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Reliability and Validity in Field Research: Some Strategies and Tactics

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In recent years there has been increasing recognition by accounting researchers of the need to study accounting within its organisational and social contexts (Hopwood, 1983; Flamholtz, 1983). Correspondingly, these and other researchers have called for more research using field study methods such as participant observation, informant and respondent interviewing and document analysis (Kaplan, 1983; Scapens and Sale, 1985)[a]. It may be argued, however, that at present there are two constraints on the extent to which the call for such research may be answered. The first is that, although field study methods have been a consistent part of research development in sociology and anthropology, they have been used much less frequently in accounting research when compared with laboratory experiments or survey methods. Consequently, relatively few accounting researchers have been formally exposed to field study methods. The second constraint is that field studies are frequently subjected to common and global criticisms of their apparent inability to attend to such research criteria as validity and reliability. These criticisms are not surprising because the general lack of exposure to field study methods applies to consumers and critics of accounting research as well as to those who would seek to produce it. The criticisms are further understandable because many published field studies in accounting do not report how issues of validity and reliability were addressed.

The tendency not to report how these issues were addressed may result from two causes. First, some researchers may not have addressed these issues explicitly, perhaps relying on Morgan's (1983) argument that criteria designed to guide and evaluate research using one method are not necessarily appropriate and transferable to research using alternative methods. These researchers may therefore reject the formal imposition of such criteria and believe instead that field study research is very much a matter of "faith"; i.e. that there comes a time in the research when the researcher is convinced that "he knows what he knows". This personal conviction is seen as attainable without formal attention to validity and reliability issues[b].

[a] These methods are well documented in the sociological and anthropological literature. See, for example, Taylor and Bogdan (1984), Burgess (1982), McCall and Simmons (1969) and Schatzman and Strauss (1973).

[b] There is an implied sense of this in Glaser and Strauss (1967).

For other field researchers, issues of validity and reliability may be continually in mind during the course of the study, and many actions may be taken in the field with the specific purpose of addressing them explicitly. However, these actions will not only be many, they will also be varied. Typically, they will not be standardised or routine, but situation- and time-specific. Consequently, they are difficult to document economically in reporting the results of the study, and when they compete for the scarce resource of publication space with other aspects and findings of the research, are frequently omitted or reported in a way which does not do them justice.

This article rests on two premises. The first is that issues of validity and reliability cannot be avoided or compromised in either the conduct or reporting of field research. Failure to attend to these issues in the conduct of the study prejudices attainment of the researcher's faith in the results. Indeed, it is difficult to see how personal conviction about the plausibility of findings can be disassociated from beliefs about the validity and reliability of the findings. Consequently, even those researchers who may reject the explicit treatment of these issues are attending to them implicitly. Failure to report how they were attended to prejudices the dissemination and communication of the research, restricting the audience who will read or accept the results.

The second premise is that issues of validity and reliability do not need to be compromised because of difficulty of conduct or reporting. Although approaches to these issues in field studies may be more varied and contextually dependent than their counterparts in experimental or survey research, it is possible to identify a series of strategies and tactics which may be systematically and generally applied.

The purpose of this article is to examine the specific nature of, and threats to, validity and reliability in field research, and to document strategies and tactics which may be employed to counter these threats. The article draws on a variety of literatures from different disciplines and on discussions with accounting researchers experienced in the use of field study methods[c]. By synthesising those literatures and experiences, it is hoped that the article may:

(1) assist accounting researchers who seek to do field research in both the conduct and communication of their studies, and

(2) allow readers of these studies to evaluate their contribution to the development of knowledge in accounting.

The remainder of this article is organised as follows. First, the general nature of validity and reliability is discussed briefly and broad definitions of each are provided. Next, the four major types of threats to validity and reliability in field study research are outlined. Three broad strategies for addressing these threats are discussed in detail and some specific tactics which may be used in conjunction with these strategies are presented.

[c] For examples of accounting research using field study methods see Baxter and Hirst (1986), Berry *et al* (1985), Burgelman (1983), Chua (1982), Harrison and McKinnon (1986), Merchant (1985), Nutt (1984), Pettigrew (1973), Preston (1986) and Tomkins *et al* (1980).

The General Nature of Validity and Reliability

The terms validity and reliability attract definitions in the research literature which, in many instances, assume a particular research method and/or instrument. In particular, many definitions relate to the properties of measurement instruments such as pre-coded questionnaires or personality scales. Examples are the definitions of validity and reliability given by Selltiz *et al* (1959), Black and Champion (1976) and Blalock (1974). Validity and reliability may, however, be described at a broader level in respect of their applicability to research generally.

Defined broadly, validity is concerned with the question of whether the researcher is studying the phenomenon she or he purports to be studying. Validity is impaired if the design and/or conduct of the research are such that the researcher is unintentionally studying either more than or less than the claimed phenomenon. Thus, in laboratory experimentation, for example, the researcher is concerned that the experimental design allows the phenomena of interest to be captured as comprehensively and faithfully as possible, while at the same time ensuring that *only* the phenomena of interest are captured.

Defined in equally general terms, reliability is concerned with the question of whether the researcher is obtaining data on which she or he can rely. Reliability may be impaired if the data are not independent of the "accidental circumstances" under which they were gathered (Kirk and Miller, 1986, p. 20). Thus, in designing a survey questionnaire, the researcher will seek to build in checks on the consistency of an individual's responses, in order to avoid the accidental circumstances of the respondent's lack of concern or care which may prejudice the credibility of those responses.

Field studies and experimental survey studies are typically undertaken with different purposes in mind. Where an experimental study will concern itself with causal relationships between variables, and a survey study with correlational ones, a field study will typically be more concerned with describing or modelling the complex pattern of roles and interactions that comprise a particular process or phenomenon. In some field research, the description and modelling is directed to the better understanding of phenomena already in the literature. In other field research, it is directed to the discovery, development and labelling of new phenomena. Hence, field studies and experimental survey studies will typically follow different research designs. As such, they will face different specific threats to validity and reliability and may use different strategies and tactics to minimise these threats. However, of central importance (regardless of the type of study) is the concern that the researcher is studying the variable, phenomenon or process he or she purports to be studying and that the data obtained are reliable.

Threats to Validity and Reliability in Field Study Research

Threats to validity and reliability in the sociological and anthropological literature are typically discussed on an *ad hoc* basis. The ability to talk about the nature of these threats and what can be done about them is generally acknowledged as being less well developed in field study research than in other branches of research

(Van Maanen, 1983; Kirk and Miller, 1986; McCall, 1969). There have, however, been some attempts by prominent researchers to classify the main types of threats to validity and reliability in field studies. This article draws on the categorisation schemas of McCall and Simmons (1969, p. 78) and Simon and Burstein (1985, pp. 242-248), and uses the following terms to designate four main types of threats:

(1) observer-caused effects;

(2) observer bias;

(3) data access limitations; and

(4) complexities and limitations of the human mind.

The nature of each of these threats is outlined in turn.

1. Observer-caused Effects

Observer-caused effects may be described as the reactive effects of the observer's presence on the phenomenon under study (McCall and Simmons, 1969, p. 78). A common criticism of the field study method is that the researcher's presence in the setting will cause the participants to change their behaviour and conversations and that, as a result, the researcher is not observing the natural setting, but one which is disturbed by the researcher's presence. The field researcher's presence must, by definition, alter the setting since it now contains another person with another role (researcher) (Simon and Burstein, 1985, p. 246). Observer-caused effects may occur when the role attributed to the researcher by the participants is such that it causes them to alter materially their otherwise "natural" behaviour. This may occur, for example, if the researcher is cast in the role of "management spy". Thus, it is the role attributed to the researcher by the participants that is instrumental in producing or avoiding observer-caused effects. This points to the importance of the researcher's representation of their role in the setting in managing this threat during a field study.

2. Observer Bias

Observer bias is described by Simon and Burstein (1985, p. 224) as the "tendency to observe the phenomenon in a manner that differs from the 'true' observation in some consistent fashion". It may be distinguished from observer-caused effects, where the observer's presence actually changes the phenomenon under study. With observer bias, it is what the observers see and hear (or think they see and hear) that is of concern. It is the distorted effects of the researcher's selective perception and interpretation.

The potential for observer bias is present not only in the process of observing actions and behaviour, but also in the researcher's casual conversations or formal interviews with participants, and in the analysis of documentation. Observer bias can enter at any or all of the three stages of "registering, interpreting and recording" events (Schwartz and Schwartz, 1955, p. 91). It may enter in the split

second following the occurrence of an event as the researcher registers it as an initial impression, subsequently as the event is interpreted in the context in which it occurred, and later as the event is recorded and transcribed into field notes. Each of these steps involves the discretion of the observer, and is potentially shaped by a range of factors unique to the observer including cultural background, occupational and general training, and prior experience of the specific phenomenon under investigation. Each researcher comes complete with a unique set of biases which mean that the way in which an event is seen, interpreted and recorded may differ from one observer to another.

The nature of observer bias is such that it is a problem of management rather than elimination. Political and philosophical views, background experiences, etc., are inextricable parts of an individual's psychological make-up. The individual cannot be separated from them or "de-biased" prior to his assuming the role of observer. Consequently, the approach to overcoming observer bias must proceed on an acceptance of its existence, and be directed towards what actions the researcher can take to protect the collection and analysis of data from the contaminating effect of their own bias.

3. Data Access Limitations

The researcher's role gives rise to three types of limitations on access to data in the field (Zelditch, 1962). First, the researcher is only on site for a limited period of time and cannot observe what happened before they arrived or after they leave. Hence, the researcher is not in a position to observe the historical background of the phenomenon, which may be important in terms of understanding its current form. Furthermore, the time period the researcher spends at the site may, in fact, coincide accidentally with an exaggerated or abnormal instance of the phenomenon, caused perhaps by the occurrence of related but not obvious events either internal or external to the site. Hence, although the researcher may have taken care to choose a "typical" site, they may in fact end up observing an "atypical" period in the life of that site.

The second type of data access limitation the researcher may experience will be one imposed by the research hosts. Either irrespective of, or because of, who the researcher is, the research hosts may impose restrictions on mobility and access to certain documents, events or people. Hence, although the researcher's aim may be to study a specific process or phenomenon, they may be faced with the prospect of being barred from witnessing specific aspects or dimensions of that process; i.e. the researcher may be studying less than the complete phenomenon they claim to be studying.

4. The Complexities and Limitations of the Human Mind

The complexities and limitations of the human mind mean that the statements subjects make may not be able to be taken at face value. The threats to validity and reliability here are of two types. First, the subject may consciously seek to mislead or deceive the researcher, perhaps reporting events in a manner most

flattering or acceptable to him/herself. This is similar to an observer-caused effect, but differs in that such deception is not caused by or restricted to the researcher. Rather it is a deception that the subject seeks to maintain for all others.

Second, subjects may be trying to be honest and accurate in their dealings with the researcher, but their statements and reports are affected by natural human tendencies and fallibilities. People forget things, they pay varying amounts of attention at different times to their own behaviour and to the behaviour of others, and, like the researcher, they also have their own sets of biases which shape their perceptions and opinions. Many aspects of behaviour which may prove important to understanding what is happening in the setting may be so entrenched and taken-for-granted by people that they are no longer consciously aware of those behaviours and their underlying rationale. Nor, of course, do people walk around with well thought out views and opinions, just waiting for a researcher's questions. These natural tendencies and limitations point to the importance of creating conditions and opportunities in the field research process for subjects to both know and say what they mean.

The four types of threats to validity and reliability identified in this section are of particular importance in field research. Continued attention must be accorded to them throughout the duration of the field study.

Strategies and Tactics

In the remainder of the article a number of strategies and tactics to counter threats to validity and reliability in field research are identified. Three strategies are discussed:

(1) the amount of time the researcher spends in the research setting;

(2) the use of multiple methods and multiple observations; and

(3) the researcher's social behaviour while in the setting.

Five tactics are considered, covering approaches to note taking, choice of type of participant observation, team research, selection of informants and respondents, and the use of probing questions.

Although the distinction between strategies and tactics is not an absolute one in this context, the military analogy is used to suggest separations of those issues which relate to the overall planning and general management of a field study and which are essential considerations in field research generally (strategies), from those specific techniques which may be deployed as appropriate in particular field studies or at particular times in the one field study (tactics). The military analogy may be pursued to recognise the interdependence of strategies and tactics. Obtaining the benefit of a particular strategic choice will depend upon the careful selection and use of tactics. Within strategies themselves, obtaining the benefits of (1) above (the amount of time the researcher spends in the setting) will depend upon (3) (the researcher's social behaviour while in the setting). These issues of interdependence will be returned to later.

Strategies

1. Substantial Length of Time in Field

One of the most frequently cited requirements of good field research is that the researcher spend a substantial length of time in the research setting. Although what constitutes a substantial period will differ necessarily from study to study, the commitment to a lengthy period of observation and interaction with people in the setting provides, in and of itself, a powerful counter to threats to validity and reliability.

First, it serves to lessen the potential for observer bias. The longer the period to be spent in the field, the more the researcher can concentrate, in the early stages of the research, on simply watching and listening; and the less pressure is felt in those stages to see patterns, uncover meanings, or develop hypotheses and conclusions. The temptation to seek interpretation and meaning immediately (or very quickly) after entering the setting increases the opportunity for observer bias. At that stage, the researcher has simply too little data to work with and, as a result, too many "interpretation gaps" that are closed with the researcher's own values, projections and expectations. The dissolution of the felt pressure for quick results allows the adoption of the patient and relaxed attitude towards developing hypotheses and forming conclusions that Schatzman and Strauss (1973, pp. 53-54) argue is essential if the researcher is to become genuinely receptive to what is happening in the field. Additionally, the longer the researcher is in the field, the more they are exposed to, and forced to confront "anomalous data": events and statements that may be contrary to the researcher's preconceptions and expectations. The consequence of confronting such anomalies is a heightened self-awareness of the researcher's own biases.

The second benefit of a substantial investment of time in the field is that it can effectively overcome the problem of observer-caused effects. Although subjects in the setting may seek to appear different from their usual selves to the researcher, the longer the researcher remains with them, the less they are able to do so. They are, to a considerable extent, constrained to carry out their normal activities in a normal manner, and cannot maintain a pretence for the benefit of the researcher while continuing to function credibly with other associates and work colleagues. Thus, their normal behaviour must come through. As Kidder *et al* (1981, p. 109) note:

> The more the participant observer is immersed in the research setting, the less likely the research subjects are to distort the research.

Threats to validity and reliability imposed by data access limitations are also decreased, other things being equal, as the length of time spent in the field increases. As noted before, the longer the period of interaction, the larger will be the number of events that form the data set for analysis. Consequently, the data set has a greater chance of including sufficient events of different kind about the phenomenon of interest to produce the comprehensiveness required for validity. Additionally, the data set has a greater chance of including sufficient instances of the same or similar events which are needed to rule out the "accidental circumstances" that may impair the reliability of a more limited set.

The above arguments point to the direct link between the length of time spent in the research setting and the reduction of threats to validity and reliability imposed by observer bias, observer-caused effects and data access limitations. It may also be argued that length of time has further benefits for combating data access limitations and human mind effects. The longer the researcher remains in the field, the more likely it is that they will be granted, or can negotiate, access to events, activities and people which may have been denied on initial entry to the setting. And, the more time the researcher spends with subjects, the more insights they will develop into the particular prejudices, capabilities and limitations of those subjects. Hence, the researcher is better able to separate those who may be more articulate and thoughtful about the setting and their role in it from those who are less introspective, and is better able to break down the barriers to understanding imposed by human mind effects. These benefits may be seen, however, as indirect consequences of the length of time committed to the field, and, more critically, dependent on the researcher's social behaviour while in the field. This issue forms the third strategy to be discussed here and will be returned to later.

2. Multiple Methods and Observations

Although the ability to spend a substantial period of time in the field is, in itself, a powerful counter to threats to validity and reliability, the length of time a researcher can commit or will be permitted is always constrained by other factors. This constraint makes the second strategy of using multiple methods and obtaining multiple observations important not only in its own right but also in compensating for the limitation on field time.

Multiple methods and observations assume a particular significance in field research because of the way in which the phenomena at issue are present and manifest in the field study method when compared with experimental or survey methods. This point may be developed by drawing on Black and Champion (1976). Black and Champion (1976, p. 223) note that the phenomena at issue in social science research are typically abstracted concepts. As such, there are no objective standards against which measurements of these concepts can be compared for verification. Additionally, for whatever abstracted concept the researcher is interested in, there exists a universe of indicators or manifestations of the concept from which the researcher must extract a sample. These indicators are infinite in number and include "questions, statements, social, psychological and/or biological behaviours which, to one degree or another, are indicators of" the concept (Black and Champion, 1976, p. 224). Because of these two constraints, researchers in the social sciences can never attain perfect validity and can speak only of degrees of validity. A more important implication in the present context is that different research methods are differentially restricted in the number and type of indicators or manifestations they can employ.

In survey research, for example, the measurement instruments constructed for use will usually sample from the first two types of indicators only (questions and statements). Instrument validation is typically sought by reference to other types of manifestations of the trait, but following that, the phenomenon of interest is represented by the questions and statements that comprise the measurement

instrument. In field studies, by contrast, where the phenomenon of interest is studied in its natural location and time, the phenomenon is present in the multiple manifestations noted by Black and Champion. The field researcher does not simulate the phenomenon as in laboratory experimentation, nor is he or she restricted to the statement and question manifestations of survey research. Rather, the field researcher is faced with multiple indicators of the phenomenon and needs to draw on multiple methods, such as observation, interviewing and document analysis, in order to gain access to those multiple indicators. Field studies are also in a good position to exploit such multiple indicators. Before discussing this, however, the relationship of multiple methods and observations to validity and reliability is examined.

The strategy of multiple methods and observations to address the issues of validity and reliability in field studies derives from Campbell and Fiske's (1959) multi-method, multi-trait matrix. Here, validity rests on the idea that:

> one variable should have low or near zero correlations with another variable which is presumed to be different from the first even though they are measured by similar methods; and it should have high correlations with other measures of itself, even though the methods of measurement are maximally different (Kidder, 1981, p. 245).

Reliability, by contrast, relates to the consistency of observations and is approached by taking repeated measures of the same trait, or variable, with similar or identical methods. Kidder (1981, p. 245) suggests that reliability and validity may be viewed as representing opposite ends of a measurement continuum, with reliability based on maximally similar methods of measurement at one extreme and validity resting on maximally different methods at the other.

The notion of a validity-reliability continuum must be interpreted carefully. This approach to validity and reliability was not developed with field study methods in mind, but rather within an assumed context of survey or experimental research. It does, however, convey the ideal of reliability as the achievement of consistent results from repeated measures, using maximally similar methods, and validity as the achievement of agreement on the phenomenon of interest, using maximally different methods.

The distinction between validity and reliability implied by the continuum becomes blurred when the methods of measurement are neither identical nor maximally dissimilar. While this will frequently be the case whatever the research method, it is particularly so in field studies where the measurement instrument is the researcher and the phenomena of interest exist and occur in real time and context. Thus, although the researcher may choose to observe repeated instances of an event in the field with an objective of reliability, neither the researcher nor the event can be represented as identical. Correspondingly, while the researcher may employ a number of different measurement methods (participant observation, respondent and informant interviewing, and document analysis, for example) with the purpose of enhancing validity, the researcher is common to these measures and, thus, the methods cannot be represented as maximally different.

The above arguments reinforce the difficulty and perhaps the inappropriateness of trying to distinguish issues of validity and reliability too rigidly in field research,

because many of the actions the field researcher takes in respect of these issues may be seen as lying towards the middle segments of the continuum. As a result, those actions affect both validity and reliability. Observation of repeated instances of a phenomenon, for example, is an approach to reliability because it serves to rule out accidental or chance circumstances. It is also, however, an approach to validity because, to the extent that the repeated observations are different manifestations of the phenomenon, the researcher is able to verify the existence of the phenomenon and to delineate its boundaries more comprehensively.

These differences in validity and reliability issues between field research and survey or experimental research are important because they reinforce the role of the researcher as the measurement instrument in field studies, and the natural existence of the phenomenon of interest rather than its created or simulated existence. With these differences in mind, however, Campbell and Fiske's (1959) approach is useful in that it gives authority and purpose to the use of multiple methods and multiple observations in field research. A powerful counter to threats to both validity and reliability lies in a strategy which incorporates examination of repeated instances of phenomena and brings different methods to bear on those phenomena. The field researcher can use this strategy to great advantage because, in participant observation, interviewing and document analysis, he or she has data collection methods capable of capturing indicators and manifestations of phenomena from more of the indicator types, as identified by Black and Champion (1976, p. 224), than are typically available through other research methods. Multiple methods contain the potential to reduce each of the specific threats to validity and reliability. By subjecting hypotheses emerging from observational data to "testing" against interview data, the researcher is able to detect, and, therefore, compensate for his or her own interpretational and perception biases which may have distorted the shape of the hypotheses.

Additionally, the ability to evaluate what a subject does against what a subject says is a strong counter to the threats of observer-caused and human mind effects. Statements made by respondents to the researcher may be distorted by a social desirability or "party-line" motivation. "Party-line" responses are answers agreed on by respondents to be given to outsiders and perhaps insider authority figures. These are not uncommon, particularly where the area under examination is a sensitive one. They may be the product of explicit and conscious agreement, and thus pose the threat of observer-caused effect, or implicitly accepted and taken-for-granted by respondents, thereby posing a threat of human mind effect. To the extent that they produce consistent statements across repondents, the bias may be detectable only by adding observational data to statement data. The field researcher is in a better position to detect and "crack" this bias than is, say, a survey researcher who may have elicited similar party-line responses.

Finally, the constraints imposed on the time the researcher can spend in the field mean that multiple methods will be essential in overcoming the threat to validity and reliability caused by data access limitations. The acquisition of a full data set will almost always require data on events prior to, and possibly after the researcher's period of observation, as well as events that occurred while they

were there, but to which they did not have access. The combination of informant and respondent interviewing and document analysis with the researcher's own observation will serve to provide the comprehensive data set required[d].

3. Social Behaviour While in Field

In the previous sections it has been claimed that diversity of method and length of time spent in the field are, themselves, strong counters to threats to validity and reliability — other things being equal. Perhaps the most critical of those "other things" is the researcher's interpersonal behaviour while in the field. Clearly, good behaviour is warranted simply by the fact that the researcher is a "guest in the house of the host" (Schatzman and Strauss, 1973, p. 27). Beyond this, however, if handled sensitively and well, the researcher's behaviour can be the mechanism which not only combats many threats to validity and reliability, but also unlocks many "doors" to data. Handled badly, the researcher's behaviour can be a great threat to validity and reliability, particularly insofar as data access limitations and observer-caused effects are concerned. These threats may be treated together here, as they are both probable responses by subjects to what the subjects may see as improper, or suspect behaviour on the part of the researcher.

To some extent, these threats are present before the researcher enters the site. Prior to having any real information, people in the setting will approach the researcher's arrival with feelings ranging from genuine interest to annoyance, disinterest, and fear of exposure, or they may see the researcher as a means to promote their own political agendas. Hence, the researcher's first concern on entering the research site should not be data collection; rather it should be preparing the ground for data collection. This involves ensuring, firstly, that the participants understand clearly why the researcher is there and, secondly, creating the conditions under which they will be allowed access to the social relationships of the setting. The latter is critical because being allowed physical access to the site says nothing, of itself, about being allowed access to the data the researcher hopes to obtain. To this end, the importance of the researcher's behaviour in the field in terms of being accepted as a non-threatening, taken-for-granted part of the setting is stressed consistently in the sociological literature. The researcher needs to gain the confidence, trust and respect of the participants and to be seen as personable and genuinely interested in them. While these may sound like motherhood statements and the description of the researcher somewhat idealised, appropriate social behaviour on the researcher's part is essential for securing access to reliable and valid data[e].

[d] Against the benefits of using multiple methods in field research should be placed the potential costs. Silverman (1985, pp. 105-6) draws attention to some of these including that of Garfinkel (1967), who notes that if multiple methods or observations are used to "verify" some accounts and reject others, the sense and importance of each account "in the context in which it arises", may be lost.

[e] Taylor and Bogden (1984, pp. 32-52) and Schatzman and Strauss (1973, pp. 18-33) provide an excellent check-list of "do's and don'ts" for gaining entry into social relations, complete with illustrations from their own experiences and those of colleagues.

The underlying theme of the advice available in the sociological literature is that access to data in field studies is not achieved by adopting what, on the surface, may appear to be more "objective" approaches. For example, the concept of the researcher's distance or remoteness from the experiment or the sample survey does not transpose to field research. By staying remote, the field researcher:

(1) will not overcome the multivariate and uninformed reactions that preceded their presence, and

(2) cannot hope to be seen by subjects as personable and interested.

The more genuinely interactive and giving the researcher, the more the threat of observer-caused effects can be reduced. In addition, the more time and effort the researcher invests in getting to know the participants generally, the way they think and the way they express themelves in words and gestures, the greater chance the researcher has of understanding the participants when the conversation turns to research-related topics. Hence, the threat of complexities of the human mind is reduced accordingly.

In achieving rapport with participants, the researcher should be interactive and giving, but not naive. For example, they should be careful to avoid taking sides in conflicts. This not only has the benefit of not alienating either side but it also ensures that the researcher is seen as neutral and trustworthy. In addition, the researcher should be careful to avoid getting too closely identified with specific individuals in the early stages of the research (Taylor and Bogdan, 1984, p. 42). These individuals may be authoritative or unpopular figures in the organisation. They may not have the respect or trust of other members of the organisation, and by associating with them, the researcher may come to be viewed accordingly. A related issue here is the need for the researcher to guard against the natural human tendency to associate more with the people in the site with whom they feel more comfortable. The danger here is that the researcher is exposed to a restricted range of views and that these views may reinforce the biases of the researcher. Similarities of backgrounds, beliefs, etc., may be the very factor which attracted the researcher to these participants in the first place.

Tactics

As noted earlier, several tactics are discussed here:

(1) approaches to note taking;

(2) choice of type of participant observation;

(3) the use of team research;

(4) informant and respondent interviewing; and

(5) probing questions.

While these are not the only tactics available to the field researcher, they are selected and discussed here because of their importance in the anthropological

and sociological literature, and because they serve to illustrate how reliability and validity threats can be managed through careful tactical planning[f].

1. Note Taking

Note taking fulfils two major functions in field research. The first is the obvious one of providing a record of the data. The second is that systematic note taking provides the means through which the research may be managed and allows control over threats to validity and reliability, primarily that of observer bias.

Data analysis in field research is an on-going process. Unlike experimental or survey research, where typically the stages of hypothesis formulation, data collection, and data analysis are relatively distinct and sequential, in field research these stages tend to occur continuously and interactively throughout the study. A behavioural consequence of this is that the factual data and the researcher's interpretation of that data may become intermingled, leading to the former being contaminated by the latter and highlighting the potential for observer bias. While the steps of data collection and analysis are necessarily interrelated in field research, it is critical in ensuring the validity and reliability of the results that the two steps are clearly separated in the researcher's mind. This mental separation can be facilitated by adopting a note-taking schema that forces a physical separation of the steps. One such schema is that of Schatzman and Strauss (1973, pp. 99-104) under which notes are recorded and coded as Observational Notes (ONs), Theoretical Notes (TNs) and Methodological Notes (MNs). ONs are the facts; they are restricted, ideally, to a verbatim, accurate and detailed record of what the researcher hears and sees. TNs are the researcher's developing ideas about the data in the ONs. MNs describe which research strategies have been followed to date in the collection and analysis of data, and what the researcher plans to do next. Rigorous adherence to this note-taking schema, which requires the recording of ONs before the researcher turns to interpretation, forces confrontation of biases. Interpretation must fit the facts as observed. All the facts must be considered. The prior recording of ONs means that the researcher cannot ignore inconsistent or anomalous facts. An additional benefit is that, as the ONs are as uncontaminated by interpretation as possible, they can be re-used as data, should the hypotheses or interpretative theory change at a later stage of the study.

2. Choice of Type of Participant Observation

The choice of type of participant observation (PO) has implications for the degree to which threats to validity and reliability in field research can be overcome. Of significance here is the fact that the types of PO which on the surface appear most objective and least disturbing of the research setting, in reality provide the greatest threats to validity and reliability. Conversely, those types of PO which appear the most intrusive paradoxically offer the best means of overcoming those threats. This may be demonstrated by drawing on the PO continuum, ranging from complete

[f] See Burgess (1982), Kirk and Miller (1986), Miles and Huberman (1984), Schatzman and Strauss (1973) and Taylor and Bogdan (1984) for more detail on field study tactics.

observer to complete participant (Gold, 1958, pp. 217-223; Schatzman and Strauss, 1973, pp. 59-63). Each point on the continuum is examined for its validity and reliability implications. The points on the continuum are shown as the rows in Figure 1. Cells indicate the favourable (+) and unfavourable (–) implications of each point for each specific threat to validity and reliability given as the columns. Points 1 and 2, and 5 and 6 are discussed first as these represent opposite ends of the continuum.

	Observer-caused Effects	*Observer Bias*	*Data Access Limitations*	*Complexities and Limitations of Human Mind*
1. *Watching from outside*	+	–	–	–
2. *Passive presence*	–	–	–	–
3. *Limited interaction*	+	+	+	+
4. *Active control*	+	+	+	+
5. *Observer as participant*	+	–	–	
6. *Participant with hidden identity*	+	–	–	

Figure 1. PO Continuums: Implications and Threats to Validity and Reliability

Point 1: Watching from outside

In this form of PO, the presence of the researcher in any capacity is unknown to the subjects. Although the image of the researcher watching through a one-way mirror, for example, is not transferable realistically to an organisational field study, it may be considered here as a theoretical polar point on the continuum. This approach clearly has the advantage of total unobtrusiveness and completely overcomes any threats to validity and reliability arising from observer-caused effects. The cost of a total reduction in this threat, however, is to prejudice validity and reliability through increasing each of the other threats. Because the researcher can ask no questions, but must simply watch and listen, they are forced to work with a very incomplete data set, and there is considerable risk of misinterpretation of what is seen and heard. All information gaps must be closed by the researcher, maximising the opportunity for their own values and expectations to be projected into the interpretation.

Point 2: Passive presence

Closely related to the first point on the continuum but more realistic in organisational field research is the approach of "passive presence". Like "watching from outside", the researcher has no interaction with the subjects being observed, but here they are aware of the presence of an observer. Once again, this approach appears to offer the advantage of minimal disturbance of the participants' behaviour. Schatzman and Strauss (1973, pp. 59-60) argue differently, pointing out that "the impassive observer offering few clues as to what he is up to and showing little natural anxiety" can often be both stressful and disturbing

for the subjects. The subjects will try to "second guess" the researcher's purpose and may change their otherwise natural behaviour accordingly. As a result, an approach based on passive presence may lose the advantage of unobtrusiveness, without gaining the benefit of better information or explanation about either the activity or the subjects being observed. The researcher remains unable to ask questions for clarification or explanation and is again forced back onto a need to interpret from incomplete data.

While the use of passive presence as an observational technique may be warranted at certain stages in the research, or in respect of certain activities (where, for example, it is inappropriate or not permissible to do anything other than observe in silence), it is not an approach which does much to counter any of the identified threats to validity and reliability.

Point 6: Participant with hidden identity

Like its counterpart at the opposite end, this polar position also offers the advantage of unobtrusiveness. Here, the researcher is known to the subjects, but not as a researcher; consequently the behaviour of the subjects is not disturbed by the process of observation. Even if this approach were not ruled out on ethical grounds, [g] it would be ruled out on grounds of validity and reliability. Once again, the price for zero disturbance is too high in respect of threats of observer bias and data access limitations. With the researcher's true identity hidden, it will be next to impossible to ask "research" questions, and the researcher will again be thrown back onto their own interpretation of what is seen and heard. And, with mobility significantly restricted by the work that has to be done, and its location, the researcher will again be confronted with an excessively restricted data set.

Point 5: Observer as participant

Under this approach, the researcher participates in the activities of the setting and is effectively a co-worker with the subjects, but the researcher is identified in that role. This approach, therefore, overcomes the ethical problem associated with Point 6. It fails, however, to overcome the problem of restricted mobility, and adds the further problem that the researcher may "go native"; i.e. become so emotionally and psychologically involved in the organisation that the ability to distinguish and balance the observer and participant roles is lost. Thus, the threat of data access limitation remains, and, although its form may have changed, so too does that of observer bias.

Points 3 and 4: Limited interaction and active control

Under an approach of limited interaction, or active control, the researcher both observes the events and activities and talks with subjects either in casual conversational and questioning form (limited interaction) or in interview format (active control). With limited interaction, the researcher does not direct the

[g] The ethical problem refers to that of reporting data gathered covertly. As Burgess (1982, p. 52) notes, "...if the observer cannot participate with the knowledge and approval of the people to be studied he should not be there at all".

conversation to specific topics, but uses it to clarify the meaning of events and comments as they occur. With active control, the researcher uses the conversation to achieve both these ends.

These types of PO are partially intrusive in that the researcher is present as an observer not as a participant, and "intrudes" by asking questions. This interaction is, however, a socially natural and accepted form of intrusion. Thus, an approach of limited interaction can still minimise obtrusiveness while allowing for greater understanding and explanation of the meaning of events and activities as they are observed. Herein lies the paradox of PO types: it is that the more the field researcher seeks to maintain a distance from the research setting and its participants and to disrupt the setting as little as possible through choosing, say, Points 1 and 6 (or 2 and 5) on the continuum, the more susceptible they are to validity and reliability threats.

In most field studies, the researcher will use a number of forms of PO. It is typically accepted that the polar approaches of Points 1 and 6 should be avoided, but the researcher will probably move among the other approaches during the course of the research. The stage of development of the study, the nature of the event or activity of interest, the extent to which the researcher has obtained rapport and acceptance, and the particular objective are some of the factors to be considered when selecting a particular form of observation[h].

3. Team Research

There are two main forms of team research:

(1) parallel, where two or more researchers observe similar activities and/or conduct similar interviews at different research sites; and

(2) duplicate, where two or more researchers observe the same activities and/or attend the same interviews.

Miles and Huberman (1984) and Tomkins *et al* (1980) provide excellent analyses of the strengths and problems associated with the first form. This article focuses on the second, duplicate team research which, as a single tactic, is a strong counter to the threat of observer bias.

Having a number of researchers record their impressions of the same activity or interview forces confrontation of observer bias. Comparisons highlight inconsistencies in the record of what actually occurred and also in the interpretations of that record. Hence attention is drawn to the biases of different researchers and also to activities or statements of the research subjects which are particularly difficult to comprehend and which require further investigation.

[h] The choice of type of PO is a dynamic process. For example, the researcher may choose an approach of limited interaction in the early stages of the study while they are "settling-in" and gaining familiarity and acceptance. As hypotheses are formulated, the researcher may then use both active control and limited interaction to obtain information relevant to the hypotheses. They may also use passive presence from time to time to check out an important event where any interruption would be inappropriate or unwelcome.

Three arguments against the use of team research are frequently raised. The first is that the presence of more than one researcher is intimidating for subjects and may result in exaggerated observer-caused effects. The second is that the findings of team research are limited by the "lowest common denominator" effect — the results are the minimum on which the researchers can agree. The third is that team research is more costly than individual research. While the latter is a specific cost/benefit consideration, the former two may be less problematic than they appear. Subjects in organisational field research in particular may not find the presence of multiple researchers intimidating, because the organisational context itself is one in which committee and group processes are familiar and accepted. Second, to the extent that the results of joint research are in themselves significant, the "lowest common denominator" effect may be seen as a strength rather than a weakness. In respect of validity and reliability issues, it provides a strong assurance and defence against observer bias, as the plausibility of results rests not just on the credibility of a single researcher but of several.

4. Informant and Respondent Interviewing

A distinction may be drawn between informants and respondents in terms of the purposes they serve in field research. Informants provide general background data on the organisation and the people in it. As such, they are an important means of overcoming the data access limitations which stem from the researcher's restricted time and mobility in the setting. Informants can provide an oral history of the organisation's development, as well as details on its present structure and the designated functions of participants. Additionally, they can inform the researcher about what typically happens at events the researcher is not permitted, or otherwise unable, to attend.

Careful selection of informants, based on criteria including their length of involvement in the setting, their access to social structures and relations, and their ability and willingness to communicate, allows the researcher to obtain the historical and spatial context for the events observed while in the setting.

By contrast with informants, respondents are used to provide more specific information about themselves, their functions, experiences, and their interactions with others in the organisation, in respect of the phenomena of interest to the researcher. The selection of respondents for interview is a sampling process. Where interviews are used as the sole data collection method (or in conjunction with document analysis only), this sampling must be made prior to, or in the early stages of the field work. The researcher will need to identify, at an early stage, the categories or groups of people which, in combination, can provide both a comprehensive picture of the phenomenon under examination, and a variety of perspectives on that phenomenon. It is important that the sample is comprehensive, drawing from all categories or groups of people involved in the phenomenon. An approach of interviewing only one or two key categories from a number of participating ones provides a substantial threat to the validity of the research, in that the researcher may be studying much less than the total phenomenon[i].

[i] McKinnon (1986) and Burgelman (1983) provide good examples of approaches to prior sampling of interview respondents in this respect.

It is important also that the selection of interview respondents pays attention to the need to obtain a variety of perspectives on the phenomenon under examination. Selltiz *et al* (1976, pp. 99-100) are useful here. As well as supporting the need to select respondents in different positions and capacities, who will themselves bring a diversity of perceptions on the phenomenon, they also suggest drawing interview respondents from people who are in marginal or dual capacities, or who are "strangers and newcomers" to the setting. Respondents in marginal or dual capacities, i.e. individuals who are members of more than one of the groups or sub-groups in the system, are forced to consider the interaction and conflict between groups from both sides. As such, they can often provide an insight into the major influences operating in each group from a perspective that may not be available from an individual associated with only one of the groups.

Similarly, the use of "strangers and newcomers" has the potential to uncover insights into the social customs, practices, or assumptions of groups or sub-groups. Indigenous members of those groups will take many of the group's assumptions and practices for granted, with the result that they may never surface in an interview context. To a stranger or newcomer to the group, however, these customs or assumptions are much more visible. The deliberate selection of respondents from this category is a powerful counter to the threat of validity and reliability arising from the complexities and limitations of the human mind.

Where respondent interviews are used in conjunction with participant observation, they are usually conducted later in the study when the hypotheses are "firming up". Selection of respondents here will be systematically geared to those people with specific knowledge of the phenomena to which the hypotheses relate, and who are able and likely to provide both confirming and disconfirming evidence for the hypotheses. It is important in countering observer bias that as an emerging hypothesis is put to test in the field, it is exposed to potentially negative as well as positive evidence. A question that will provide continual guidance to the field researcher here is: "I think that is right, but if it is not right, where should I go and to whom should I talk to find the circumstances in which it is most likely not to be right?"

Careful selection and use of informants and respondents in field study research provides not only a comprehensive set of data but also one sensitive to a variety of perspectives. As a tactic, it emphasises data access. However, as we shall see, when it is combined with skilful use of probing questions, it places the researcher in a good position to break through the threats to validity and reliability stemming from the complex and fallible nature of the human mind and from the researcher's own biases.

5. Probing Questions

Probing questions are used to allow the researcher to quiz the subject further about any unsolicited statements that were made, or about a response to a specific question. This tactic may be usefully employed in casual conversation, as well as in a more formal interview setting. Unlike the questionnaire survey where all questions need to be formulated and ordered in advance, probing questions are situation specific.

As a tactic, probing is a powerful means of reducing threats to validity and reliability. First, in being able to ask "why?" or "what happened?", the researcher has access to data not available through questionnaire surveys. In particular, contextual details of the incidents being discussed can be provided in this way. Second, probing questions allow the researcher to accommodate some of the problems caused by the complexities and limitations of the human mind. Careful probing assists respondents to clarify their views and allows the researcher to separate the factual (i.e., what the respondent has experienced or observed first hand) from the presumed (i.e., what the respondent assumed happened based on hearsay and previous experience of similar instances). Third, probing helps to keep the researcher's own biases at bay. Implicit in the use of probing questions is an assumption that the researcher does not understand the full implications of what is being said. In pressing for clarification, the researcher is allowing any "gaps" in understanding to be filled by the respondent rather than by the projections and expectations of the researcher.

Conclusion

As the calls for more research into accounting within its organisational and social contexts translate into empirical studies, field research, with its comparative advantage in such contexts, will become an increasingly important and necessary method for more accounting researchers. It will be important both in providing better understanding of phenomena already existent in the literature and in the discovery of new phenomena. As such, it will be a major adjunct and facilitator in the development of knowledge in accounting.

In order that field research can fulfil this potential, a number of barriers to its more widespread institution and acceptance among accounting researchers must be recognised and overcome. One such barrier is the lesser exposure of contemporary accounting researchers to field study methods when compared with experimental and survey methods. A second is that field studies are frequently criticised as being unconcerned with or unable to attend to issues of validity and reliability. A third is that the nature, focus and purposes of field studies are often sufficiently different from those of experimental and survey research that issues of validity and reliability do not translate readily across methods, either in respect of the nature of threats to validity and reliability or in respect of the strategies and tactics enlisted to manage those threats. These barriers are not unrelated, of course, and together can provide strong pressures to resist or reject field research in general.

This situation places considerable responsibility onto those who would seek to do and to communicate field research. That responsibility extends not only to the researcher's being confident of the plausibility of the findings of the study, but also to ensuring that the same confidence is instilled in readers of the study. The importance of this latter point is stressed consistently in the literature (Taylor and Bogdan, 1984, p. 150; Becker and Geer, 1960, p. 240; and Miles and Huberman, 1984; for example). The onus is placed on the field researcher to provide sufficient details of the conduct of the study to allow others to evaluate the validity and reliability of the findings. Failure to achieve this prejudices the dissemination of

the findings, and unduly restricts the audience who will be prepared to read or entertain the results.

This paper has, therefore, been based on two premises:

(1) that issues of validity and reliability cannot be avoided or compromised in either the conduct or reporting of field research; and

(2) that such issues need not be compromised in reporting field research, despite their variety and contextual dependency.

As such, the article has sought to bring together in one source a structured examination of the validity and reliability threats encountered in field research, and to present a number of strategies and tactics which may be employed to minimise those threats. It is hoped that it serves as a useful reference for field researchers wishing to document their attendance to validity and reliability issues, as well as for accounting researchers in general who may wish to become more familiar with the tools, strategies and tactics of the field researcher.

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