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EXPOSURE DRAFT

A FRAMEWORK FOR BALANCING PRIVACY AND ACCOUNTABILITY NEEDS IN EVALUATIONS OF SOCIAL RESEARCH

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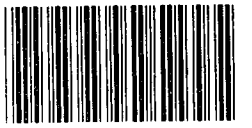

UNITED STATES GENERAL ACCOUNTING OFFICE
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Both the Congress and the Executive are committed to reviewing and reconsidering Federal policies, programs, and activities. We remain optimistic about the ability of the Federal Government to obtain the information necessary to perform these functions and to make appropriate changes in Government activities.

Social research is one mechanism for providing information which public policymakers need to make meaningful decisions. However, public accountability for Government sponsored research requires that the processes which create and disseminate this information be open to scrutiny. In using information from a research study, decisionmakers ought to be confident that the results are credible.

Independent reviews, including reanalysis of research data, can help to assure this credibility. The Privacy Protection Study Commission, the National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research, the Social Science Research Council, the American Statistical Association's Ad Hoc Committee on Privacy and Confidentiality, and a number of individual researchers have recognized that the public interest is served by such independent evaluations.

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These evaluations can be performed by agency evaluation units, audit agencies, or other research organizations. Careful cooperation by researchers and reviewers, however, will be required to assure that the rights and obligations of all involved parties are appropriately balanced. These include, on the one hand, protecting the privacy rights of research participants. On the other hand and equally important is the right of society to know that research which will influence public policy is conducted properly, that results are accurate and reliable, and that they are reported clearly, completely, and fairly.

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Certain legislation provides for balancing personal privacy and accountability in the research authorized. Other legislation limits access to individually identified data in Federal agencies. However, omnibus legislation which provides a comprehensive basis for appropriately balancing personal privacy and public accountability will be an evolutionary process, and any such legislation must also be accompanied by responsible administrative practice on the part of both researchers and reviewers.

The purpose of this framework is to help independent evaluators balance privacy and accountability needs. The overall principle embodied in the framework is that the quality of research can be determined with due regard for the rights of research participants. Our work provides a basis for the independent review organization to assess any risk its activities pose within the circumstances of each research effort. Specifically, it provides a basis to consider the feasibility of alternatives which might avoid the need to obtain confidential research data or to recontact research participants.

Also inherent in this framework is the principle that the purpose of the independent evaluation is to assess the quality of research results. Such an evaluation is not intended to make administrative determinations about individual research participants. Those who perform independent evaluations have a responsibility to use data in ways that are compatible with the intent of researchers' confidentiality pledges. On the other hand research sponsors have a responsibility to consider whether their confidentiality pledges might conflict with the need for public accountability and with the statutory rights and responsibilities of independent review organizations.

In this regard, researchers need guidance to help them decide the appropriate degree of confidentiality to pledge in obtaining informed consent to participate. Citizens should not be asked to provide information under assurances of confidentiality which cannot be maintained. To do so would likely undermine public trust and, in the long run, dilute the quality of research.

For the reasons indicated, we hope this document will be helpful to auditors and evaluators of social research and to social researchers in their efforts to cooperate with independent reviews. This document is being issued as an exposure

draft to allow consideration of any problems in its use which are perceived or experienced by auditors, evaluators, researchers, decisionmakers, or other interested citizens. We would appreciate receiving your comments on how it can be improved. Please send these comments to Harry S. Havens, Director, Program Analysis Division.

Comptroller General
of the United States

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ABBREVIATIONS

GAO	General Accounting Office
SSRC	Social Science Research Council

CHAPTER 1

INTRODUCTION

Federal outlays for social programs are estimated to exceed $300 billion in fiscal year 1979, and yet many societal problems remain. Partially as a result of this fact, the American people have developed mixed feelings about the role of Government. They want social problems solved, but they also believe that Government has become too big, too bureaucratic, and, most of all, too costly.

The problems of our society are complex, and our knowledge of what creates and sustains them is limited. Yet each year as legislative, budgetary, and appropriation issues are addressed, Government decisionmakers must contend with the practical issues: What does the public need? What priorities should be placed on each of these needs? How can the needs best be satisfied with limited resources?

In the past, public policies and programs frequently were established with little information other than the policymakers' implicit attitudes, opinions, and perceptions of reality. Although policymaking in a democracy is clearly and properly political, officials cannot hope to maintain public support for programs which do not work, are unnecessary, or waste valuable resources. A systematic, orderly, and rational approach to decisionmaking about social change involves a mix of information and value judgments. In general, decisionmakers need to know what the problems and values of the society are, the extent to which current policies and programs conform to those values and help to resolve the problems, what the options for the future are, and what each of these options is likely to cost and achieve.

Social research often can provide this information. 1/ A variety of activities, including policy science, applied research, program evaluation, and social experimentation,

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1/Social research involves systematic and intensive studies of either the characteristics, opinions, attitudes, desires, and behavior of individuals, groups, or institutions or the effects of policies, programs, or technologies on those factors.

apply scientific criteria to a greater or lesser extent to the problems of public policy formulation and program design. A recent report by the National Research Council, for example, showed that in fiscal year 1976, the Federal Government obligated about $1.8 billion to acquire and use knowledge of social problems. 1/

The $1.8 billion included amounts for basic, applied, and policy research; demonstration programs; general purpose statistics; program evaluations; development of materials; and dissemination activities. It is about three times as much, in real terms, as the Government spent for similar activities in the early 1960s.

This trend, however, has been matched by rising dissatisfaction. Despite the promise which social research methods offer, a variety of problems have combined to reduce their influence and potential effectiveness. One of these is the lack of any generally accepted and systematic way for policymakers to judge the credibility of research reports.

How receptive decisionmakers are toward a research study depends primarily on their individual perceptions of its relevance and credibility. Credibility, in turn, largely depends on the quality of the study, but users often lack the information or expertise to judge quality. They frequently have no choice but to base credibility assessments on the researchers' academic credentials, the reputation of the research organization, or subjective determinations, such as whether the results support their own individual views and opinions. Consequently, if research is to achieve its full potential, more systematic assessments will be necessary.

1/National Research Council, The Federal Investment in Knowledge of Social Problems, National Academy of Sciences, Washington, D.C., 1978.

CHAPTER 2

EVALUATION OF SOCIAL RESEARCH

NEEDS AND RISKS

A fundamental principle of democratic societies is that organizations, agencies, and individuals entrusted with public resources and the authority for applying them have a responsibility to render a full accounting of their activities. This accountability principle is inherent in the governmental process and extends not only to Government officials but to those in the private sector, such as contractors and grantees who expend public resources.

Much federally funded social research is performed by a variety of contractors and grantees. Growth in this research industry has been rapid. As in most industries, research organizations vary in the quality of their work; but the industry has not developed generally accepted standards of quality or a means of sanctioning those who do not achieve acceptable levels of quality.

Experience has shown that when there are no generally accepted performance standards controlling procurement for the Government, more than market forces are needed to protect the public interest. For example, pressures to secure contracts may sometimes induce researchers to promise more than they can deliver, and once the contracts have been obtained, pressures to remain within established cost estimates may result in poor quality work.

INDEPENDENT EVALUATION

Because evaluation provides independent judgments of the credibility of statements about the manner in which officials and organizations have carried out their responsibilities, it is an important part of the public accountability process.

The most important reason for evaluating social research is to provide an independent review of the quality of the research findings. Such an independent review can help assure that the research results are not misused in the formulation of public policy. Independent reviews can be of help in identifying high quality research, as well as deficiencies in research.

The purpose of substantial amounts of research is to influence the formulation of public policy and the design of programs which will use public resources and deliver services to the public. Social researchers frequently attempt to produce information which suggests solutions for the most critical problems affecting individuals and society. Therefore, the public has a right to know that the research was conducted properly and that the results are of high quality. The public also has a right to know that the results were properly interpreted and reported clearly, completely, and fairly.

The choice: replication or independent review

There is no foolproof way of guaranteeing that research data will be properly collected, adequately analyzed, or fairly interpreted. It is important, therefore, that policy research results are replicated or independently reviewed. To be replicated means to repeat a particular research design to study the reliability and validity of research results. Replication is fundamental to the scientific method, but social research cannot always be replicated before it enters policy debates. The time or the resources may not be available to replicate some research, such as costly social experiments.

In cases where replication is infeasible, an independent review can help establish the credibility needed to assure the effective use of the results in policy debates. An independent review team can systematically evaluate the processes by which the research was planned, carried out, and reported. 1/ Independent review can also include reanalysis to assess the quality of data and validity and interpretation of original analyses.

Such a review reveals whether persons with different perspectives and theoretical persuasions can arrive at similar conclusions when considering the same questions. When circumstances make scientific replication impossible or impractical, independent review can provide this determination.

1/Such a review can be carried out using a checklist, such as our office's "Assessing Social Program Impact Evaluations. A Checklist Approach" (PAD-79-2) (Exposure draft), October 1978.

The environment for independent review

An independent review can also enhance the objectivity of the research. Those social policy issues on which research is focused are likely to be controversial. The fact that the research is commissioned indicates that there may not be a consensus about the issues. Various stakeholders are likely to have a substantial interest in the outcome of the research. Without an independent examination, the research may be misused. Furthermore, many decisionmakers will not have sufficient confidence to use the information. The knowledge that the study may be independently verified should reduce the likelihood of deliberate distortion or misuse of the research process.

Opportunities for falsifying data or conducting intentionally incorrect analysis, however, are not great. One reason is that the large number of people involved in most research efforts intended for use in policy will serve as a check on fraud.

The causes of most problems are usually more subtle. The social and political values of those who sponsor the research help determine the selection of issues and organizations which will perform the work. Because these officials control the flow of funds, they can sometimes influence the study approach and results in subtle but important ways. For example, they usually have a great deal of latitude in determining which issues or analyses will be highlighted and which will be ignored. Under such conditions, effective use of research may be reduced because the research was not focused on the interests and needs of potential users, such as those in the Congress and state and local government.

For example, although a major portion of the policy-making process involves developing legislation, the Congress generally plays an indirect role in determining research agendas and objectives. Because of the separation of powers principle inherent in the American form of government, the Congress usually provides broad authority for the research and the Executive interprets and implements this authority. Serious concern has been expressed, however, about the ability of the Congress to deal with analyses and evaluations presented by the Executive. Such studies may be perceived as biased, or at best, emphasizing only aspects which the Executive might wish to highlight.

The need for guidelines to judge research

There are no clear-cut rules for the evaluation of social research. The uncertainty of the task can be categorized both in terms of how the review should be conducted and what types of information are needed to accomplish the review objectives.

There is no generally accepted set of standards or guidelines which the review team can use to judge a research work. Social researchers often are less able than their counterparts in the physical sciences to rigidly apply the scientific method to their work. For example, many researchers believe that people may react to any stimuli and, therefore, the process of being studied may cause them to alter their behavior. For a host of legal and ethical reasons, researchers cannot control, manipulate, and observe humans and human organizations to the same degree as they might animals or physical elements.

To try to improve the validity of social research, a variety of approaches, methods, and techniques have been developed. Each of these has characteristics which make it more effective in some circumstances than others. The review team will have to judge the appropriateness of these methods and techniques in light of the particular circumstances of a specific research study. There are a number of documents containing guidance for auditing and evaluating programs and activities which can help to make the review judgments as reliable as possible. 1/

The guidance documents, however, are necessarily general and cannot substitute for experience and judgment. The review team will, therefore, have to use a great deal of ingenuity

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1/Guidance issued by our office includes, "Standards for Audit of Governmental Organizations, Programs, Activities, and Functions" (1972); "Evaluation and Analysis To Support Decisionmaking" (PAD-76-9), Sept. 1, 1976; "Assessing Social Program Impact Evaluations: A Checklist Approach" (Exposure draft) (PAD-79-2), October 1978; "Guidelines for Model Evaluation" (Exposure draft) (PAD-79-17), January 1979; and, "Comprehensive Approach for Planning and Conducting a Program Results Review" (Exposure draft), June 1978.

when adapting general guidance to reviews of specific social research projects. The composition of such a team will depend upon the perspectives needed to satisfy specific review objectives. For example, this may necessitate using a multidisciplinary team, including expert consultants or panels. It might consist of people knowledgeable in the current state-of-the-art of research methodology generally or in the subject area being studied, those with a substantive knowledge of the subject area being studied, and those who understand the perspective of the users of the research results.

The types of information needed to accomplish review objectives also will vary with the particular circumstances. The review might, for example, be limited to an evaluation of the research procedures. The review team could verify that a research design was created and made explicit, that threats to the research's validity were anticipated and plans made to overcome them, and that controls were established to ensure the quality of data collected. As a general rule, poor research procedures will generate poor research findings. Consequently, review of the research procedures will help determine the potential for collecting invalid data which would lead to possible errors in interpretation and analysis.

A review of research procedures, however, usually will not be sufficient to verify the existence of invalid data or characterize the extent to which it affects study findings. In some cases, therefore, it may be necessary for the review team to actually examine portions of the data.

The validity and reliability of research data can be examined in a variety of ways depending upon the circumstances. The data sometimes can be examined in an aggregated statistical form. In other cases, the review team may need to examine individual pieces of data. To do this, the team may need access to data which identifies the individuals who provided it. Because of the need to protect privacy, however, special considerations are needed in these cases. At times, the information researchers collect is very sensitive; that is, if disclosed it could cause the individuals who provided it to be subject to ridicule, harrassment, or recrimination. Because citizen trust is essential to collecting data to meet research objectives, researchers have usually taken special precautions to prevent the data's disclosing the identity of participants. They have done so

for several reasons, including a sense of professional responsibility and because they have often given a pledge to the cooperating citizens that the individually identifiable data would be kept confidential.

The Social Science Research Council (SSRC) recently performed a study for our office to consider the need for auditors' access to individually identified data and to suggest methods for use in audits of social experiments which would balance the needs of public accountability and personal privacy. 1/ In addition to suggesting methods, the SSRC report also recognized the need for the review teams to include staff with experience and expertise in social science.

CONFIDENTIALITY IN SOCIAL RESEARCH

In a basic sense, social research is the study of people: their characteristics, opinions, attitudes, desires, and interactions with each other and with their environment. Social research, however, is usually used to learn about aggregate, rather than individual, behavior and about potential benefits to society as a whole. Although a variety of research data must be collected from individual citizens and organizations, researchers will, in the end, analyze and report aggregated characteristics, proportions, and other such indicators.

Researchers are generally aware that some types of personal data are more difficult than others to obtain from the individual participants. Except for any data required as a condition of program participation, citizens are free to decide, item by item, what to reveal about themselves. Researchers must consider in their study design the likelihood of cooperation by individuals because, to a large extent, the success of their work depends upon this cooperation.

Social scientists do not fully understand what motivates people to cooperate with researchers, but they believe citizens generally are reluctant to provide information which may characterize themselves or others negatively. Some people do not trust others with information about their personal

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1/"Audits and Social Experiments: A Report Prepared for the U.S. General Accounting Office by the Committee on Evaluation Research," Social Science Research Council (PAD-79-1), October 1978.

lives, particularly if they perceive it to be unfavorable. As a result, while some people willingly participate in research studies, others protect themselves by refusing to disclose information or providing inaccurate or incomplete information.

The cooperation of respondents exerts a strong influence on the achievement of social research objectives. If some of the data cannot be obtained, policymakers will be deprived of useful information; if inaccurate or incomplete data is obtained, social policy may be misguided.

Researchers usually operate on the theory that people will provide more candid and complete information if they are convinced that the data will not be used against them. Thus, researchers may promise some specific limitations on who will have access to the individually identified data. Strict pledges of confidentiality are necessary for ethical, legal, and other reasons when the information sought is sensitive or could be personally embarrassing. Research into deviant or illegal behavior, such as drug abuse, is a good example.

For a number of reasons, citizens also may be reluctant to be identified with a variety of other information, such as their business practices, incomes, or opinions about a Government program. For example, some research has shown that more people refuse to provide information on their personal income than on any other attribute. The sensitivity of various data has made it necessary for audit and evaluation organizations, as well as researchers, to offer confidentiality pledges to citizens from whom they wish to obtain information.

The intent of confidentiality pledges is to assure, to the extent possible, that individually identified information collected for research or evaluation purposes is not perceived as harming the participant. Citizens will surely be less likely to provide information if they believe that in so doing they risk punishment or embarrassment.

RISKS TO RESEARCH FROM INDEPENDENT REVIEW

It is understandable that researchers who have given confidentiality assurances have usually been concerned when independent evaluators sought access to individually identified research data to verify its accuracy and reliability. Their concerns were intensified in those

cases where the information was requested as a basis for recontacting and possibly reinterviewing the research participants. In particular, such disclosures may appear to involve breaches of promises made to research participants, breaches of ethical standards, or violations of law.

Researchers' concerns stem in part from a lack of knowledge of how research participants will perceive the review function. If participants believe that the review will increase risk to them, that perception many cause them to modify their behavior or even drop out of the study. As a result, the study findings may be seriously biased, and such biases are often difficult to detect and measure. If, however, research participants perceive no risk from the review, or if the benefits of their continued participation outweigh the disadvantages, there may be no impact. Actual evidence of the impact is limited.

The SSRC report identified only one instance in which the participants were reinterviewed. In that case our office reinterviewed some participants in the Department of Housing and Urban Development's housing allowance experiment. This example provided little information about the potential impact of the reinterviews because only those people who had previously consented to the reinterview were contacted and the reinterviews were conducted after researchers had completed all data collection activities.

According to the SSRC report, however, indirect evidence, although inconclusive, suggests that independent reviews may pose some risk to research. For example, that report states that a congressional investigation disrupted research in a Woodlawn, Illinois, manpower training program because trainees believed the investigators had breached the researcher's confidentiality assurances.

Also, during the late 1960s, threats of subpoena provoked the distrust of participants during research by the American Council on Education into causes of campus unrest. The resulting furor caused three or four of the participating colleges to drop out of the study.

On the other hand, there were congressional investigations of the negative income tax experiments and some disclosures of participants' records at various times to auditors, local district attorneys, and members of the press despite confidentiality assurances. These disclosures appear not to have been identified as having any substantial impact on participant attrition. There does not seem to have been any

study, however, of the effect such disclosures may have had on citizens' willingness to participate in subsequent research.

Recent large-scale experiments conducted by the Bureau of the Census indicate that strong confidentiality pledges will elicit higher response rates. 1/ In one component of of the study, each respondent was given one of five different promises. (1) data would be kept confidential forever, (2) data would be kept confidential for 75 years, (3) data would be kept confidential for 25 years, (4) no promise of confidentiality, or (5) an explicit statement that confidentiality could not be guaranteed. Although by any standard the participation rates were high for all of the conditions, refusal rates did increase slightly across each condition as the confidentiality pledge was weakened; that is, the weaker the pledge, the higher the refusal rate. The overall pattern was statistically significant, but reliable estimates of refusal rates between any two conditions could not be made.

A similar study was conducted under the auspices of the National Opinion Research Center. 2/ In a component of that study, each participant was given one of three different promises: (1) an absolute assurance of confidentiality, (2) a promise of the best possible protection of confidentiality except as required by law, and (3) no mention of confidentiality. Although the confidentiality pledge did not affect the overall response rates in that study, assuring respondents of absolute confidentiality had a small but consistent effect on their willingness to answer individual questions. Respondents who were given unqualified confidentiality pledges were somewhat more likely to answer sensitive questions than either of the other two groups. Evidence also suggested that a promise of absolute confidentiality would elicit more accurate answers to sensitive questions.

1/Goldfield, Edwin D.; Turner, Anthony G.; Cowan, Charles D.; and Scott, John C.; "Privacy and Confidentiality as Factors in Survey Response," Review of Public Data Use, Vol. 6, No. 4, pp. 3-17.

2/Singer, Eleanor, "Informed Consent; Consequences for Response Rate and Response Quality in Social Surveys," American Sociological Review, 1978, Vol. 43, April 1978, pp. 144-162.

CHAPTER 3

BALANCING PERSONAL PRIVACY AND PUBLIC ACCOUNTABILITY NEEDS

Organizations which independently evaluate social research have an obligation to obtain sufficient, competent, and relevant evidence to support their conclusions about the validity of the research. They also have a responsibility to assure that their efforts do not unduly damage or bias the research which they are attempting to validate.

Review organizations can use a variety of approaches and methods to obtain data; some of these methods require access to individually identified data. However, review teams should only seek access to individually identifiable information, monitor research activities, or recontact research participants when the need is clear and necessary to accomplish the review purpose.

It is not possible to specify a comprehensive set of circumstances in which the review team will require access to individually identified data or will need to recontact and possibly reinterview research participants. These needs are determined in large part by the particular purposes of each review and the circumstances of the research study. Even when deemed necessary, however, such access should be obtained only after carefully assessing the risk to the research effort and weighing feasible alternative methods of satisfying the review objectives.

ASSESSING THE RISK OF INDEPENDENT REVIEW

Because the evidence is limited and inconclusive, assessing the risk of obtaining individually identifiable data or reinterviewing research participants is not an easy task. Although the risk cannot always be quantified, it can be assessed by carefully considering the character of the research, the timing of the review, the purposes for which the data was collected, and the data itself.

Character of the research

The review team must consider the character of the research. In research programs where the objective is to determine how specific policies or programs would

function if fully implemented within the existing social system, the independent review may add an element of realism without posing a serious risk to the research. This is particularly true if participants are receiving some direct and tangible benefits from the research.

The Privacy Protection Study Commission's report, "Personal Privacy in an Information Society," recognized the distinction between those activities, such as demonstration programs, which provide what many would view as a direct benefit to the participants and those, such as opinion surveys, which do not. The Commission noted that participants who benefit directly from a program may be considered to have entered into a contract to provide information in exchange for the benefits. These participants have motives to cooperate other than a desire to contribute to the general fund of knowledge or a sense of social duty. They are, therefore, much less likely to refuse to provide the information because the review team has access to it or might recontact them to verify it. They might, however, decide to alter their future behavior and responses, depending in part on the sensitivity of data being collected from them.

When research involves various stages of prototype development of a new social program, an independent review may add realism at one or more of those stages; that is, the presence of a review function may establish a more realistic environment for experiments intended to determine which individuals or organizations would participate in the proposed program and how that program would affect them. In such cases, research objectives are best accomplished by modeling the pilot program as closely as possible to the way a fully implemented program could operate successfully. Review would likely be a part of any full-scale operating program.

In some research, however, any direct, unplanned intervention could have serious consequences. For example, in small "theory testing" experiments, successful results depend upon very careful control over factors which might influence sample size; participant characteristics, attitudes, or behavior; program administration; or measurement methods. Reinterviewing program participants in these cases might disrupt the research or introduce biases into the study results that would be difficult to detect.

Timing of the independent review

The timing of the review in relation to the research will also affect the risk. Potential problems can be minimized when the review team is involved early in the research process or the researchers anticipate whether an independent evaluation will occur. For example, the research can be specifically designed to accommodate the evaluation--samples can be enlarged and stratified or grouped so that the effects of the evaluation can be studied and, if necessary, some groups dropped from the research after the evaluation.

It is especially important for sponsoring agencies to anticipate the possibility that an independent review team may need to reinterview participants so that research samples may be appropriately augmented. However, both the agency and the review team should ensure that viable alternatives will be fully considered to balance review needs against any possible risk or cost to the research. Furthermore, if the research design includes effective quality control procedures, it may be possible to accomplish independent review objectives without reinterviewing significant numbers of participants.

Obtaining confidential data or reinterviewing research subjects obviously will involve less risk to a specific research work after the research is completed than it would during the course of the study. However, research participants may be more difficult to locate or more reluctant to provide information to the review team after the research is completed. They also may be less able to verify original data.

Although preferable from the standpoint of risk, it is not always possible to delay a review until the research is completed. The timing of involvement is determined in part by the review objectives and decisionmakers' needs.

Purpose for which the data was collected

Agencies' administrative record systems contain a great deal of information useful in policy research. Because of the burden and cost of collecting data, researchers increasingly have come to rely on information in these record systems. Information originally collected by Federal, State, or local agencies for administrative purposes is used by researchers in a variety of ways, from

defining populations of interest and drawing statistical samples to supplementing data which they collect directly from individuals and organizations. In some cases, the administrative records constitute the primary or even the only source of information for the study.

The Privacy Protection Study Commission introduced the principle that data collected for administrative purposes should be functionally separated from that collected for research purposes. The objective is to prevent information collected for research from being used to make administrative decisions about the individuals who provide it. Such a distinction is also useful in assessing the risk of independent evaluators obtaining the data.

Administrative information is not normally collected under explicit, individual confidentiality pledges. When researchers extract information from program records or data archives, the individual may not even be aware that the information is being used. When the review team gains access to such data, the individual's right to privacy must still be respected, and possible risk to the individual or to the research should be assessed.

The distinction between administrative and research data is not the sole basis for assessing the risk. Indeed, making such a distinction is not always easy. For example, much information collected during the course of demonstration or experimental programs properly could be characterized as either administrative or research. This is particularly true of the types of information which would be required for administering a similar full-scale operating program, such as the names of participants and information about their eligibility to participate in the program.

In addition, a functional separation of data is not always maintained. Quite often information collected for administrative purposes is integrated with information collected for research purposes. The researcher, for example, may draw some information, such as the names and addresses of program participants, from the agency's administrative records and collect other information, such as participants' attitudes toward the program, directly from the individuals. The composite data have both administrative and research characteristics, but once integrated any risks associated with access to the data should be assessed. If recommendations of the Privacy Protection Study Commission were enacted, such functional separation would be required.

Sensitivity of the data

The nature or sensitivity of the data will also help determine the risk. Some information with major policy relevance is so sensitive that even routine research procedures are not very effective in obtaining it. In these cases, attempts by the review team to access individual data or recontact subjects may pose a serious risk to the research.

Included in this category is information about illegal acts, such as drug usage; legal but stigmatized behavior, such as alcoholism; and certain kinds of victimization, such as rape. Many people refuse to even talk to Government officials about these acts because they fear possible harassment, recrimination, or embarrassment. For example, research has shown that there are 300 percent or more rapes than are reported by citizens to police.

Social scientists have devised and field tested elaborate ways of obtaining such sensitive personal information. All involve vigorous assurances of anonymity and confidentiality, and some methods preclude verification of individual information. For example, the randomized response technique was developed for just such circumstances. Using this method, the researcher asks the respondent to answer one of two totally unrelated questions. The respondent randomly selects the question but does not reveal to the researcher which of the two questions he or she has answered. Using statistical techniques, the researcher can estimate the percentage of the sample possessing the characteristics of interest but cannot attribute that characteristic to any particular individual.

Similarly, recent tests on self-reporting methods show the totally anonymous, self-administered questionnaires to be significantly more effective in eliciting responses than the personal interview with confidentiality and anonymity guarantees. 1/

Even these methods are not totally effective, however, in eliciting cooperation. People might refuse to cooperate

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1/Sasfy, Joseph H., "To Tell or Not To Tell: A Study of The Self-Reporting of Criminal Offenses," the MITRE Corporation, McLean, Virginia, January 1979, MTR-79W00037.

at all if the review team had access to the information, were present when it was collected, or were likely to recontact them.

CONSIDERING ALTERNATIVES

The extent to which the review team will need to access confidential data, monitor research activities, recontact program participants, or reinterview those participants is largely determined by the review objectives. These activities are not necessary to satisfy the objectives of every review. For example, we assessed the Federal Aviation Administration's study of the impact of the Concorde aircraft's landing at Dulles Airport without access to any individually identifiable data, although a public opinion survey was an integral part of the study.

In other cases, the review team will need access to the data and may need to recontact research participants. For example, a congressional committee which directed the Army to test a new training concept before implementing it also requested that we "monitor and evaluate the test" to ensure that it "was conducted in a professional manner and was sufficient in scope to judge the program's merits." We recontacted a sample of participants to verify test conditions. Although practical or legal aspects of different cases limit generalization from such specific experiences, it is likely that the need to recontact participants may be found in a variety of circumstances.

Another factor which will help determine the extent to which the review team needs access to individually identified information and to research participants is the quality of the research effort itself and the extent to which research activities have been documented and an audit trail created. The research design and quality control procedures are important factors to be weighed in deciding the review scope.

The review team should always evaluate the research procedures before deciding the type and extent of access needed to confidential information; evaluation will help assess the potential for serious bias in the research and indicate those factors on which the review team should concentrate. The purpose of reviewing the research procedures, however, should be consistent with the review objectives. If an objective is to perform an independent technical assessment of the research design and of its adequacy to meet research objectives, the review is clearly

not an alternative but an essential task. In such a situation, the review team must include all of the skills required for such a technical review.

If, however, an objective of the review is to test reliability of the data base, the need to have access to individually identified data and possibly to reinterview a sample of participants or make independent observations will usually be considered. In such cases, reviewing research procedures can still be considered an alternative to reinterview since such a review could identify factors which contribute to unreliable results.

The techniques discussed below are alternatives to a wholesale reinterview by Government auditors of an entire research sample. In specific instances, some of these techniques also represent viable alternatives to obtaining data from confidential research records. The usefulness of some techniques will be limited for either purpose, but all should be considered in the appropriate circumstances.

Reviewing research procedures

The review team should examine the research procedures to determine the potential for significant bias in the study. Such an examination will pose no serious risk to the research effort, and checklists are useful in this kind of examination.

The examination should focus on the possibility of bias which might be caused by the research plan, the selection of effectiveness measurement strategies, the sample design, the sampling procedures, the data collection quality controls, or the data processing procedures. For example, researchers should be able to assure the review team that effective use is being made of statistical techniques to detect interviewer bias or cheating.

The review team should also consider the efforts of parties outside the research team to help ensure the quality of data. For example, in some cases the sponsoring agency may have submitted research procedures to review by outside experts to ensure that they were appropriate and complete. The sponsoring agency may also monitor the implementation of the research plan either through in-house staff or outside consultants or contractors. The Office of Management and Budget and our office also have certain responsibilities for reviewing forms used to collect data from the public. Although these oversight reviews are not sufficient in themselves to ensure that the data collected are reliable

and valid, sometimes the reviews contribute to improvements in the instruments.

Examining research procedures, however, will help determine only the potential for bias. In some cases, this will be sufficient to satisfy the review objectives. If, however, the review team must verify the existence of bias or determine its extent, additional work will be necessary.

Comparing records

Comparing research records with an outside information source is an appropriate technique when the review team's objective is to verify the accuracy of facts. For example, the team might determine the accuracy of income reports from demonstration program participants by comparing the reports with employer pay records.

The review team can proceed with more confidence when independent records are congruent. However, it is important to note that almost all record systems contain errors, and without evidence to the contrary the review team cannot assume that the outside source is sufficiently accurate to be used as a standard. For this reason, better methods are being developed to recognize different errors in multiple independent data sources and to combine the sources to obtain a higher confidence level than can be attributed to any one source individually. The review team should consider use of these methods.

Record comparison often can be accomplished without access to individually identified information in the research files by using insulated data file linkage techniques which were developed for this purpose and which have been successful in the past. In the simplest form, both the researcher and outside source would supply data files to a disinterested third party. That party would link the two files, make the comparison, and report the results without individual identifiers. Wherever appropriate, however, the review will be more efficient if the review team is given direct access to the data.

Even where access to individually identified information is required, the need to reinterview research participants may still be avoided. For example, our review team compared a sample list of participants in the New Jersey negative income tax experiment with local telephone directories to obtain a reasonable assurance that the people existed.

Obviously this technique is effective only when the review team can find an accurate source of information with which to compare the research records. However, when a single outside data source does not exist, the team may be able to create one by consolidating information from multiple sources.

Aggregated data comparisons are also useful and pose no risk to the research. Although much less precise than individual comparisons, these can provide an indication of whether the research data is reasonable. For example, the review team might get some idea of the reasonableness of income data reported by participants in an experimental program by comparing the mean reported income with that for similar groups in the same area. In addition, they can compare the aggregated data with results of other similar research studies as a test of the data's reasonableness.

Sampling independent groups

When the primary objective is to establish the accuracy of sampling and the validity of responses, the review team in some cases may be able to obtain an independent sample of the same target population. The primary benefits of this approach are that the data can be obtained without disrupting the original sample and can be used as a legitimate statistical basis for judging the quality of the original research.

This technique might be necessary, for example, when the research subject matter is extremely sensitive and the researcher used data collection methods not subject to individual verification. In other cases, it may not be possible because no additional members of the target population can be found. In cases such as the New Jersey experiment, the review team would have been unable to obtain data on the impact of a negative income tax policy from an independent sample without creating a separate experiment. Use of this method, therefore, may or may not be appropriate, depending upon both the nature of the research and the objectives of the review.

When it can be used, parallel sampling has considerable scientific merit since it constitutes a partial or sometimes even a total replication of the original research. It will involve some cost, but the cost may not be prohibitive since the review team can capitalize on the original research design, target population listing, and sampling procedures. Though

costly, it will be worthwhile if there is a high risk that reinterviewing the original sample will disrupt an expensive research effort.

Subsampling

In some cases, the review team will require direct access to individually identified research records or research participants. For example, they may need direct access when the objective of the review is to verify the integrity of the original researcher's performance or to test the reliability and validity of certain measurements or other techniques used in the research. In such cases, the risk of seriously disrupting or biasing the research is reduced by selecting a subsample. This is because the researcher can remove these individuals from the study if the review provokes them to drop out of the study or to alter their behavior. Subsampling also is less costly than a review of the total research sample.

Subsampling is used in its broadest sense here to mean any subset of an original sample. The method for selecting the subsample will depend upon the review objectives to be served. In some cases a random subsample will be needed. For example, we were unable to form meaningful conclusions from our reinterviews of participants in the housing allowance experiment because of possible self-selection biases. In other cases, however, nonprobabilistic subsamples may be sufficient.

It is important in such cases to have an understanding with the researcher that the sample is not necessarily intended to verify the statistical accuracy of particular responses and that the sample will be the minimum needed to meet the review objectives. For example, it may be quite effective to ask project staff to describe their data collection procedures and then observe each step of the procedures being carried out for a relatively small sample.

Financial auditors have long used subsampling to accomplish their review objectives. This technique is just as useful for reviewing research programs. For example, we used a random subsample of individually identified files in our audit of the New Jersey negative income tax experiment. The primary objective of that audit was to assess the data supporting conclusions contained in a preliminary report of research findings.

Financial audits frequently reveal that internal control procedures developed by the organization have not been effectively implemented by operating personnel. Similarly, the reviewer of a research effort may need to verify that the researcher's quality controls were actually implemented. He or she, for example, may review participant records to determine whether the research organization obtained documents that verified individual eligibility to participate in the program. The reviewer may also recontact participants to verify that interviews took place and that the participants provided particular responses to certain questions. While these activities would require access to individually identified data and to research participants, the risk of disruption is reduced when the reviewer contacts as few individuals as possible.

Using surrogate interviewers

When data reliability can be assessed only by recontacting research participants or when the review objectives require collecting additional clarifying data from the participants, reinterview may be unavoidable. The reinterviews are most likely to disrupt the research when they are conducted by people whom the respondents view with strong suspicion. Their suspicion may make the reinterviews difficult or impossible to conduct and results more difficult to interpret.

The review agency may be able to minimize these problems by contracting with others to conduct the reinterviews if it appears likely that respondents will be suspicious of Government interviewers. In some cases, this also may be less costly and more effective than if the review team members, who are often less experienced in such interviewing, conducted the reinterviews.

The primary advantages of using surrogates are that it does not involve direct Government intervention and the review agency obtains the benefit of trained professional interviewers. Because the contract is between the review agency and the interview firm, its use does not necessarily compromise the independence of the review.

We used surrogate interviewers in our research into the well being of older people in Cleveland, Ohio. Although using surrogate interviewers was not dictated by privacy considerations, the interviewers were carefully selected to avoid provoking the suspicion or distrust of the research participants.

When interviewers are well trained and supervised, data from the reinterviews can serve as a measure of the variability over time of the responses; that is, comparisons of the original interview data with that obtained from the reinterview can help determine the stability of response. Although it would be difficult to determine which responses were correct, such comparisons can be very helpful in interpreting research results.

In some cases, a research group experienced in secondary analysis could be used. In addition to conducting and analyzing the reinterviews, such an organization might also reanalyze the original statistical data, verify its internal consistency, and generally check the validity of conclusions.

PROTECTING CONFIDENTIAL INFORMATION

When the review team obtains information collected under a pledge of confidentiality, they bear responsibility for assuring that the intent of that pledge is not violated. They must take the necessary steps to ensure that the information is neither used without the permission of the participants nor used in ways which are incompatible with the pledge. This is very important to establish and maintain cooperation between review agencies and researchers.

In some cases protection of individually identified data is required by law. For example, the Privacy Act of 1974 generally precludes disclosure of individually identified data in Federal agencies without the prior written consent of the individual. The act does authorize the disclosure of individually identified data to our office; employees of an agency, such as auditors, that have a need for the data to perform their duties; and contractors performing an agency operation or function. However, unless specifically authorized, the act does not generally allow for disclosure of individually identified data between agencies or to organizations outside the Government. Another example, the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment, and Rehabilitation Act Amendments of 1974 provide for auditors and evaluators to access individually identified alcoholism and alcohol abuse research data but prohibit the auditors or evaluators from further disclosing the information in an identifiable form. The act provides penalties for violation of the disclosure provision.

The review agency and the researcher should negotiate and agree on mutually acceptable procedures for protecting

individually identified data. In many cases, it may be necessary to put the agreements in writing.

The possibility of disclosure by subpoena is implicit in most requests for information. Since many congressional committees, as well as the courts, often can compel the disclosure of research information, neither the researcher nor the review agency can always absolutely assure the data's confidentiality. On the other hand, statutes which authorize some types of research also provide researchers with immunity against compulsory disclosure of their data in an individually identifiable form. Some of these statutes, though--for example, the Drug Abuse Office and Treatment Act of 1972--specifically provide access for purposes of financial and management audit or program evaluation.

In the absence of immunity, the likelihood of subpoena can be minimized by retaining the data in an individually identifiable form only when absolutely necessary. In many cases, it will not be necessary for the review team to remove individually identifiable data from the researchers' files. In other instances, they could initially record the information in an identifiable form and later remove the individual identifiers. Also, if data is subpoenaed the researchers and review agency could explain the damage which might result to cooperating citizens if their confidential data were released in a public forum. It is reasonable to expect that this would be given consideration by the tribunal.

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