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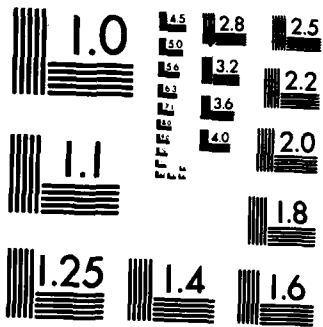
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## Abstract

This report reviews unobtrusive research methods from a variety of fields for application in Air Force community relations program evaluation.

Its purpose is to provide base public affairs personnel with an overview of these non-reactive measures, including: analyzing physical traces, monitoring existing data and simple observation. Examples are given of creative unobtrusive applications to current community relations issues. These applications include the uses of content analysis, the semantic differential and the Delphi Technique to quantify qualitative data.

An extensive annotated bibliography includes sources on above subjects and case studies of evaluative and unobtrusive research.

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**PUBLIC RELATIONS PROJECT:**

**Unobtrusive Research  
with Applications for  
Air Force Community Relations**

Submitted by:

Capt. John M. Dumoulin, USAF

In partial fulfillment of the requirements  
for the master of arts degree in Public Relations

School of Public Communication  
Boston University  
August 1984

**APPROVALS:**

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**UNOBTRUSIVE RESEARCH  
WITH APPLICATIONS FOR  
AIR FORCE COMMUNITY RELATIONS**

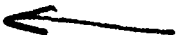
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Abstract

This report reviews unobtrusive research methods from a variety of fields for application in Air Force community relations program evaluation.

Its purpose is to provide base public affairs personnel with an overview of these non-reactive measures, including: analyzing physical traces, monitoring existing data and simple observation. Examples are given of creative unobtrusive applications to current community relations issues. These applications include the uses of content analysis, the semantic differential and the Delphi Technique to quantify qualitative data. 

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Research is a wonderful thing. In the natural sciences, formal research has led to the advancement of humanity in undeniably profound ways. The very idea of scientific research conjures up images of lab-coated old men with beakers and white mice performing sterile experiments to benefit all mankind.

Why is it then that the term "social research" - for those few who know what it means - evokes shuddering images of complicated surveys of imprecise questions with invalid answers getting undeterminable results?

Today a dominant part of social science research is done through interviews and questionnaires (Webb, 1966, p. 1). To keep up with the accuracy of scientific research, we insist these measures be precise, reliable and valid (Severin, 1979, p. 13). The result is often a complicated, costly and time consuming monstrosity. By the time it has been written, typed, pre-tested, coordinated, administered, correlated, post-tested and reported it is out of

date.

Within the Air Force, federal and military regulations and restrictions designed to protect individual rights hamper Air Force Public Affairs attitude and opinion research. The Privacy Act of 1972 limits a researcher's access to certain demographic information. Service regulations limit the kinds of questions a military Public Affairs officer can ask. Public affairs people find they neither have the time, expertise, resources nor the budget to understand the nuances of government regulations enough to produce reliable and verifiable program evaluation. They do not know the research process well enough to know which unobtrusive techniques they can use to supplement information they have on external programs. Often, the result is that no research gets done.

Yet Air Force Public Affairs cannot effectively function without this feedback. By definition, Air Force Public Affairs exists to provide information and maintain an awareness and concern for public opinion regarding an organization that is owned and operated by and for the American people (Wood, 1983, p. 1).

The public is not the only one demanding a responsive Air Force public affairs program. More and more, commanders are demanding quantifiable results

from public affairs programs to justify the money and manpower diverted directly from "the mission" - money they argue that could be better spent on additional manpower slots or new equipment.

Those in need of research find themselves in a "Darned if they do, darned if they don't" situation.

The objective of this paper is to assess the work done to date on program evaluation methods, with an emphasis on those techniques that 1) remove the researcher from the research scene, 2) require less expertise to use than more formal methods, 3) lend themselves easily to quantification and 4) show promise of application to Air Force community relations issues.

The reader may find more sources than usual attributed within the text. This paper is designed to spark creative applications of past unobtrusive research. Because of this, footnotes have been used liberally to provide the reader an opportunity to further research each subject or case study.

Background

Air Force Public Affairs cannot afford to be "darned" for not having done the type of research that provides data or insight into public opinion. By

definition, Air Force Public Affairs exists to provide information and maintain an awareness and concern for public opinion regarding an organization that is owned and operated by and for the American people (Wood, 1983, p. 1).

#### The Public Affairs Role

The Public Affairs Officer's (PAO) role is to advise and assist the commander in the many specialty areas of public affairs so that the command can better accomplish its designated mission. The PAO delivers management's message to employees, the media and local communities. He is tasked to provide prompt, honest, and factual information about the installation (subject to security constraints). He is a policy advisor, planner and implementer of community relations programs. At the same time, the PAO is the "eyes" for higher echelons of Public Affairs - the Command and Headquarters Air Force levels.

The Air Force Public Affairs program is traditionally divided into three functions: internal communications, community relations and media relations (Wood, 1983). At present, Air Force public affairs people solicit a considerable amount of internal feedback. They use readership surveys to measure the

effectiveness of their primary internal communications tool, the base newspaper. Most bases have an anonymous "Tell It To The Commander" telephone line to record complaints or laud programs. Interpersonal communication is used with "Commander's Call" meetings and office visits by the commander to informally monitor employee attitudes. Combined results from all these techniques can be quantified to some degree and monitored.

A quantifiable system for feedback of publics not under the control of the military is lacking. Air Force programs at the base and command levels do not routinely monitor for changes in community or area media attitudes toward an installation or some facet of its externally oriented programs. Scanning newspapers or talking to influential city officials may uncover a latent attitude for or against a base commander or event, but it does not provide representative and quantitative feedback about general attitudes and opinions toward a base or its programs over the long run. Justifying the cost effective existence or initiation of public affairs community relations programs to a commander (and the Public) takes carefully gathered facts.

When a commander's or PAO's actions produce

... because of lack of adequate public opinion research, the outcome can often have long-term regional and international impact (Wood, 1983).

The Public Affairs Officer is not, of course, a magician. Neither having the PIO on the commander's advisory council, nor the subsequent development and use of a well thought-out public affairs plan will inoculate against external problems. Public Affairs, even with the sophisticated scientific social research surveys backed by sound unobtrusive feedback, cannot prevent controversy, eliminate advocacy by special interest groups, eradicate negative news stories or keep everyone happy (Terino, 1982).

#### Evaluation Terms and Concepts

Evaluation feedback can be described several ways - qualitative vs. quantitative, policy planning vs. evaluation of existing programs, obtrusive vs. unobtrusive.

QUALITATIVE EVALUATION analyzes and categorizes values, attitudes and other subjective data into non-numerical generalized statements. QUANTITATIVE EVALUATION uses scientific techniques that enable a researcher to make general, objective (numerical) statements about his findings.

For quantitative evaluation to work, it must assume that resources are available and used, that they provide equal benefit to everyone and meet everyone's needs. For example, by limiting data gathering to auditing of federal expenditures - the most common quantitative method - evaluators only see the relationship of dollars spent to program effectiveness (Siedman, 1977, p. 415). Meanwhile data about recipient needs in the form of personal experience, records, reports and other resources go untapped for policy development or program evaluation. Likewise, counting the number of visits per month as part of the base's community speakers bureau will not tell a base PAO if what the Women's Garden Club heard increased their appreciation of the base's environmental position. Validation, not explanation, of assumptions is the strength of qualitative analysis.

When quantitative and qualitative analysis are used together or if qualitative evaluation can be quantified, the result is the support demanded by commanders for or of conclusions and policy recommendations.

When contemplating evaluation, it's useful to distinguish here between two broad contexts. The first, POLICY AND PROGRAM FORMATION, evaluates the

appropriateness of or potential for the establishment of a program. The second, **EVALUATION OF EXISTING POLICY** and programs, determines whether existing programs are accomplishing their objectives. Unobtrusive research methods can be used effectively in either context (Rossi & Berk, 1981, p. 286).

**OBTRUSIVE RESEARCH** methods are those which intrude into the situation studied. In other words, the subject knows he is being studied. Examples of obtrusive methods include surveys, visible cameras, interviews, etc. The presence of certain variables almost requires unobtrusive research methods. A desire for social acceptance or evaluation apprehension on the part of the subject can skew results. A subject may have a desire to sabotage the results. He or she may be doing what they perceive the researcher wants them to do. Stern (1979, p. 71) labeled these variables the "On Stage Effects".

## CHAPTER ONE

### An Overview of Unobtrusive Research Methods

Why should this research be unobtrusive?

First, most forms of unobtrusive research are quantifiable and easily updated. Content analysis, for example, is an effective way to measure the communication channel itself and can be updated periodically with little effort (Babbie, 1979, p. 274). Second, unobtrusive techniques are often less complicated and in many ways less time consuming and less expensive. Using existing records, if you know where to find them, can eliminate costly surveys (Vogel, 1982, p. 22). Third, it takes the researcher out of the research situation. Rank, uniform, even haircut or posture, can influence responses. Similarly, a military return address on a survey can contaminate research results. The fourth and probably most important reason is that military and federal regulations prohibit or discourage surveys directed at

restrictions, usually to protect privacy. For many programs, unobtrusive measures are the only kind possible.

For example, experiments producing scientific, quantifiable results are an "extremely powerful method for answering some of the questions posed as part of a program design issue but may be largely irrelevant to or ineffective for answering questions associated with program implementation" (Rossi & Berk, 1981, p. 289).

Most kinds of unobtrusive research can be broken down into three categories according to the characteristics of the data: physical traces, archives or data gathering and observation (Webb, 1966, p. 3). "Physical traces" is the use of physical clues as indicators of the use or disuse of a program or parts of a program. "Archives" (also referred to as Existing Data or Secondary Analysis) is the study of public and private records which help clarify a program or policy by analyzing trends. "Observation" is the study of audiences or individuals for insight into attitudes and behavior.

#### Physical Traces

Like a detective piecing together clues at the scene of a crime, a researcher can use physical

evidence to draw conclusions about the effectiveness of his programs.

Worn tile or carpet, for instance, can indicate the popularity of visitor center displays (Webb, 1966, p. 36). The wear and tear of base newspapers or base newcomer's guides in a doctor's office or waiting room may indicate changes in the interest or need of certain types of information when measured over time (Webb, 1966, p. 39). A PAO might monitor radio dials on automobiles in visitor parking places as an indication of where to "place" radio PSAs for promotions of programs like open houses (Webb, 1966, p. 37).

The following examples illustrate some of the applications of observing physical traces in unobtrusive research:

-- Four woodworking companies purchased new, programmable wood routers. Ettlle (1977) set up an unobtrusive method as one of two independent measures of the same variable to increase confidence in his research results.

After each machine was in place, Polaroid photos were unobtrusively taken from the eight compass points, using the machine's base length as an artificial north. Photos were taken again several weeks later. The

amount of sawdust on the machine and its bench became an indicator of acceptance and use of the machine.

At the same time, woodworkers at each of the companies were contacted by the researcher and asked to report over the telephone the average time they spent each week using the machine.

The self-reports and photos matched when ranked one to four, appearing to measure the same variable.

-- Telephone trucks and public utility trucks parked in front of fast food restaurants were used as a measure of lost work time among employees (Maddock, Kenny, Lupfer & Rosen, 1976, pp. 199-203).

Management at a public utility in Tennessee noticed while driving through the city that a large number of their utility trucks were parked at fast food restaurants during all times of the day and night. They wanted to know if employees were spending too much time at this obviously non-productive activity.

Since workers may not be candid about lost work time and any "goofing off" or "gold bricking" may not be apparent when an employee knows he or she is being watched, unobtrusive measures were needed.

Researchers drove a six mile route during previously established morning and afternoon hours. They recorded the number and types of the public utility's vehicles parked at restaurants, on the job, or driving on the road. For comparison, they did the same for a privately owned utility similar in size, the local phone company.

In all, there were two types of trucks by three possible locations, by four time slots. This produced a chart with 24 cells.

Researchers found that though a large number of trucks were sighted at restaurants, considerably more trucks were found "on the job". [However, during one of the time frames - when the World Series was broadcast - almost all the trucks disappeared from all locations. Also, more phone company trucks (at a ratio of three to one) were found at fast food restaurants.]

Physical traces techniques do have subtle pitfalls which must be kept in mind. Some types of carpet or tile wear better than others. Where a magazine is placed or replaced on a rack may influence its visibility. Radio dials tell you only what stations those who have already expressed an interest in or have business on your installation listen to. But the advantage of physical research is that it circumvents the variable of subject awareness as an influence on results (Webb, 1966, p. 50). The obvious disadvantage is its imprecision. It is a more appropriate measure of the extent of activity than the motivation behind it (Webb, 1966, p. 52).

Although the confidence in a study's results may be enhanced by agreement between formal research and physical traces, it is also possible that when the two approaches do not match one of them may still be valid and the other simply measuring a different aspect of the same construct (McGrath, 1970, p. 52).

#### Data Gathering

One of the most expensive and time consuming aspects of formal research is determining sources and gathering the information needed to compare results. Many times this involves surveying a randomly selected

audience once before the start of a program (pre-testing) and then again after the program concludes (post-testing).

The mass media is now used by most base Public Affairs shops as a judge of general community attitudes for or against the installation. By monitoring broadcasts and articles presented in the mass media, and categorizing each story as either favorable, unfavorable or neutral, a PAO can determine communication problem areas with the media. But the use of the Cloze Procedure (Severin & Tankard, 1979, p. 83) and other readability tests can determine whether or not news releases and speeches generated by the base will be understood by their intended audiences. Similarly, STARCH tests, or variations of them, have provided indications of article or photo recognition and can give clues to editors and advertisers about layout and content effectiveness for base internal audiences.

Local company personnel statistics can be a welcome source of data - when available - for a PAO who needs background information on the attitudes of a community's work force. This is especially true in communities where a few corporations employ most of a community. If re-enlistment rates can be used to

indicate job satisfaction in the military, why can't the same thing be done with job turnover in the private sector? Certainly the causes of job turnover can be ambiguous, but the mere fact that turnover has increased or decreased significantly can indicate a need for more accurate attitude research within the base itself.

Union grievance records have been used to study racial conflict (Webb, 1966, p. 102). In such cases, complaints were categorized to monitor feelings, attitudes and actions against Blacks and Spanish-speaking workers. In the same sense, letters to commanders or Equal Employment Opportunity (EEO) officers can be used for feedback on military programs and the community's overall attitudes toward that base. These letters, however, should be closely examined. For instance, when Xerox Corporation was flooded with negative letters after sponsoring a television series on the United Nations, it hired a group of handwriting experts to examine the mail. These experts found that the 51,000 negative letters were actually written by 12,000 different people, a number equal to the number of positive responses (Webb, 1966, p. 106). This "over-mailing" can be fatal to community relations programs or other base decisions

with minority impact if the bias is not recognized.

One way to avoid the government regulations and red tape involved in mailing questionnaires is to tailor available data as comparative material (Vogel, 1982, p. 22). For example, data from national, state or city censuses can contain information about age, sex, family size, occupation and housing. Health statistics can give birth and death rates. Federal, state and local institutions collect and publish information on wages, hours of work, production, absenteeism, strikes, financial transactions, etc. (Selltis, 1960, p. 316). Voluntary organizations often have profiles of their own membership and groups they serve. Schools, hospitals, social service agencies, personnel departments and other institutions often administer psychological tests of one kind or another to their entire populations (Selltis, 1960, p. 317).

A base, for example, can compare its high absenteeism among civilian or military employees with regional or local community trends to quickly determine whether or not the source of the problem is within the base (indicated by inconsistency with external trends) or generated from outside (indicated by a consistency with local or regional trends).

In another example, attendance figures at union meetings or the percentage of union members voting can indicate the degree to which members are concerned with certain issues.

It is a lucky group that has access to a broad range of data systems or has as a member someone with a nose for collecting information from federal, state and local special interests data sources. If the project is well funded, long term or important enough, a research group may be able to collect and continually update a library of sources or this can be done through contract with specialized research firms (Greer & Greer, 1982, p. 155).

The "rates under treatment" approach develops estimates of target populations by studying the services used for the same purpose in a similar community. The assumption is that the characteristics of the two target populations will be similar as well (Rossi, Freeman, Wright, 1979, p. 105). Air Force bases comparable in size or geographic location could share community relations case studies and data.

The sharing of statistics and the opportunity to retrieve information from studies or records of other communities or agencies appears attractive. One problem, however, is the limited use of the data.

Over-generalization can invalidate the conclusions drawn from this approach. Also, if a program manager had pressure to show positive results or if he was overly enthusiastic about the results, the data an evaluator will try to use as a base of comparison could be intentionally or unintentionally inflated. The rates under treatment approach should be used with these potential pitfalls in mind.

Most of the examples discussed so far involve ways to gather statistics already compiled by others. The information, however, is often general and the inferences that need to be made to make the facts applicable to a specific problem can be very broad.

One way to focus the research is for a PAO to conduct his or her own tests on a limited scale. Tests on the effectiveness of a community program can be as simple as encouraging an audience to anonymously call a publicized number to discuss the program's good and bad points. If it's an on-going program, or if manpower limitations apply, then the purchase of a long-playing recording device can serve the same function.

Taylor and Parker (1964) studied the use of an "attitude report question". An application of their method could involve getting a random selection of pre-identified opinion leaders to answer an issue

question along a graphic rating scale from very favorable to very unfavorable. Surprisingly, this simple technique has been found to be as reliable as such more complicated self-reporting methods (Oskamp, 1977, p. 43). An obvious limitation to this technique is that it cannot measure aspects of the rating, only direction. Tayler and Parker suggested that adding an essay answer requirement about the question could be a way to round out and help explain aspects of the findings (Oskamp, 1977, p. 43).

#### Observations

Seeing is believing and a researcher can often pick up clues and insights about individual and group attitudes and behavior through simple observation.

Personal appearances alone may give clues about the orientation of an employee to the norms of his work environment. Haircuts, make-up and even tatoos and scars, when compared to the observed norm of an organization, can give clues to a person's perception of what is normal and his motivation to comply with those norms (Webb, 1966, p. 116). Clothes, jewelry and personal possessions can give similar clues, though these indicators can reflect other variables such as wealth, perceived social status, etc. (Webb, 1966,

Listening is also an effective form of observation.

A good listener will try to understand the remarks in the context in which they are made and not jump to conclusions about what the speaker means. Words do not mean the same to everyone. Conflict arises, or at the least messages miscommunicated, when either a sender or receiver assumes that phrases like "private enterprise", "the American Way", "morality" or "virtue" are universally understood (Phillips, 1966, p. 69).

Another potential problem to listening as observation, especially when the researcher gathers facts through an eyewitness, is that each person's observations of events are interpreted by the way that person perceives the world. Eyewitness reports are secondhand information and should be treated as such, but the more witnesses that collaborate and confirm an observation the stronger confidence there will be in the results.

One method tangent to listening is for the researcher to use the voice as the stimulus in his research. For example, "Black" and "White" voices dialing "wrong numbers" on the telephone have been used

to measure racial prejudice (Gaertner & Bickman, 1972, as described in Stern, p. 66).

The callers explain that their car has broken down. They say they are calling from a phone booth, had been trying to call a garage and are now out of change. Those answering the phone are given a phone number and asked to call the garage with a message.

A researcher at "the garage" simply tabulates the results which can then be compared to other previous sessions.

In this case, deception is used to trick the subject into participating, a strategy with questionable ethics.

Though his work focuses on group dynamics, G. M. Phillips' statements (Communication in Small Groups, 1966, p. 68) are relative to unobtrusive measures:

"Members should also be alert to the nonverbal behavior of their colleagues. Facial expressions, hand gestures, nods of the head and body motions communicate significant cues which, if responded to, would be very useful in understanding the feelings of others. Often the soft, quiet person will try to express his opinions in the

form of non-verbal cues."

In this capacity, unobtrusive observation can be used to identify those individuals the researcher might wish to further study obtrusively, through interviews or surveys.

Body language is probably the quickest and most accurate form of informal feedback, yet the most subtle (Bogard, 1979, p. 18). It can be so subtle at times that the observer is unconscious of what he has seen.

A PAO attending a local businessmen's luncheon or Chamber of Commerce meeting, like a good detective, can use non-verbal communication as cues of unconsciously expressed attitudes (Bogard, 1979, p. 15). The comfort or nervousness demonstrated by locals around someone in uniform can be an indication of rapport. Cliques can give clues to informal channels of business communication. Seating position or the order in which people answer questions may indicate a kind of "pecking order" in these groups.

Where people meet and how they gather can indicate to a communicator where to focus his message for the most exposure. It can provide some insight into group interaction as well. For example, Campbell, Kruskal and Wallace (1965) demonstrated that in a classroom with optional seating, the amount of

alienation or interaction between Whites and Blacks was an index of the degree of social integrations (Webb, 1966, p. 123). Melton (1935) demonstrated that the closer an exhibit is to an exit, the less time will be spent on it (Webb, 1966, p. 134). Both classroom and exhibit studies indicate the importance of physical location in observation evaluation.

Timing is as important as physical location. One cannot judge accurately his evaluation of body language or racial interaction without considering the biases, limitations or influences of the time of day, month or year. Nor can he ignore the connections between behavior and recent events, trends or styles.

#### Conclusion

The Air Force has a responsibility to keep informed about the desires of its "stockholders", the American public. But in most cases, Air Force public affairs people can't just go out and ask the public for feedback on local, regional or national issues. Privacy restrictions or military regulations are just a few of the barriers to gathering this data.

One of the few ways around such barriers is unobtrusive research, which can be broken down into three main categories: physical traces, data gathering

and observation. But this research must be simple and quantifiable or it is of little use to the average base public affairs office.

## CHAPTER TWO

### Quantifying and Reporting Findings

In a management-by-objective climate where progress reports are made to commanders weekly, PAOs can no longer use the excuse that they're dealing with qualitative intangibles hard to measure and harder to report.

In his book Communication and Public Relations, Edward J. Robinson describes RESEARCH as a systematic attempt to obtain reliable knowledge. The term "systematic" refers to goal-oriented patterns of logical and complete steps that make sense intuitively, are credible, and provide useful information. "Reliable" suggests the results accurately represent what has been studied and that the methods used give the best possible evidence. "Knowledge" indicates the results should reflect some degree of objectivity.

Unobtrusive research, if it is to fall under this definition, must be systematic, reliable and



generally, however, the validity of the way they were used (internal validity) and the generalizability of the results (external validity).

The difference between qualitative and quantitative research has already been discussed, but it is important here to be reminded that the difference between the two is not in the administering of the research but in the tabulation of its raw data.

One of the simplest ways to report research is through item response. For instance, "Thirty percent of the car radios we checked were tuned to WXXX, fifty percent to WYYY and the remainder to a variety of other stations." Another is to build employee or community profiles from government, company, local and private data and monitor the profiles regularly for changes. Frequency distribution methods can show group data in tabular form or in graphs such as frequency polygons, bar graphs and pie charts (Oskamp, 1979, p. 26). Employee absenteeism, for example, can be compared with regional absenteeism in a bar graph.

One way to deal with written notes or written qualitative data is to stack it in a corner, cover it up with a sheet and use it as an endtable. Likewise, some people bury their qualitative information in a file drawer. At least an endtable can be used. A

...in to recycle this "soft data"  
into qualitative information. Margaret Morris (1981,  
p. 103) combined participant observer's log notes, tape  
recordings of interviews and meetings and official  
documents such as letters, meeting minutes, news  
releases, etc. into an unobtrusive sources of  
feedback.

She wished to measure public opinion about the  
intent of a certain community work organization. By  
identifying the most frequently reoccurring topics, she  
developed a chart with four cells. Guidelines for  
delegating opinions to cells were needed so a check  
list of topic characteristics was developed. Each  
opinion expressed in Morris's soft data was placed in  
one of the four topic categories. Because opinions  
were often accompanied by examples, Morris could  
further break down the topics by traditional or  
innovative, helpful or hindering statements. In all,  
her chart totaled 24 different categories or cells.  
Incidents could then be counted, factored and analyzed  
into what amounts to content analysis.

#### Content Analysis

Scores of articles and books have been written  
about content analysis. Some of them are listed in the

annotated bibliography. Anyone interested in the technique of content analysis should explore these sources.

For this paper, however, it is sufficient to explain that content analysis is a social science research method that studies communication "artifacts" instead of people (i.e., printed or broadcasted news, books, photos or paintings, etc.). If the research methodology is logical and measures are taken to ensure as much objectivity as possible, content analysis can be used to quantify qualitative data.

There are two types of content analysis approaches. The first looks at directly visible, objectively identifiable characteristics of communication, usually words, paragraphs, books and other units (Babbie, 1983, p. 284). This is termed manifest content. Latent content involves extrapolating the meaning within communications. This involves subjective (but consistent) judgement on the part of the evaluator.

Today with the computer as a common piece of office equipment, it should be possible to code observable, statistical and physical information into a program and cross-tab elements to build correlations. [I have not yet run across any prepared programs for

unobtrusive research, but it seems feasible.]

Semantic Differential

As mentioned before, frequently military and civilians just don't speak the same language. Words that often appear in business - like 'productivity' and 'bottom line' - could be subjected to semantic differential testing (Severin & Tankard, 1979, p. 89). By doing just thirty or so (15 with community business and 15 with military managers) and charting the findings on a XYZ axis, the connotative uses and meanings of such buzz words might shed light on the sources of miscommunication within the groups.

The semantic differential is a quantitative method of expressing the usually qualitative connotation of words. Basically, it involves identifying the perceived meanings of three categories of words on a polar scale of seven degrees (Severin & Tankard, 1979).

An example would be the question asking a respondent to place an "X" in one of seven boxes between the words "Worthless" and "Valuable" that best describes a particular program or policy. The three categories of words are an evaluative dimension (good-bad, pleasant-unpleasant); a potency dimension

(~~fast-slow~~, strong-weak); and an activity dimension (fast-slow, active-passive).

The answers are factored and the mean response is found for each dimension. The three means are then plotted on an X-Y-Z axis. (The X-axis representing the plane of evaluative meaning; Y-axis the potency meaning; and Z-axis, activity.) If, after repeated evaluation over time, the charted point moves drastically, a change in the connotative meaning of words may warrant the reassessment of written goals, regulations, charters, etc.

#### The Delphi Technique

The Delphi Technique, on the other hand, is a method of soliciting, collecting, interpreting and reinterpreting the informed judgements of groups of experts about specific issues or questions. There are three main types of Delphi: a numeric Delphi which attempts to identify future numeric ranges of forecasts; a policy Delphi which attempts to isolate answers or alternatives to current or expected policy or problems; and a historic Delphi which looks back at past alternatives that could have been used to alter or influence current or past policies (Strauss & Zeigler, 1974).

Wanting to examine how the great philosophers of the past would suggest society solve some of its contemporary and anticipated problems, Strauss and Zeigler built panels around ten political philosophers - Plato, Aristotle, Hobbes, Machiavelli, Swift, Burke, Rousseau, Locke, Marx and Freud. Each panel consisted of six experts. The Plato panel, for example, would consist of six experts on Plato. A questionnaire of 42 three-part statements was prepared and mailed. Each statement asked the expert to: describe the particular philosopher's point of view on a similar situation of his time, discuss how he would have reacted then, and how he would solve the problem if alive today.

The responses were collated into a multiple choice list, ten lists in all. The experts were then asked, on a five-point scale from strongly agree to strongly disagree to rate each statement on the panel's list. What evolved was a consensus of options of solutions to contemporary problems as seen through surrogate eyes from a philosophical point of view.

The Delphi method has proven surprisingly reliable. In 1964, Robert Ament (1970, as described by Strauss and Zeigler, 1974) used a numeric Delphi to gather estimates from a panel of scientists and technicians on innovations in the physical and

biological sciences, weapons systems, automation and space as well as projections of world population growth and war. It was repeated again in 1969 and though the experts were different, the panel's forecasts were similar.

The critics and advocates of the Delphi Technique are many. The major advantage is that it is simple to understand and implement and uses a minimum amount of numbers. It is, however, slow and time consuming. If mailed, the process could take months. It lacks the stimulation of face-to-face brainstorming. Another potential problem is that the evaluator may misunderstand an expert's response. The panel, too, could be so homogeneous as to skew the results. Despite its criticisms, the Delphi is becoming an important tool for evaluating future policy decisions and assessing present program trends.

#### Validity

After all this, an evaluator must still decide if the unobtrusive methods he or she has devised will be internally and externally valid.

Any researcher claiming a causal relationship between variables based on unobtrusive methods alone should be viewed with scepticism. Causal relationships

assume all other explanations have been addressed and discarded; missing or overlooked explanations invalidate the cause. Observation, content analysis, the examination of physical evidence and other unobtrusive methods can have their share of hidden relationships. The question of how broadly an evaluator can generalize research findings is the issue of external validity. How applicable are the techniques someone else once used for other reasons to the problem at hand? Are the methods or findings useable in other agencies or by other bases or do the results apply to only the program tested?

#### Conclusion

It is prudent here to review what has been said about unobtrusive measures. First, there are three general types of unobtrusive or non-reactive research - the analysis of physical evidence, the interpreting or reinterpreting of existing records, and simple observation. Second, a variety of ways exist to quantify and report research findings.

So far, examples have been given which illustrate possible Air Force application of the non-reactive methods. But, as has already been pointed out, to try to force-fit specific problems to existing

techniques creates a fallacy in methodology. As Wood states in the DINFOS Handbook (1983, p. 7-7), "A method has to be found to solve the research problem at hand, even if an entirely new method must be devised."

The next chapter will review current Air Force unobtrusive measures of public affairs research, discuss chronic Air Force-wide public affairs issues (as identified by the Defense Information School) and suggest possible non-reactive methods of evaluation.

## CHAPTER THREE

### Specific Air Force Applications

As was mentioned before, the Air Force Public Affairs program exists to provide information and maintain an awareness and concern for public opinion as it relates to Air Force programs, members and policies. Since the organization is owned and operated by and for the American public, PAOs at the local level should feel a sense of responsibility to the community to assist the needs of these communities. Too often community relations activities are constructed around the needs of the base when it would better benefit the base to "give of itself" to the community.

The comraderie and loyalty of the Air Force member to his closed, sheltered society can often inhibit his seeing his installation as a part of a larger community. This is especially true when the military member lives on base. A PAO spends much of his time reminding the external community about the

local impact of his Air Force base and should spend the same amount of time communicating the importance of the community to the military individual.

In this capacity, the PAO is a "boundary spanner" (term from lecture, Otto Lerbinger, Boston University, 1984), - the contact with one foot inside the base perimeter and the other on the steps of the local city halls, Chambers of Commerce and town meeting places. He must understand and feel loyal to the community and the Air Force installation and mission. In addition, he must keep in contact with other base boundary spanners - like those in the Judge Advocate's Office, Procurement, Social Actions, Morale and Welfare - to know the overall impact or influence the base is having on the community.

There's a saying, "You don't feel the breeze until it changes directions." Likewise, the impact of an installation's program is not understood until it changes. These changes, especially when unannounced, bring Air Force issues into the front seat of local attention.

It's important that the PAO know the local attitudes and opinions, expected behavior or reaction, potential conflict and support that these issues will influence. What's more, he or she should be able to



of government bodies of functions, including not only law enforcement and judicial administration but public culture and resource keeping for the state (Arterburn, 1981). Proposition 13 (California, 1978) type restrictions are causing cut backs in special districts that would often span local and county boundaries (Arterburn, 1984).

#### Current Evaluative Methods

The military structure and chain of command is by organization often unreceptive to effective communication. The very concept of "orders" dictates that communication should be one way - "Rank has its privileges, my privilege is to direct and your's to perform". This was effective years ago when the only educated military men were the officers and the poorly educated were not strongly aware of any other way to accomplish tasks (Peppers, p. 25). The situation today is different and communication techniques must change too or cease to serve. The greatest need for improvement is in that area of the communication process called feedback.

Certain methods for gathering feedback are more appropriate than others, depending on the kind of information needed. For instance, environmental

monitoring or social audits are appropriate when the data needed deals with an organization's external environment. Social audits and communication audits work well when researching an organization and its publics. Communication and social audits work well for gathering information about messages and effects, but social audits do not effectively measure the resistance or assistance of the message channel (Lerbinger, Otto, paraphrased from chart, "Corporate Use of Public Relations Research," Public Relations Review, Winter, 1977, p. 13).

Wood describes audits and other types of more formal research in the DINFOS Handbook. Yet he emphatically states (emphasis his, 1983, pp. 7-10) "The PAO also needs to know and practice less formal, more immediately practical methods, such as analysis of meetings, informal surveys, analyzing 'built-in' feedback (e.g., letters to the editor), and using field agents (contacts who are 'in the know' in specific areas)."

One of the unobtrusive methods described in the handbook is the use of available government data (p. 7/I/1-6). Included in this appendix is a list of government sources and an excellent section summarizing the information a researcher can gather from the

**National Census.**

A second appendix (7/II/1-4) focuses on the use of case studies as a way of gathering an indepth, though somewhat subjective, historic perspective of a given subject.

**Chronic Issues**

Some of the reoccurring Air Force community relations issues - and potential PAO headaches - requiring constant evaluation - include the reduction of closure of support activities; abrupt expansion; annexation of military facilities; changes in utility rates for service; noise or increased noise from the base; Federal Impact Aid changes; community encroachment; environmental changes caused by the installation; special privileges and needs of military members; bigotry or prejudice; and accidents or disasters.

BASE CLOSURES may be the most traumatic issue a PAO can face since it affects the lives of thousands and threatens the livelihoods of thousands more. The 'death' of an Air Force base could conceivably spell death for a small town whose major income comes from the services and support it provides an installation. In the case of a base closure, extensive preliminary

studies are made by a base's environmental impact office. The PAO plays a key role in servicing the information needs of the base and the community. By obtaining case studies of past closures and knowing the community government and community action power structures, precise questions from particular audiences can be anticipated.

ACCIDENTS AND DISASTERS which affect the local community can range from sail planes which land in backyards (U.S. Air Force Academy, author's experience) to missile silo explosions (Damascus, AR, 1980). The former may scare a farmer or two and get a public chuckle from a one paragraph story or photo caption in a newspaper the next day. It's not likely to affect a base's community relations. The latter, however, can cause local, state and federal government miscommunication and local panic. When the smoke clears and the accident inspection team is inspecting the disaster, the PAO must assess the damage to his community relations program.

Both the base closure and accident disaster situations are ad hoc issues needing either pre- or post-event evaluation - evaluation using unobtrusive measures of a potentially "hostile" community.

Changes in UTILITY RATES usually happen without

such notice by military employees. But if a PAO and other boundary speakers are not aware of local government official sentiment, the situation can become front page news. In January, 1980, Las Vegas news media announced that the county was suing Nellis Air Force Base, NV, for failure to pay its sewage bill. Several months before, the county had changed its rates but Nellis, required by law to have approval from the Office of Management and Budget to pay the higher rate, continued to pay the outdated amount. The base had been setting aside the extra money each month and had told the county it would release the entire sum payable upon OMB approval. County officials decided to prod OMB into action with a lawsuit against Nellis (Air Force Public Affairs Case Studies, 1983).

This is when it is important to get out of the office and talk to community leaders. Encouraging the entire public affairs staff to get involved in community programs at all levels can gather a wealth of inside information. If the office is understaffed, identify Air Force members or retirees in local government positions who can provide this information.

**COMMUNITY ENCROACHMENT and NOISE COMPLAINTS**  
from the community, have a not-too-surprising relationship. The closer a community grows around an

installation with a flying operation, the louder and more frequently the community complains about noise. Though flight patterns may have existed unchanged for many years and in some instances cannot be changed (because of prevailing winds, mountains, etc.), developers continue to build residences under air paths and families continue to buy them.

The PAO is directly involved in coordinating and writing plans to combat encroachment and then publicizing these plans. If the plan does not solve the problem, as is often the case, the PAO may face the wrath of organized community action committees when aircraft noise becomes "intolerable" during exercises.

The commander of one Tactical Air Command Training base thought that the local community would not notice the roar of increased F-4E aircraft night activities. Against the advice of the PAO, the base told no one in the community about the exercises - that is, until the commander was kept up all night answering phone calls from angry citizens (Air Force Public Affairs Case Studies, 1983).

The point of this example is not that the commander should have listened to his public affairs director. The point is that complaints can be content analyzed and tracked for their intensity and

direction. Why waste all that information-laden criticism on the commander?

Though the commander will always get calls, one way to short circuit most of them is to set up a telephone recording device for community questions. Many bases have a "Commander's Hotline" for base personnel, why not a community answers line? This publicized recording could tape questions, rumors, advice, complaints or pats-on-the-backs from community members about an installation's policies or programs. Each question would have to be staffed and answered as quickly as possible. Trends and audiences could be monitored by issue categories and the data presented in bar graph form. If open, credible, two-way communication exists it can act as an early warning system to potential problems.

Noise complaints can develop without an encroachment problem. In 1970 and 1971, Air Force radar sites and a small F-106 detachment in Klamath Falls, OR, received sonic boom complaints, though not at all responsible for the noise. Community frustration mounted and an analysis of town meetings and letters to the editor indicated the Air Force was beginning to suffer a regional community relations problem. Clips and summaries of broadcasts and

meetings were sent to Command Headquarters, Air Force Public Affairs. The Command Public Affairs Office decided to time and log each boom. They then consulted air traffic controllers. The pattern of sonic booms matched the flights of supersonic SR-71 aircraft originating from Beale AFB in California. Flight patterns were altered and favorable community relations were restored. In a second example, experimental tree-top level flights were conducted over sparsely populated areas of Arkansas and Oklahoma.

Unfortunately, this area contained the heaviest concentration of poultry raisers in the world and farmers were afraid the noise would cause the chickens to stop laying eggs. The PAO called in an Air Force film crew to film the chickens' reaction to the noise. Though the chickens were startled at first, it was discovered that the effect lessened with successive fly-overs. Farmers were satisfied (Both examples, Air Force Public Affairs Case Studies, 1983).

Both of the above examples illustrate the variety and scope of unobtrusive techniques available to the creative PAO.

However long the Air Force has been dealing with sonic booms and encroachment, it has dealt with the issue of IMPACT AID longer.

Impact aid funds are those monies paid by the Department of Education directly to local school districts to partially underwrite the cost of educating children (one of whose parents is a full time employee of the Federal Government on Federal property) in public schools (Gatto, Community Considerations, 1984). This includes the children of civilian employees as well. Impact Aid began in 1950 to offset the funds school districts lost because they could not tax federal property. Aid increased from about \$30 million in 1950 to \$744 million by 1980. But it was reduced \$53 million in 1981 and by 1982 Impact Aid was down to \$456 million. It went up to \$565 million by 1984 but is expected to be reduced to approximately \$488 million in FY 1985 (Gatto, Community Considerations, 1984). This roller coaster funding and inflation have caused budget crises in many school districts. Districts now strongly lobby their congressmen and local military leaders to support increases. Public affairs problems manifest when civilians perceive that since the military benefits from taxes paid by locals, it should take the responsibility to offset costs by increasing Impact funding. Many do not realize that budget cuts are not the choice of the military, nor does the military have control over Department of Education

generated Impact Aid.

Community oriented programs designed to inform school officials and school affiliated organizations require a feel on the part of the PAO for local attitudes and level of understanding of the Federal bureaucratic system. Obtaining School Board minutes and newsletters, monitoring newspaper editorials, scanning School Board annual reports and transcripts of speeches to local government bodies can be a gold mine. Content analysis can then be used to quantify some of the information.

The ENVIRONMENT is another reoccurring public issue requiring constant attention. Of the nation's opinion leaders surveyed in a recent Gallup Poll, most felt that the world's big problems would improve before the year 2000, but that the environmental situation would worsen (Gallup, 1984). Environmentalists are active again after a few quiet years in the late 1970's. They have more power, influence and grass root support than ever before (Gallup, 1984).

When an environmental issue surfaces, the PAO will be expected to advise on how and when to announce the proposed action, help determine who to include in the initial scoping meeting, provide updates to the media, serve as a focal point for news queries and

questions from government and community leaders  
(Terino, p. 44).

From what has been written in this paper, it should be obvious that the PAO must have done his homework. He should know what other events relate to the action and what the combined effect is likely to be. This can be done by obtaining meeting minutes, agendas from local government and community action groups, etc. He should know who the key advocates and potential adversaries are by monitoring local editorials with content analysis.

A PAO with adequate information before everything "hits the fan", will be in a position to defuse adversity by promoting understanding and dispel rumors with facts.

The following is an example of this volatile issue. Tests by state public health officials in California, revealed traces of Trichloroethylene (TCE) in wells near, but not on, Mather AFB in 1979. TCE is a degreasing solvent used by the Air Force and is highly toxic. Initially the water wells on base were declared "clean" and the media reported it as such. Two months later, minute traces of TCE were found in the on-base wells but since the levels were below Air Force set standards, no public announcement was made. When the

media found out about the tainted wells at an open meeting between base engineers and the state's Water Quality Control Board, the story received prominent attention (Air Force Public Affairs Case Studies, 1983). Again, the intent of this example is not to second guess the PAO's decision not to release, but to illustrate that an ongoing assessment of the changing environmental profile must be done in order to better plan policy and evaluate the actual or potential impact of current programs. Public affairs programs should not be thermostats - kicking on when it is already too hot. A PAO should know the sensitivities in his or her community before they become issues.

It is also necessary to understand the 'ego' or ethics of the media. No news reporter likes to be scooped or feel like the PAO has at the most deceived or at the least given the reporter incomplete information. The way a reporter feels about an organization can influence the way a reporter describes an issue. Journalists might argue that that is what editors are for. But a PAO can decide for himself the objectivity of news stories by flagging key words in a story as either positive, neutral or negative in a simple content analysis.

In the Gallup Poll quoted earlier, 13 percent

of the experts listed RACIAL TENSIONS as one of the top concerns today. Though the Air Force PAO is not a race relations expert, human relations specialist or affirmative action officer, he must be able to identify his role in this issue.

The PAO's role is to support the Air Force Equal Employment Opportunity Program by providing information channels; advice and expertise on effective communication; and adequate support of the program by writing articles and providing other technical support (Gatto, Minority Relations Seminar, 1984). But he must do more. As a boundary spanner he or she must work with the base EEO officer to monitor community attitudes for bigotry and prejudice as well as community perceived discrimination on the part of the installation.

Kirtland AFB in New Mexico is a good example of how problems can evolve. For five or six years a movement had been building that placed the base in the limelight. Minority groups were dissatisfied with the number of women and minorities employed by federal agencies in the area. Kirtland had tried at length to recruit and promote minorities but not necessarily to inform the community about their effort. The situation deteriorated, with minority leaders calling news

conferences and making accusations against the base. Finally, the Secretary of the Air Force received a letter from two New Mexico senators and a congressman requesting the EEO Commission and the Government Accounting Office conduct an investigation. After an intensive public affairs program of briefings to congressional and minority groups and news media visits, the misperceptions were corrected (Air Force Public Affairs Case Studies, 1983).

It's possible that stronger relationships with the minority media could have defused the issue earlier. Monitoring the minority media provides a source of minority information rich in attitudes and opinions. A PAO can content analyze minority attitudes or stands on real or potential issues. Minority media can be used to reach specific minority publics. What's more, demographic information about minorities is available from many broadcast media as a public service.

Public affairs people must communicate to all relevant publics about policies that effect the community. To do this, boundary spanners must avoid negative stereotyping and racial sensitivities in their everyday, face-to-face and written communication - including the way they disseminate information.

If an issue can be identified early enough or **COMMUNITY NEEDS** discovered before an issue surfaces, the PAO may have an opportunity to polish the base's image. Planning ahead for a reputation of cooperation is an excellent investment. By monitoring the needs of a community through an audit of a community's public facilities, the base may be able (within regulations) to offer its facilities to the public when not in use. Cooperative fire and police agreements are two examples. Basketball or football fields on 'open bases' are under-used during the duty day and might be made available to the local community. The reputation for cooperation that develops can go a long way to decrease misunderstanding when a PAO may need it most.

Besides a review of community facilities, one way to identify community needs is to ask every base organization to request (as routine) an after action report from any group it may work with on any community project. Included in this report would be copies of all letters that may come in (whether positive or negative) from those sources the program influenced. These after action reports can give a researcher insight into individual, family or organizational needs.

Finally, the military member and his or her

family have SPECIAL PROBLEMS or receive special compensations that are not readily understood by civilians.

These special issues vary by geographical location and many are often specific to one installation. They can be chronic or one time events that once solved never surface again. For example, because of a strong liquor coalition, one Air Force Base could not open a package store on its installation. Another base's personnel had problems cashing checks anywhere in the community, despite the installation's excellent credit reputation (Both examples, Air Force Public Affairs Case Studies, 1983).

The key to these different issues is often in avoiding "the defeating dynamics of disagreement," as Jerome Peppers put it in AFJ Log (Spring 1983, p. 25). "Misunderstanding may be profitable but disagreement is not. Identify and handle misunderstanding before it turns into violent disagreement that creates impossible barriers to communication." A PAO should monitor the reports of potential adversaries, their events, the attitudes of members as expressed in editorials or public statements. He should defuse misunderstandings as soon as possible, yet at the same time realize that some groups (as seen in the Nellis AFB utility rate

... (PAOs) will  
... or create  
... to achieve their goals.

### Building an Information Bank

No public affairs office can be considered effective unless it continually monitors community issues in such a systematic way that the information needed to make decisions is within easy reach.

The basis of an information bank or profile of recurring community issues is in every PAO's file cabinet. Complaints, formal research done in the past and other existing data, however, are often scattered across several file categories in numerous drawers.

When organized by issue, though and kept up to date, a PAO can assess an issue in minutes, improving his response time. An organized information bank is also an efficient way for a new PAO to become familiar with an issue as soon as he or she arrives. Chart A is an example of what should be included under each pertinent issue in an information bank.

### Conclusion

The PAO must know the needs of the community as well as his base. He must monitor the community in

## Chart A

**FILE ONE: Issue synopsis** - a one or two page summary of problem, tangent influences, affected audiences, past base actions or decisions.

**FILE TWO: Formal research done on or impacting issue.** Environmental impact statement, for example, if issue is environment. Formal surveys, community audits, communication audits, existing thesis or dissertation information on issue. Copies of applicable federal laws, base regulations or where to find them.

**FILE THREE: Specific information on similar, past experiences, case studies, articles or newsclips (including content analysis), audience assessments, letters of complaint, community action group or local government office profiles, handwritten notes of observation, other historic data.**

**FILE FOUR: Techniques and sources to monitor and assess present situation.** Current afteraction reports, public facilities audit (if applicable), list of current officials and news media, handwritten notes of observations or comments from conversations, meeting minutes, newsletters, current complaint letters, analysis of "Community Answers Line," etc.

How to Organize an Issue in an Information Bank

order to evaluate base community relations policies and programs as well as assess the impact of the programs of other boundary spanners.

Several external issues may influence the PAO's profile of important issues. Among these can be changes in Federal law, shifts of power due to government reorganization, and the appearance, disappearance or lack of certain community action groups.

Existing records, content analysis, and observation have been or can supplement formal research in a variety of reoccurring community issues such as base closures, changes in utility rates, noise and encroachment, environmental impact, Federal Impact Aid, prejudice, accident impact assessment, as well as a score of installation-specific problems.

### Summary

The techniques of social research are as varied and colorful as those in the more formal natural and physical sciences.

Yet because the questions deal ultimately with the motivations and needs of Man - individually and collectively - social research is often harder to quantify.

Researchers should use the more formal, scientific methods whenever possible. But because Man is so complicated, even the validity of true experimental research is suspect. Unobtrusive research is one way to supplement more formal research and increase confidence in the results.

Unobtrusive measures are generally categorized three ways. The analysis of physical traces can be an effective way to measure the level of activity of a program. It falls short, however, when used to measure motivations behind the activity. Simple observation has the same disadvantage. Though seeing is believing,

it is difficult to assess the motivations behind observed activity. Interpreting existing data has the advantage of adding extra, unpaid staff to an evaluation question -- someone else has already done the data gathering. Its drawbacks stem from problems with external validity, or over-generalization.

If internally and externally valid, however, non-reactive methods can provide insight into behavior that cannot be measured with obtrusive measures. Employee "goldbricking" and the acceptance through actual use of a new wood router are just two examples. A dozen or so more can be found in the annotated bibliography which follows.

Social scientists use unobtrusive methods when it is necessary to remove the evaluator from the research scene for fear of contaminating the results. A military uniform or rank can influence a subject's response and contaminate results as well. Military and Federal regulations discourage or prohibit surveys directed at civilians, usually to protect privacy. In many cases, unobtrusive methods can be less time consuming or costly and less complicated.

Depending on the methodology, research results come in two forms - qualitative and quantitative. Qualitative means that numbers have not yet been

assigned to certain values or attitudes in a response. Ways to convert qualitative into quantitative data include the many forms of content analysis, the semantic differential with its X-Y-Z axis, and the Delphi Technique. As programs become available, computers will make easier the tabulation of qualitative data. It is important to realize, however, that the evaluator's subjective judgement will always be necessary when reformulating values into numbers.

More and more, commanders are asking for quantitative data to defend the cost-effective existence of present programs or to support new policy changes. The PAO can build community profiles of qualitative and quantitative data of reoccurring Air Force community issues such as base closings, the environment, prejudice, encroachment, noise complaints, etc.

By mixing and matching techniques and developing creative applications of their own, PAOs can build better cooperation and understanding between their base and the community.

As Jerome Peppers wrote (AFJ Log, Spring 1983, p. 26):

"Human cooperation is a function of understanding. Understanding is a

function of effective communication.  
Effective communication demands  
feedback with both parties involved in  
a dynamic two-way process. It is the  
(PAO's) responsibility to create the  
climate in which effective  
communication becomes a common goal."

### Selected Annotated Bibliography

Very few books have been written on unobtrusive research methods and none have been written specifically for public relations or public affairs. The 'bible' on unobtrusive research is the one most often quoted in this report, Webb, Campbell, Schwartz and Sechrest's Unobtrusive Measures: Nonreactive Research in the Social Sciences.

Because little has been done with the public affairs applications of unobtrusive research, this selected annotated bibliography draws together a scattered variety of references ranging from general textbooks to technical articles. Most of the references come from one of three fields: Public Relations, Social Science Research or Education. Since most of the current unobtrusive research appears to be generating from the Education sector, a large amount of the case studies listed here can be obtained through ERIC, the Education Research computer index.

The Defense Information Handbook, PA Research

Methods section, includes an exhaustive annotated bibliography of general public relations and public opinion topics, communication processes, journals and magazine indexes, reference material and Department of Defense research sources. Those topics, therefore, have not been duplicated here.

The general subject of unobtrusive measures has been divided into the subtopics of physical evidence; existing data; observation; quantitative techniques; general, background; and general, Air Force. One source may cover several subtopics but will be listed only under the one subtopic it best addresses. Though lengthy, it might be wise for an inquiring reader to scan the entire bibliography.

#### Physical Evidence

Bouchard, T. J. "Unobtrusive Measures: An Inventory of Findings." Sociological Methods and Research, April 1976, pages 267-300.

Though unobtrusive methods are weak when used alone, when combined with formal methods, they can compensate for subject reactions to the evaluator. Excellent article categorizing biographical data on work done in all areas of unobtrusive research but exceptionally thorough review of physical traces references and non-reactive research technology.

Brechner, Kevin C. and others, "A brief report on a device for unobtrusive visual recordings." Journal of Applied Behavior Analysis, Fall, 1974, pp. 449-500.

Short article describes the mechanics of constructing a portable, inexpensive remote

controlled camera device for observation. Suggests placing such a device above head level behind bright lights.

Ettlie, John E. "Validation of an Unobtrusive Measure of Technological Utilization." Psychological Reports, 1977, pp. 123-128.

Ettlie uses the measure of sawdust accretion on a new automated (programmable) production wood router as an unobtrusive method to compare self-reported use with physical evidence. He explores the generalizability of dust accretion and the need to use unobtrusive measures as a supplementary rather than primary measurement.

Maddock, Richard C.; Charles T. Kenny; Michael B. Lupfer; and C.V. Rosen "A Nonreactive Measure of Lost Time Among Employees." Journal of Psychology, March, 1976, pp. 199-203.

The study of public utility and telephone trucks parked at fast food restaurants can serve as an unobtrusive measure of lost work time among employees. Article illustrates the differences location, time and outside events can have on research results.

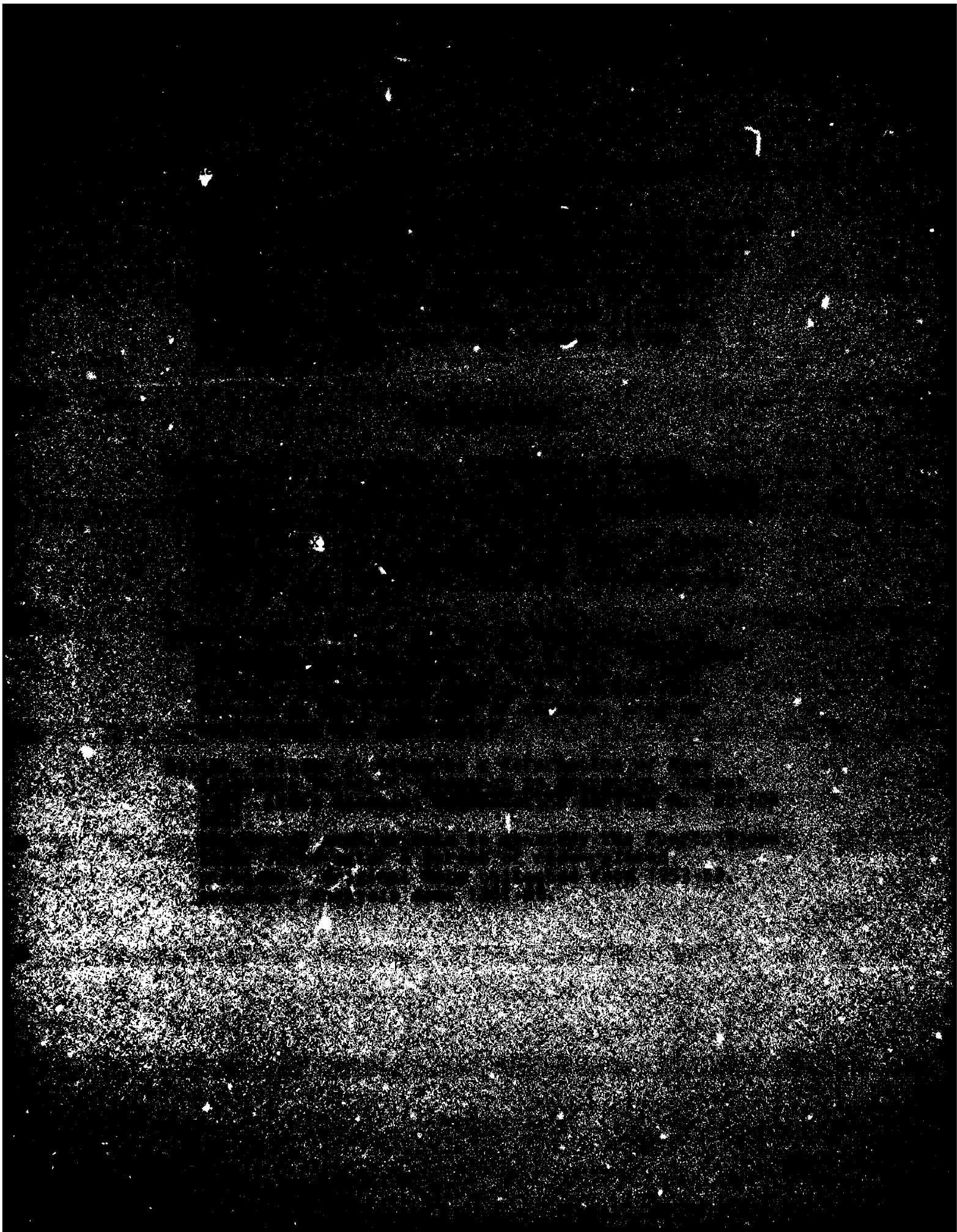
Palmer, Jean and Frederick L. McGuire "The Use of Unobtrusive Measures in Mental Health Research." Journal of Consulting and Clinical Psychology, June 1973, pp. 431-436. (ERIC Document Reproduction Service No. EJ 081 994).

Use of physical surroundings of mental health facilities as an unobtrusive supplement to analysis of readmission rates, length of stay and ratings received. Correlations found between physical appearance and ratings.

Theilin, John R. "Beyond the Factory Model: Sew Strategies for Institutional Evaluation." College and University, Winter 1976, pp. 161-164. (ERIC Document Reproduction Service No. EJ 131 235).

Suggests the use of unobtrusive measures of the way schools treat constituents as a supplement to surveys. Includes: artifacts, signs, clues from architecture, spatial arrangements, movements, and ceremonies.

Wolf, Robert L. and Barbara L. Tymitz "A Preliminary Guide for Conducting Naturalistic Evaluation in Studying Museum Environment." Research in Education



Fisherty, Eugenie Walsh and others, "Use of an Unobtrusive Measure for the Evaluation of Interagency Coordination." Evaluation Quarterly, May 1978, pp. 261-273. (ERIC Document Reproduction Service No. EJ 184 153).

The use of existing records to evaluate interagency coordination. Though the agencies involved in this study were early childhood development oriented, it may have applications to the federal levels. Advantages and disadvantages are discussed.

Greene, James E. and others, "Using Administrative Data as Unobtrusive Indicators of Teaching Performance." Research in Education, December, 1983. (ERIC Document Reproduction Service No. ED 232 590).

An unobtrusive measure of teacher performance by assessing their student following (e.g., taking additional courses with instructor). Measures five years of grade data and other records, comparing this unobtrusive measure with student end of course faculty evaluations.

Huebner, Robert B. and others, "Assessing Local Mental Health Need: A Multi Method Strategy." Research in Education, June 1979. (ERIC Document Reproduction Service No. ED 165 062).

Studies the impact of a program on its community. Social indicators and census data were evaluated, a survey administered to the community, and client statistics analyzed by a mental health agency to produce a profile of community needs.

Nesvold, Betty A. "Instructional Applications of Data Archive Resources." American Behavioral Scientist, March/April 1976, pp. 445-466. (ERIC Document Reproduction Service No. EJ 136 909).

Notes that the computer can be used to process social science data archives into useful research information.

Parker, Edwin B. and others, "Bibliographic Citations as Unobtrusive Measures of Scientific Communication." Research in Education, June 1969. (ERIC Document Reproduction Service No. ED 026 075).

An unobtrusive study of scientific topics stated or reported in behavioral science index. Intent was to discover trends by subject and author and the number of interconnected or repeated references.

... National Institute for  
... existing data. Researchers found  
... less likely than are researchers to  
... activities. Not-research  
... by survey of approximately 2300  
... researchers.

Salita, Clair; Marie Jahoda; Morton Deutsch; and  
Robert E. Cook. Research Methods in Social  
Psychology. New York: Holt and Company, Inc., 1960.  
... on social research. Especially  
relevant is work about use of existing records.

Stewart, McGill J. and others. "Educated Women's  
Career Patterns: Integrating Social and Developmental  
Change." Journal of Social Issues, Spring 1968,  
...  
By using existing records, researcher identified  
several family and work variables of educated  
American women and was able to separate the effects  
of general social change, cohort specific change and  
developmental change.

Tamm, Lloyd V. "The History and Methodology of the  
American Society Follow-Up Study." Research in  
Sociology, May 1970. (ERIC Document Reproduction  
Service No. ED 111 252).  
See applications discussed to the execution of the  
research using existing data.

Vogel, Charlotte M. "How to Recycle Your Research."  
Public Relations Journal, May 1972, p. 22.  
The data a public relations person needs to evaluate  
his programs probably already exist in the form of  
someone else's records. Well written article on  
secondary analysis.

Observation

Rosen, Peter L. and others. "Pretty Pleases: The  
Effects of Physical Attractiveness, Race and Sex on  
Evaluating Help." Journal of Experimental Social  
Psychology, December 1970, pp. 409-415. (ERIC  
Document Reproduction Service No. EJ 151 821).

**Reger, Morris L. The Manager's Handbook: A Guide to the Manager-Employee Relationship.** New York: McGraw-Hill, 1971.

A good lesson in non-verbal communication, especially as it applies to the manager-employee relationship.

**Felson, Marcus "Noncreative Indicators of Cultural Change: Cigarettes, Cigars, Marijuana, Cops, Magazines, and Urban Sprawl." American Behavioral Science, March/April 1983, pp. 539-542. (ERIC Document Reproduction Service No. EJ 275 708).**  
The use of physical evidence and observation such as medical instruments, clothing, sporting goods, drugs, garbage, telephones or magazines to study social change. Compares changes in use of artifacts over time.

**Jennings, M. Kent Community Influentials - The Elites of Atlanta.** London: Free Press of Glencoe, 1967.  
Studies the process of community decision-making, measures the political status and roles as existed in Atlanta in the early sixties. Approach and methodology of study still sound.

**Leif, Irving P. Community Power and Decision Making: An International Handbook.** Methuen, NJ: Scarborough Press, 1974.

A book of bibliographies and references. Topics include: community power theory, methodology of community power studies, community power case studies, comparative community power studies, and the study of decision making.

**McGrath, J.E., ed. Social and Psychological Factors in Stress.** New York: Holt, Rinehart and Winston, 1970.  
Chapter 15 has an exceptional chapter titled "Community Disaster and system stress: a sociological perspective." About the importance of disaster research including a conceptual framework for analyzing stress in disaster situations.

**Mooreman, Leonard G.H. Inferring From Language.** New York: Springer-Verlag, 1979.

A detailed look into language and the meaning of it



...in a California ...  
...of ...

... "Observative Measures of ...  
... August 1971.  
... No. ED 090 255).  
... assigned to three  
... and three control groups. After a  
... human relations training  
... the experimental groups were studied for  
... This was done by monitoring  
... and counseling referrals  
... four weeks before and four weeks after the  
... training.

### Quantitative Techniques

Habbis, Earle The Practice of Social Research.

Belmont, CA: Wadsworth, 1979.

Textbook of research. Excellent section on the  
... behind and the advantages and disadvantages  
... research. Also sections on internal  
... and external validity, research design and  
... quantitative analysis.

Campbell, Donald T. "Exploration of Novel Research  
Designs and Measurement Techniques." (ERIC Document  
Reproduction Service No. ED 003 389).

A search for suitable new research designs for  
... application in media, educational and social science  
... areas. Includes annotated bibliography. Emphasis  
... is on quasi-experimental designs.

Campbell, Donald T. and Julian C. Stanley Experimental  
and Quasi-Experimental Designs for Research.

Chicago: Rand McNally, 1963.

Describes the basics in the experimental design from  
... one-shot case studies and other pre-experimental  
... designs to the Solomon Four-Group Design. A large  
... amount of space, though, is dedicated to  
... quasi-experimental designs, or quantitative analysis  
... without randomization. Detailed, not light  
... reading.

Ross, Dan Huntington, Jr. and Raymond Maurer The  
Corporate Social Audit. New York: Russell Sage

Organization, 1972.

The use of the formal social audit, the needs for research and development and the future use of social auditing by corporations. Describes the steps involved in constructing a social audit.

Fielden, John S. and Ronald Dulak "What Rejection Letters Say About Your Company." Business Horizons, September/October 1982, p. 40.

The way an organization writes routine letters broadcast louder the company's image than any public relations program. It is communication to an audience directly concerned with the organization. Provides insight into how evaluators should scrutinize letters to their organization.

Greer, Thomas V. and Joanne G. Greer "Problems in Evaluating Costs and Benefits of Social Programs." Public Administration Review, March/April 1982, pp. 151-58.

Discusses seven potential problems to evaluating the costs and benefits of social programs: the natural resistance to evaluation; the quality of the management information system; not understanding the program's beneficiaries; incompatible data; poorly designed accounting systems; funding; and lack of communication with others who may be doing similar research.

Haynes, S. N. and J. H. Wackwitz "Digital Coding and Computer Analysis of Behavior Observation Data." Journal of Applied Behavior Analysis, Winter 1975, pp. 475-7.

Short article describing exactly how to record and analyze behavior through mark-sensitive forms and preprogrammed computer analysis. Mentions cost and computer program sources. Long list of applicable situations.

Helmer, O. "Delphi and Short Term Forecasting."

Futures, April 1977, pp. 171-2.

Discusses pros and cons of Delphi Technique over the short and long term.

Holsti, Ole R. Content Analysis for the Social Sciences and Humanities. Reading, MA: Addison-Wesley, 1969. Handbook on the uses of content analysis as they relate to the characteristics measured and inferences about cause and effect. Stresses methodology and coding, with an extensive chapter on computers and their uses in content analysis.

Larrabee, Harold Reliable Knowledge, Scientific Methods in the Social Sciences, rev. ed. Boston: Houghton, Mifflin, 1964.

Stresses the importance of formal logic in social science research, including the clear formation of a hypothesis. Applies a combination of hypothesis to Legal and Governmental situations: court cases, precedent setting, government policy setting.

Loftland, John Analysing Social Settings. Belmont, CA: Wadsworth, 1971.

Part One discusses quantitative analysis of social settings. Part Two deals with the collection and management of Qualitative Materials. Excellent handbook of direct relation to unobtrusive research methods.

Norris, Margaret "Problems in the Analysis of Soft Data and Some Suggested Solutions." Sociology, August 1981, pp.337-351.

Article discusses what to do with those answers to open ended questions and evaluator notes and observations that pile up after administering a survey. Norris describes ways of establishing reliability and validity in information that may be a year or more old.

Payne, Stanley L. The Art of Asking Questions. Princeton, NJ: Princeton University Press, 1951.

An indepth look at the planning and preparation needed to train properly survey administerers. Includes the proper way to phrase and order questions on a survey.

Rossi, Peter H., Howard E. Freeman and Sonia R. Wright. Evaluation - A Systematic Approach. Beverly Hills, CA: Sage Publications, Inc., 1979. Textbook useful to the practicing evaluator and student in applied social evaluation research. Dissects evaluation research into program

What are the Qualitative Analysts? Public  
... 1977, pp. 114-17.  
... using soft data in evaluating  
... social programs. Discusses the  
... of qualitative (audit) data.

... Research in Social Science Research. New  
... and analyzing of  
... data. Includes  
... sampling and  
... in Chapter 3 on  
... of qualitative methods.

... Research in Social Science Research.  
... 1975.  
... describes the uses of the social techniques  
... by placing the process into  
... categories. The author looks on the drawbacks and  
... as well as the future of the  
... Concrete examples given.

... Research in Social Science Research.  
... 1975. (ERIC Document  
... ED 218 120).  
... implementing evaluation research it is  
... the research plan, train  
... and examine the motivations of  
... components of research such as  
... data preparation and data analysis,  
... pilot studies,  
... and observation.

... Research in Education,  
... 1975. (ERIC Document  
... ED 225 120).  
... impact by comparing changes in  
... communication network  
... and review of decision  
... are discussed.

General, Background

- Boruch, Robert F. and others "Recommendations to Congress and Their Rationale: The Holtzman Project." Evaluation Review, February 1983, pp. 5-35. (ERIC Document Reproduction Service No. ED 238 914).  
Recommendations made to Congress and Department of Education to improve evaluation of federally supported education programs.
- D'Aprix, Roger M. The Believable Corporation. New York City: AMACOM, 1977.  
Stress the importance of credibility in a business' dealing with the public. Very general without many case studies or examples.
- Gallup, George Jr. and William Proctor Forecast 2000. New York: William Morrow and Company, Inc., 1984.  
By using a combination of present trends, an analysis of youth attitudes and the Delphi Technique, Gallup has listed here projected major concerns and issues he expects the world to face in the year 2000.
- Hirsch, Paul, Peter B. Miller and Gerald F. Kline Strategies for Communication Research. Beverly Hills, CA: Sage Publications, Inc., 1977.  
The more formal research methods, such as surveys and interviews make up the thrust of this book. Some information on content analysis, but mostly stresses the quantitative data collection methods for formal research.
- Hodgkinson, Harold L. and John Thelin "Survey of the Applications and Uses of Unobtrusive Measures in Fields of Social Service." Research in Education, May 1972. (ERIC Document Reproduction Service No. ED 958 863).  
Discusses an eight week pilot study of current (1971) uses of unobtrusive measures. A directory and examples of organizations using unobtrusive measures by field is included. Criteria used by study to define unobtrusive methods were clues, traces, signs, patterns or records.
- Krupar, Karen R. Communication Games: Participant's Handbook. New York: Free Press, 1973.  
The practical approach of using communication games

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**Wallerstein, J., Lewis, E., Rowland, and James A.**  
**Community and Professional Research in**  
**Community Settings. San Francisco, CA: Jossey-Bass.**

This book described the range of unobtrusive  
measures in community social settings. It  
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**Wallerstein, J., Lewis, E., Rowland, and James A.**  
**Community and Professional Research in**  
**Community Settings. San Francisco, CA: Jossey-Bass.**  
... of the formation of attitudes, behavior,  
values and their relation to opinions. Includes  
quantitative techniques with applications for  
qualitative data.

**Ortiz, Flora Lee "Is Unobtrusive Ethical?" Research in**  
**Education, September 1983. (ERIC Document**  
**Reproduction Service No. ED 229 427).**  
Explores the ethical questions of reusing data.  
Does the re-use of secondary analysis of data  
violate the confidentiality of the first study?  
Suggests way to keep the ethical standards high in  
ambiguous circumstances.

**Paolsey, William J. and Ronald E. Rice Public**  
**Communications Campaigns. Beverly Hills, CA: Sage**  
**Publications, Inc., 1981.**  
Citing case studies from antismoking to political  
campaigns, this book looks at using research to  
shape persuasive messages.

**Robinson, Edward J. Communication and Public**  
**Relations. Columbus, OH: Charles E. Merrill Books,**  
**Inc., 1969.**  
Textbook on communication, its steps and processes,  
behavior and activation as they pertain to public  
relations. Strong in case studies and examples.  
Also all along with social sciences and behavior  
research methods.

- Rossi, Peter H. and Richard A. Berk "An Overview of Evaluation Strategies and Procedures." Human Organization, Winter 1981, pp. 287-299.  
An indepth look at the different types and uses of evaluation research. Includes a checklist of questions to ask about the policy or program before trying to evaluate it. Examples and case studies.
- Severin, Werner J. and James W. Tankard, Jr. Communication Theories: Origins, Methods, Uses. New York: Oxford University Press, 1979.  
Textbook on fundamental communication theories, including indepth descriptions of Semantic Differential and content analysis.
- Webb, Eugene J.; Donald T. Campbell; Richard D. Schwartz; and Lee Sechrest Unobtrusive Measures: Nonreactive Research in the Social Sciences. Chicago: Rand McNally, 1966.  
Quoted by almost every other author who has written on unobtrusive research, this is the foremost book on the subject.
- Weech, Terry L. and Herbert Goldhor "Obtrusive versus Unobtrusive Evaluation of Reference Service in Five Illinois Public Libraries: A Pilot Study." Library Quarterly, October 1982, pp. 305-324. (ERIC Document Reproduction Service No. EJ 271 561).  
Test in an Illinois library discovered that library staff answered questions correctly more often when they knew they were being evaluated. Copy of questionnaire, report form and references provide clear methodology for other applications.

General, Air Force

- "Air Force Public Affairs Case Studies," Public Affairs Department Defense Information School, Ft. Benjamin Harrison, Indianapolis, IN, 1983.  
Collection of 77 case studies from AF PA personnel. This collection of incidents and disasters touches on major & minor problems from noise complaints, plane crashes and missile silo explosions, and drug busts to poisoned pigeons, talks with Santa and transvestites.
- Arterburn, Keith, Lt. "State and Local Government."  
Lecture notes on community relations, unpublished.

USA Public Affairs Department, Defense Information School, Ft. Benjamin Harrison, IN, January 1984. Background information on local governmental structure and list of potential Public Affairs community relations problems.

Gatto, Leonard M., JOC, USN "Community Consideration." Lecture notes on community relations, unpublished. Public Affairs Department, Defense Information School, Ft. Benjamin Harrison, IN, November 1983. Notes used to lecture students on community issues. Topics include Impact Aid and economic impact. May be difficult to obtain.

Gatto, Leonard, M., Chief Journalist, USN "Minority Relations Seminar." Lecture notes on community relations, unpublished. Public Affairs Department, Defense Information School, Ft. Benjamin Harrison, IN, March 1984. Notes used to lecture students on minority related issues. May not be generally available.

Gatto, Leonard, M., Chief Journalist, USN "Reporting Minority Affairs." Lecture notes on community relations, unpublished. Public Affairs Department, Defense Information School, Ft. Benjamin Harrison, IN, March 1984. Notes used to lecture students at Defense Information School. Topics include minority media and EEO complaints. Unpublished, may not be easily obtainable.

Peppers, Jerome G., Jr. "The Military Leader -- A Manager of Communication (The Feedback Process)." AFJ Log, Spring 1983. Excellent article about the importance of good managerial communication and the need for feedback. Article has applications for a more macro look at getting feedback. Author writes about the 12 guidelines managers should keep in mind when communicating, from written critiques to timing and selecting the right media for the message.

Wood, Charles A., editor Public Affairs Handbook, third edition, Indianapolis, IN: Ft. Benjamin Harrison, 1983. Main text of the Defense Information School and the "bible" for military public affairs officers. Includes an extensive annotative bibliography of public affairs, public relations, index and

... also, an awareness of the  
... of the community.

... The Air Force, the Community and the  
... The Role of Public Affairs.  
... Summer, 1982.

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... The public affairs officer serves as  
... a gatherer of community  
... feedback.

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