applicant's submission of a written proposal to the Foundation. The Foundation Secretary's office screens each proposal, determining to which program office it should be referred. If the proposal is unrelated to any Foundation program, it is rejected by the Secretary on that basis. Of the approximately 20,000 proposals the Foundation receives each year, about 5,000 are rejected after the Secretary's relevance review. The rest of the applications are routed by the Secretary to the appropriate program offices.

Each program's officer-in-charge selects a "responsible program officer" (RPO) for each application. The RPO assesses the proposal in light of its substantive merit, and the Foundation's program objectives, priorities, and financial resources. If this assessment is unfavorable, the RPO rejects the proposal. If the assessment of the application is encouraging, the RPO may develop the proposal further through a consultation and negotiation process with the applicant.

If the applicant is an individual, the Foundation is required by law to obtain endorsements of the proposal by two outside advisors. If the candidate has been nominated by a non-profit organization, outside endorsements are not required. In practice, such nominations are rarely reviewed by people outside the Foundation since staff expertise is ordinarily sufficient to assess the merits of a proposal. However, staff do contact experts in the field to discuss the proposal and/or the applicant on an informal basis. Applications in an area where staff expertise is lacking, particularly those in a new area of Foundation activity, are likely to be referred to outside experts for detail review.

Once the appropriate review has been completed for a prospective grant to an organization, the RPO prepares "recommendation for grant action" (RGA). The RGA is a brief memorandum, usually about ten pages long, which summarizes the proposal and discusses its strengths and weaknesses. The division vice-president reviews the RGA, and may request additional information or clarification from the RPO. After the vice-president has approved the RGA, it is submitted to the President for approval at the weekly meeting of the Foundation's executive officers. The overwhelming majority of RGA's submitted to the President are approved. RGA's are not prepared for grants to individuals; in this case approval authority rests with the program officer-in-charge or program head. The bulk of the Foundation's activities, however, are conducted through grant to organizations.

As the summary of the grant process indicates, the program officer exercises primary responsibility for assessing and approving grant proposals. Successful

proposals are, by and large, submitted by individuals or institutions the program officers know and respect or by applicants recommended by highly regarded experts in the field. The processing of a grant proposal usually takes two to three months from submission of the application to receipt of the first check.

PROCESS ASSESSMENT

The Ford Foundation's ad hoc use of outside advisors in program development and review of grant applications from organizations results in the following advantages and disadvantages:

Advantages:

- Use of in-house expertise is maximized.

- Staff expertise is supplemented by using outside experts when . necessary.

- Foundation staff retain control over program development and grant selection, and thus can insure consistency of the outcomes of these processes with the Foundation's objectives and priorities.

- Administrative costs of more structured advisory mechanisms are not incurred.

Disadvantages:

- Applicants are not assured of a balanced review of their proposal.

- Since initial screening of grant proposal is usually the responsibility of a single individual, there is danger of arbitrariness in initial rejections.

- Grants are ordinarily awarded to people known and respected by the RPO or recommended by a trusted advisor. An "old boy" network may result, with limited opportunities for applicants who are not well-known to receive grants.

APPENDIX A

FORD FOUNDATION BOARD OF TRUSTEES

APPENDIX B

SUMMARY OF GRANT REVIEW DATA

October 1, 1974 to September 30, 1975

Item	National Affairs Division	Ford Foundation
Number of applications received	approximately 2,500	approximately 30,000
Number of applications reviewed by outside advisors	approximately 50	
Number of applications approved	225	
Total dollar value of approved grants	$18.5 million	approximately $167 million
Smallest grant	$800	
Largest grant	$1,600,000	
Number of external reviewers	100	approximately 1,000 *
Number of outside advisors on standing review panels	0	0
Number of standing review panels	0	0
Number of panel meetings per year	Not Applicable	Not Applicable
Length of each meeting	Not Applicable	Not Applicable
Term of Panel members	Not Applicable	Not Applicable

*This represents one Foundation official's rough estimate of the number of people consulted on Ford Foundation projects during the course of a year.

CARNEGIE CORPORATION

INSTITUTIONAL SETTING

The Carnegie Corporation, which was founded in 1911, is primarily interested in supporting programs in education and governmental affairs. Andrew Carnegie began the foundation with a capital fund of about $135 million, which has a current market worth of approximately $241 million. The Carnegie Corporation awards about $15 million in grants each year, with approximately seven per cent of these monies allocated to educational endeavors in British Commonwealth nations. The balance of the Corporation's grants are made to American colleges and universities, professional associations, and other educational organizations. Current priorities focus on improving education at all levels, and include supporting basic and applied research and dissemination of information in the following areas:

- At the preschool level: child development in cognitive and related areas; assessment of development; and model training programs for parents, teachers, and others who work with young children.

- At the elementary and secondary levels: school program evaluations; measurement of student learning; reforming public school finance; and training and technical assistance for public school administrators.

- In higher education: non-traditional degree programs; work and education; institutional renewal; collective bargaining; and the status of women.

In addition, the Corporation currently supports research, education and monitoring projects to increase government responsiveness to citizens' needs.

The Corporation prefers to fund projects which will provide significant models, important information or useful insights, or trained specialists to directly affect a program area. It also maintains an ongoing interest in model projects initiated by minority group members to increase educational opportunities for minorities.

The President, Vice-President and Board of Trustees are active in approving grant applications and defining areas for Corporation activity. The Corporation's seven program officers, experts in their respective program areas, have primary responsibility for developing and reviewing grant applications, and actively participate in formulating programs and priorities.

ROLE OF ADVISORS

The Carnegie Corporation's Board of Trustees is the only formal committee with a role in the Corporation's grant application review and program development processes. The Board consists of the President of the Corporation and sixteen other prominent people interested in the Corporation's programs. Current trustees are listed in Appendix A. Members of the Board may serve a maximum of two four-year terms. New members are selected by current trustei.s. The Board of Trustees meets five times each year for one-half day to review and approve grant applications for amounts over $15,000. They also meet annually on a two-day retreat to discuss possible new programs and to work with the Corporation's officers to help them formulate program priorities.

The Corporation uses individual advisors on an ad hoc basis to assist the program officers in program development and grant application review. Programs officers ordinarily ask two or three experts from outside the Corporation to comment on each grant application they wish to consider for

for funding. Whether a proposal is sent to reviewers, and the selection of
the reviewers, are matters for the program officer's discretion. The role
of the outside reviewers also varies. For example, the program officer may
contact them by telephone for their comments on the proposal and/or the
applicant, or may ask them to complete a detailed substantive review of
the project which could include a site visit.

The Corporation also hires consultants to assist in program development
when the need arises, particularly when staff expertise is not available in
the area of interest. A consultant may, for example, complete a state of
the art review to help define potential program issues or complete a strategy
for the Corporation's involvement in that area. These consultants are hired
and paid by the Corporation. Consultants who are not grantees are paid
approximately $150-$200 per day; grantees are not paid for reviews.

PROGRAM DEVELOPMENT

Carnegie Corporation program officers are responsible for the total scope
of activity in their areas of concern. They keep themselves abreast of develop-
ments in their areas of responsibility, maintain ongoing communication with
other professionals in the field, and seek to identify specific areas in
which the Corporation could make a significant contribution. Identification
of such areas may result from a program officer's experience with an individual
project, or from broad knowledge of the field.

The Carnegie Corporation's senior staff, including the Corporation's
officers and the program officers, meets two or three times before each Board
meeting to discuss grant applications. The outcome of these meetings is a
priority list of applications staff believe should be funded. These meetings
provide an opportunity for each program officer to become familiar with the

broad scope of opportunities for Corporation involvement, and for discussion and consensus among staff concerning the Corporation's priorities. After review of the staff consensus, the President submits a single list of proposals to the Board of Trustees.

The Board reviews the President's recommendations for grants for more than $15,000. As a result, the trustees are familiar with specific projects or groups of projects which represent significant financial commitments for the Corporation, and, hence, potential or actual priorities. In addition, the trustees occasionally review evaluations of projects the Corporation has undertaken in the past to assess the efficacy of the Corporation's financial commitment to individual projects and priority areas. Finally, the Board discusses program directions at its meetings, and during its annual retreat. The President of the Corporation, as a member of the Board of Trustees and chief officer of the Corporation, serves as a means of communication between staff and trustees concerning program development and priorities.

GRANT SELECTION PROCESS

Prospective applicants are encouraged to submit a brief description of their projects to the program officer in their field of interest, or to discuss their ideas with a program officer. The program officers make preliminary assessments of the Corporation's interest in the projects based on their knowledge of the field and the Corporation's current priorities, and discourage or encourage submission of detailed proposals. Program officers may contact applicants for additional information before making this determination. They also may assist applicants in developing promising ideas into detailed proposals.

There is no standardized grant application form. The detailed proposal consists of the applicant's statement of the project's objectives, methodology,

personnel, and financial support requirements. The program officer may send the proposal to two or three experts who complete a "mail review", or contact people by telephone to discuss the merits of the proposal and/or the qualifications of the applicant. Generally each proposal is reviewed by two or three experts. The program officer may also schedule a site visit, contact the applicant for additional information, or gather information about the people or institution(s) involved. In addition, the program officer requires a formal letter of request from the applicant's institution.

If, after obtaining the information necessary to make the judgment, the program officer determines that the Corporation should fund the project, a project docket is compiled. The docket includes a description of the project, the proposal, information concerning the applicant's previous Corporation-sponsored projects, and other information the program officer has obtained about the project and the applicant, including reviews by outside experts. The program officer submits the docket to the Corporation's vice-president approximately six weeks before the Board of Trustees meeting. The vice-president reviews the docket and returns it to the program officer for necessary clarifications or additional information, including additional reviews. When the docket meets with the vice-president's approval, it is referred to the President. If, after reviewing the docket, the President agrees that the proposal should be seriously considered for funding, the docket is circulated among the senior staff. Each of these staff members reads the docket and prepares comments on it. They meet two or three times before each meeting of the Board of Trustees to discuss the proposals in detail, vote on each proposal, and assign priority rankings to proposed projects. The President, after conferring with the vice-president, presents

the Board with a single list of grants. The Board of Trustees reviews and votes on projects which require over $15,000 funding. Projects requiring less than that amount must receive final approval by the President and are reported to the Board of Trustees.

It takes two to three months to process a grant at the Carnegie Corporation from submission of the detailed application to award of the first check. Although grant applications may be submitted at any time, grants over $15,000 are processed in phase with the trustees' meetings held five times annually. Grants under $15,000 can be handled in three or four weeks. In-house development and review of proposals are planned to complete the staff phase of application processing before each Board meeting.

Between October 1, 1974 and October 1, 1975, approximately 160 grant applications were received by the Carnegie Corporation's Public Affairs Programs. Twenty-five of these were referred to outside experts for review, and fifteen of those twenty-five were funded. The Corporation as a whole receives roughly 2000 grant applications annually, eighty percent of which are rejected immediately because they do not reflect the Corporation's interests. One application out of every twenty or twenty-five is ultimately funded (see Appendix B).

PROCESS ASSESSMENT

The following advantages result from the use of outside advisors by the Carnegie Corporation:

- The Corporation's senior staff retain maximum control over whether outside advisors should be used to review grant applications, the extent to which advisors should be utilized, and which projects are ultimately recommended for funding.

- Only projects which the program officer thinks are promising are reviewed, saving the time of staff and prospective reviewers which would otherwise be spent in continued processing of unpromising applications.

- Reviewers may complete their work at their convenience, and the problems of timing and location of panel meetings are avoided.

- The Corporation's use of outside experts to aid in program development provides an important supplement to the expertise available among its small staff.

Disadvantages include:

- Applicants are not assured of an unbiased, balanced review since decisions on whether their proposals are reviewed and the selection of reviewers are made according to the program officer's discretion.

- When reviews are conducted there is no opportunity for exchange of ideas, one characteristic of a panel format.

APPENDIX A

CARNEGIE CORPORATION BOARD OF TRUSTEES

Appendix A (continued)

Alan Pifer
President, Carnegie Corporation of New York

Howard D. Samuel
Vice President, Amalgamated Clothing
Workers of America

David A. Shepard

Jeanne Spurlock
Deputy Medical Director
American Psychiatric Association

Franklin A. Thomas
President
Bedford-Stuyvesant Restoration Corporation

Marta Y. Valle
President, Valle Consultants Ltd.

APPENDIX B

SUMMARY OF GRANT REVIEW DATA

OCTOBER 1, 1974 TO SEPTEMBER 30, 1975

Item	Public Affairs Program	Carnegie Corporation
Number of applications received	160	approximately 2000
Number of applications reviewed by outside advisors	25	
Number of applications approved	15	approximately 100
Total dollar value of approved grants	$2.0 million	approximately $ 15 million
Smallest grant	$ 6,000	
Largest grant	$600,000	
Number of external reviewers		250 (approx.)
Number of outside advisors on standing review panels	0	0
Number of standing review panels	0	0
Number of panel meetings per year	Not Applicable	Not Applicable
Length of each meeting		
Term of Panel members		

END