MULTI-CULTURAL AND MULTI-LINGUAL SURVEYS, WITH SPECIAL REFERENCE TO THE AFRICAN EXPERIENCE
ABSTRACT
This paper looks at the main problems faced by survey researchers in developing countries, and more specifically on the African continent, in the collection of valid and reliable data. These problems are not unique to developing countries, but have found to be more frequent, more severe and generally more intractable than in developed countries. Identification of the main problems based on earlier published research experience in developing countries as well as on the authors’ personal experience of transport surveys in South Africa.

Potential pitfalls which researchers need to face when undertaking surveys in developing countries are notably the difficulty of obtaining representative samples because of the absence of an adequate sampling frame, the lack of knowledge of the concept of a questionnaire survey by local respondents, suspicion of its legitimacy and purpose, hesitancy to express personal opinions, the inability to answer questions because of the use of unfamiliar concepts and terms in the questionnaire, the difficulty of obtaining linguistic and cultural equivalence of terms and concepts in multi-lingual and multi-cultural surveys, invalid responses because of respondents’ desire to give the “right” answer and to please the interviewer, and interviewer bias.

Effective ways of reducing the negative impact of these potential pitfalls include on-the-spot examination of the locality to be surveyed, acquiring familiarity with the respondents’ community structures and behavioural norms, establishing project legitimacy through appropriate affiliation, ensuring the understanding and relevance of concepts and terms through back-translation and pilot-testing, and eliciting valid responses through the careful selection and training of interviewers, the setting of an empathetic environment to encourage the free expression of individual opinion and the use of meaningful response formats.
1. **INTRODUCTION**

The collection of valid and reliable comparative data in multi-cultural and multi-language societies has many potential pitfalls. These problems are compounded when the setting is in the developing world. Bulmer and Warwick (1993) concluded, however, that the problems “are not so much unique as more frequent, more severe and more intractable” than those in developed countries.

There is evidence that, despite their cultural and language differences, the developed countries became more and more alike over the years (Williamson and Fleming, 1973; Inkeles and Rossi, 1973). Scheuch (1973) had noted that, in surveys of developed countries, between country variances in survey findings were sometimes smaller than within country variances, implying that nationality was not always an appropriate explanatory variable. He went on to note, however, that “comparisons that include both modern and developing countries produce differences that are very hard to interpret – if they make sense at all”. As an example, he noted that “in youth surveys one observes young people in developing countries reacting with high degrees of optimism that are factually completely inappropriate, such as in India. By way of contrast, young people in Sweden or in the Netherlands exude gloom in the wake of incomparably greater opportunity”.

This paper does not attempt to cover all the well-known survey research guidelines, but examines the principal pitfalls to be avoided in multi-cultural, multi-lingual transport surveys in developing countries. These potential pitfalls are primarily:

- The intrusion of political issues;
- Ethical concerns;
- Sampling problems;
- Limitations in data collection methods;
- The problem of equivalence in questionnaire design;
- Interviewer bias; and
- Cultural factors affecting the validity of responses.

2. **THE INTRUSION OF POLITICAL ISSUES**

Issues of a political nature affecting surveys probably emerge more frequently in developing than in developed countries, because of lesser familiarity with the value of independent surveys and a fear that the findings may contradict or undermine government perceptions, policy or position. The intrusion of political issues needs to be carefully monitored and dealt with at the start of a project, before it affects the design, conduct and ultimately even the validity of survey findings.

The factors, which need to be considered, are mainly:

- The nature of domestic politics;
- The image of the survey’s sponsor;
- The appointment of the research team;
- The design of the study methodology; and
- The interpretation of the findings (Warwick, 1993).

1.1 **The nature of domestic politics**

The greater the polarisation of the population along ethnic lines, the greater will be its influence on survey design. In South Africa today, the significant political divide is that between Xhosa (who
predominate in the ruling party) and Zulu (the chief opposition). These two tribal groups speak different languages and have some different social customs. Ignoring this divide can markedly affect the access to, and co-operation of, the respondents recruited for a survey.

Overcoming this potential problem calls mainly for clear identification of the sample to be interviewed and subsequent careful selection and training of interviewers.

1.2 The image of the survey’s sponsor
Identification of the sponsor to respondents can be advantageous if the sponsor is seen as politically neutral and having professional legitimacy. It can, however, have negative connotations. Warwick (1993) noted that the US Department of Defence was considered by most developing countries “to have an overt or covert military purpose”. Suspicion of a survey’s purpose may also these days be associated in the minds of many Africans with sponsorship by the World Bank, the IMF and former colonial powers.

Government sponsorship of a survey may be perceived by respondents as either positive or negative, depending on their own affiliation. This depends as well on the topic under discussion, because some topics may generally be viewed as better not associated with government (such as matters of religion), while resentment may arise if other topics are not openly sponsored by government (such as crime on public transport and HIV/AIDS).

Researchers in developing countries need, therefore, to be aware of the range and strength of positive and negative attitudes towards sponsors in the survey area, and to develop a strategy to overcome negative perceptions, while reinforcing positive ones. In the case of negative perceptions, this could include not revealing the identity of the sponsor to the respondents unless they specifically ask to know this. Hershfield, Rohling, Kerr and Hursh-Cesar (1993) reported that in Nigeria, suspicion of their survey’s purpose was overcome by establishing the project’s affiliation with the University of Nigeria, which was a well-known and favourably perceived institution among their respondent sample. Mitchell (1973) had made a similar observation when he gained legitimacy by associating his survey among the Yoruba in Nigeria with the University of Ibadan.

1.3 The appointment of the research team
There is sometimes pressure to appoint “politically correct” researchers, even if they are less experienced or less qualified, or to appoint individuals who can be relied upon to come up with the “right” answers, politically speaking. This can be difficult to overcome if the project’s sponsor is a government department. When it does arise, however, it may be possible to stress the importance of having independent, non-aligned researchers on the project, in order to gain broader acceptance of the project findings.

1.4 The design of the study methodology
Survey design can be compromised if pressure is exerted on the research team to satisfy certain needs, such as for unduly rapid results, keeping within a strictly limited budget, for minimal time and expense on quality control, or for the selection of pre-determined individuals (usually community leaders of some sort) to be interviewed instead of the general commuter population.
If it is not possible to overcome these restrictions on the survey design, they should at the very least be properly specified in the project report.

1.5 The interpretation of the survey findings
Warwick (1993) reported that in developing countries with little tradition of academic freedom, there was sometimes pressure on researchers to interpret their findings in a manner which supports controversial or highly visible issues of public policy. The authors are aware of at least one study sponsored by a regional political grouping some years ago, which made it clear from the start that the group would want to “approve” the findings before publication. Obviously, no researcher would want to be involved in such a project!

Bulmer (1993) concluded that the need for independence of research from government action is not generally apparent to respondents in developing countries and that interviewers are very likely to be mistaken for government agents.

3. CULTURAL FACTORS AFFECTING THE VALIDITY OF RESPONSES
Two cultural factors have been identified as having the potential to affect the validity of survey responses in developing countries negatively. These factors are:
• Respondents’ lack of knowledge of the concept of a sample survey; and
• Respondents’ unwillingness to express personal opinions.

1.6 Respondents’ lack of knowledge of the concept of a sample survey
Many social researchers have recorded that, in contrast to the developed world, a basic difficulty facing researchers in developing countries is that the very activity of social research and the role of the interviewer is little known or appreciated. Bulmer (1993) cited the example of a village elder in Kenya who maintained, perhaps from previous experience, that “people in the community are accustomed not to trust people who come from outside. No one comes from outside with good intentions. Everyone comes here to take something away from us and to tell bad stories about us”. Gil and Omaboe (1993) agreed there is a generally hostile attitude in Africa to any type of enquiry, especially among the less literate sections of the society.

Bulmer and Warwick (1993) noted, however, that “There is probably not a country in which at least a few respondents will fail to understand the nature of a sample survey and perhaps the entire idea of social research. The distinctive feature of survey research in the developing countries is not the presence of this difficulty but its prevalence and severity. Where in the United States the number of respondents who simply do not understand the survey would be less than one per cent of the total sample, in the rural areas of some developing countries the figure might be closer to 10 or 15 per cent.”

In similar vein, Tessler (1973) had reported that a major problem in Tunisia was that “it has been observed repeatedly that persons in developing societies are unfamiliar with attitude surveys and
unaccustomed to expressions of opinion on an abstract and generalised basis”. This leads to the second cultural factor.

1.7 Respondents’ unwillingness to express personal opinions

Equally problematic, and perhaps unique to many rural developing societies, is the inability or unwillingness to express personal opinions. An extreme example had been reported by Drake (1973). “In many of the Malawian communities in which I worked, it is necessary to know little more than how the headman votes or worships or views one particular issue or another…. (It) is enough to predict with extreme accuracy how the village members will vote in an election or how they feel about innovative farming practices”. Tessler (1973) had also noted that a major problem in the conduct of social surveys occurred when the population was inexperienced with surveys, unused to giving expressions of opinion, was limited in literary skills, and was submissive to the interviewer, sometimes even to the point of agreeing with two mutually contradictory statements. This problem probably stems from the community orientation of many developing societies.

The idea that individuals have views and opinions of their own is itself a cultural value of developed societies. In Turkey, for instance, Turan (1975) had found that societies isolated from the urban mainstream identified strongly with their community and tended to give only perceived socially desirable answers. Even earlier, Rudolph and Rudolph (1958) had commented on much the same thing in India: “Where life is lived communally, the unit of opinion is likely to have a communal base”. Opinions would be the product of group consensus or tradition. Many of their respondents were unable to answer questions simply because they did not have a personal opinion on them. This communal orientation in their societies also influenced the perception of outsiders, such as interviewers. The stronger the communal orientation, the greater the suspicion which interviewers aroused.

Hofstede (1973) studied organisational practices in fifty countries and concluded that developing countries differed markedly from industrialised countries in that they were largely collectivist in structure (rather than individualistic) with close ties between individuals and the community, and tended to have centralisation of authority and autocratic leadership styles. In addition, people in African countries were likely to see the future as something which they could not influence and therefore had to accept.

Bulmer and Warwick (1993) warned that in designing survey questions for use in developing countries, it is therefore necessary to establish at the outset whether the target group of potential respondents has previously ever thought about the topic and whether the individuals in fact have attitudes and opinions about it, as this cannot be assumed. They note that “among respondents with little or no formal education, low income, and minimal exposure to urban influence, the chance of measuring opinions that do not and never have existed is very high “. Inkeles (1973) had added that “Education has often been defined as perhaps the most important of the influences moving men away from traditionalism toward modernity in developing countries”.

In South Africa, the authors have often found that perceptions and the ability to understand and respond to survey questions was usually a function of the level of education of the respondent, rather than of urbanisation or any other demographic variable. In the rural areas, the strong influence of the former mission schools apparently overcame any disadvantage of isolation from the modern urbanised world.
4. ETHICAL CONCERNS

There are two major ethical concerns in multi-cultural surveys in developing countries. These are the researchers’ obligations to the respondent and their commitment to professional standards of research.

1.8 The researchers’ obligations to the respondent

Two main obligations may be noted:

1.8.1 Sensitivity to cultural norms

Researchers should be aware that, for instance in some African countries, there is a reluctance to state the number of people in the household for fear of the “evil eye” (Mitchell, 1973; Bulmer, 1993). Furthermore, many inhabitants of developing countries do not have calendars and do not know their ages, not even approximately. Kinney (1973) had noted that in Ghana, Asante philosophy says that one should never tell more than half of what one knows! Such cases may be relatively rare these days, but the point remains that the researcher is obliged to establish any such cultural peculiarities in the population being surveyed, which could affect the research findings, or indeed embarrass the respondent.

In general, approaches should be avoided that might be offensive, poorly understood or against cultural norms.

1.8.2 Awareness of confidentiality issues

Unlike in the western world, respondents in developing countries do not always regard confidentiality as vitally important, or even as desirable. This issue could be crucial to the success of interviews. Hershfield et al (1993) found, for instance, that in eastern Nigeria, respondents frequently requested that their names be associated with their answers. They wanted people to know what they had said. Much earlier, Back and Stycos (1965) had reported even more dramatically that, in Jamaica, “interviewers nearly lost their lives in a rural area after stressing confidentiality”. The respondents did not value privacy of opinion in this context and related the interviewers’ concern with it to an interest in witchcraft!

Survey researchers in developing countries therefore need to establish what differences, if any, exist between the various cultural groups they are surveying on the question of confidentiality, and to respect their wishes in this regard.

1.9 The maintenance of professional standards

Warwick (1993) maintained that although the issue of research quality obviously pertains to all forms of survey, it “deserves to be taken particularly seriously in cross-cultural studies, for there the danger of slips in quality is especially high.” In this context, researchers in developing countries have to pay particular attention to minimizing possible sources of bias in their research design, especially as regards the difficulty of obtaining fully representative samples, appropriately designed questionnaires and skilled fieldworkers.
It is undoubtedly more difficult to produce high quality surveys in developing countries than in the
developed world, largely because there are probably many additional potential sources of bias that
are not yet familiar to researchers. This is intensified by the relative isolation of some of these
communities, the lack of easy communication between them, and the consequent presence of many
differing cultural norms and beliefs.

5. SAMPLING PROBLEMS

Survey sampling provides many challenges for researchers in developing countries. African social
and cultural boundaries are seldom precise, which makes it difficult to specify the nature of the
universe and to enumerate the problem. The aids used in developed countries, such as
neighbourhood maps, address lists, telephone directories and public records, are often unavailable
in these countries. In most cities in South Africa these records are available for the more established
sections of the city, but not for the informal areas, and certainly not in the deep rural areas. The lack
of a ready-made sampling frame is a common problem for survey researchers in Africa and, more
often than not, such a frame cannot be economically prepared.

Bulmer (1993) recommended that, for areas without a sampling frame, alternatives such as aerial
photography or mapping should be considered. He notes that, even in urban areas, these methods
may provide better results than inadequate or out-of-date registers. Unfortunately, however, maps
and aerial photographs are also often incomplete and out-of-date, particularly in areas where rapid
urbanisation is taking place. In this event, the interviewer may at the same time have to become a
sampler. This is common practice in rural South Africa, where interviewers are often given a map
with a starting point marked on it and are instructed to interview at every nth house. This procedure
is, however, also not without its difficulties, because roads may be ill-defined and the houses
anything but in a neat row. Clustering procedures, used to save time and costs, add to error margins
especially for variables (such as education and income) which tend not to be evenly distributed
across regions.

Mitchell (1973) had stressed the need to make careful comparison of the relative merits of the
various types of probability and quota samples when sampling resources are inadequate and funds
are scarce. Quota sampling would be difficult to do if the characteristics of the universe were not
reliably known, which is often the case in developing countries. Quota sampling can also result in
unrepresentativeness if the selection of the respondent is left to the interviewer, which it often has to
be. Although tied by some restraints on the choice of respondent (be it age, gender or whatever)
there will always be other attributes not taken into account that render the final sample
unrepresentative. Random sampling, on the other hand, has been found to arouse suspicion in
developing communities as to why certain people are selected and others not, for no perceived
logical reason allied to their position in society.

Community values and behavioural norms can markedly affect sampling success in Africa. Drake
(1973) had recorded that “the failure to spend time socializing dooms many a project to failure and
destroys any chance of representative sampling”. Spending time with the headman of a community
could gain the researcher valuable advice on the structure of the village and its inhabitants, as input
into a valid sampling frame. The western researcher’s concern for efficiency and getting on with the
job was simply not the African way of doing things!
Hershfield et al (1993) suggested that in order to obtain valid data in developing countries, it may be advisable to use a two-way system of sample selection, in which all the relevant leaders are first contacted and interviewed (in the correct status order, according to the social structure of the village) and their help sought in establishing the sample frame and the location of the selected respondents.

In conclusion, it can be said that sample design in developing countries becomes more a study of limitations and their sampling implications, than an exercise in applying the principles which result in an optimum sample design in developed countries.

6. LIMITATIONS IN DATA COLLECTION METHODS

Three aspects of broad methodology are particularly important in multi-cultural studies in developing countries:

- The methods which can be used are often severely limited;
- There is usually a need to use “gatekeepers”; and
- Pilot studies are essential.

1.10 The methods which can be used are often severely limited

Telephone interviewing can rarely be undertaken because of low telephone ownership. Postal surveys can also seldom be used because of the lack of an address structure in many rural villages and informal urban areas, the lack of a reliable postal service, high levels of illiteracy and the frequent lack of familiarity with the notion of completing a questionnaire. One is therefore left with no other choice than to undertake relatively expensive, time-consuming personal interviews. Luckily, people in developing countries tend to be far more tolerant of lengthy intrusions by fieldworkers than is the case in the developed world. Inkeles (1973) had administered a questionnaire on the causes and consequences of individual change in developing countries to 6 000 respondents in Argentina, Chile, India, Israel, Nigeria and East Pakistan and recorded that, in some instances, the interview took four hours to complete! The authors have found that transport survey interviews with less-literate people can easily take two hours to complete.

1.11 There is usually a need to use “gatekeepers”

In order to respect local cultural norms, selected respondents may need to be informed of the purpose and sponsorship of the study, and the reason for their particular selection for interview, by community leaders rather than by fieldworkers. These “gatekeepers” are usually headmen or chiefs who have at any rate to be approached for their approval of the survey and the collaboration of the selected respondents. “Gatekeepers” need to have the sample selection process and the rationale behind it explained to them, in order to avoid their biasing the sample by suggesting that only certain people should be interviewed.

Hershfield et al (1993) added that, apart from the leaders being approached in the “correct” order, the interviewers need to establish their identity and credentials with these “gatekeepers” and explain why their village was selected for study and how the study could be useful to them. Back and Stycos (1965) had noted the advantage that, after the relevant leaders had been contacted and had given their approval for the survey, there were usually comparatively low refusal rates in developing countries.
Mitchell (1973) had highlighted a negative aspect of the use of “gatekeepers” when he wrote that getting permission from the headman or chief can result in respondents feeling that he is sponsoring the study, which can in turn have the effect of their being unwilling to express minority or deviant views, in the belief that he will get to know about them afterwards.

1.12 Pilot studies are essential

Bulmer and Warwick (1993) pointed out that in order to establish whether the survey as a whole will be understood by respondents, and by the “gatekeepers” who in effect control access to respondents, it is preferable to begin with a pilot study before commencing the survey proper. The authors would agree with this, but recommend that it is, in their experience, essential to do so. Misunderstandings of the rationale behind the survey, its purpose, the questions asked and the response format are frequent and can be severe.

7. THE PROBLEM OF EQUIVALENCE IN QUESTIONNAIRE DESIGN

If one wishes to undertake a comparative analysis of survey data from different cultural and /or language groups, there are three principal problems which face the researcher, that of obtaining:

- Conceptual equivalence;
- Measurement equivalence; and
- Linguistic equivalence.

All three are especially problematic if one is comparing findings between developed and developing countries

1.13 Conceptual Equivalence

Warwick and Osherson (1973) had described three important aspects of conceptual equivalence:

1.13.1 Universality – Specificity

Are the terms used in the questionnaire generally applicable across the cultures under study, or do they differ from one culture to another? Tessler (1973) had observed that “attitude surveys in developing countries often have to be conducted amongst very heterogeneous samples of respondents in which attitudes towards a given issue may not be organised along the same conceptual dimension”. Gil and Omaboe (1993) noted, for example, that in Africa in general, the term “household” is hardly known. The concept of “family” is, however, deeply rooted.

1.13.2 Definitional Comparability

Can one define the concepts that are needed in the study in a manner that has equivalent meaning to the various cultural groups being studied? Here the concept that probably gives the most trouble is that of the “household”. The definition of “household” recommended by the United Nations has been modified for Africa to read “persons sleeping under the same roof and eating from the same pot”. Variations of this definition, such as to stipulate how many nights in a week (or month) the person sleeps in the dwelling, is commonly used in countries where migrant labour is a characteristic of the community.
1.13.3 Identification of Concepts
Is the concept reflected in the local language? Mitchell (1973) had observed that researchers’ concepts might simply not be found in the local culture. He cited as examples the concepts of time, the future, distance or height. Blacker and Brass (1993) noted that “so unfamiliar are most Gambians with the concept of “dates” that there is no word for “date” in the two principal local languages”.

In South Africa, the authors found that many commuters could not say how far they travelled (in kms or miles) but could say how long it had taken them. When it came to the value of time, however, Morello and van der Reis (1990) found that time is not generally valued in the rural parts of developing countries in the same way as it is in developed countries. To westerners, time is a commodity with a money value of its own. It can be spent, saved, wasted etc. In traditional African societies, people talk of “doing things at the appropriate time, the opportune moment”, and it is undignified to be hasty because there is plenty of time to achieve whatever you want to in life. Recently van Zyl, Lombard and Lamprecht (2001) reported that, among South African public transport users, the value of time was very low, between R5 and R10 per hour (approximately US$0.6 – 1.3). These commuters, unlike their counterparts in western countries, were not particularly time-sensitive, and indeed valued walking and waiting times the same as in-vehicle travel times.

The authors have noted in their surveys among commuters that the term “importance” does not occur in some of the local languages and is not a familiar word to many survey respondents. This has prevented a scale of levels of importance being used in local transport surveys with any success.

1.14 Measurement Equivalence
The four main aspects identified by Warwick and Osherson (1973) were:

1.14.1 Differential Researchability
This may occur because of differential salience or sensitivity of the topic under discussion, or different degrees of familiarity with the topic by various cultural groups. Cohen (1973) had remarked that the questions generally asked in western questionnaires often had little to do with the decisions and feelings with which the respondent in Africa is concerned in everyday life. When questions were salient and of interest to the respondents, one could obviously have greater confidence in the validity of the findings. Also working at the same time in Africa, Ijomah (1973) agreed that the variables being studied should be derived from the real world of the respondents, but that this was not always the case. Much more recently Flay, Bull and Tamahori (1993) found that among Polynesians concepts such as “organised”, “occasion”, “responsibility”, “opportunity for advancement”, “constant”, “increase”, “decrease” and “praise” had little relevance for some of their respondents.

Certain topics are more sensitive to members of some cultures than to others and, because of fear and suspicion of the survey’s purpose, respondents in various cultures may differ in their willingness to answer the relevant questions. Warwick and Osherson (1973) had cited topics such as politics and income. Hershfield et al (1993) suggested, as a partial solution to the problem of sensitivity, that if the topic was sensitive to respondents in developing countries, the interviewer should “give a vague and diffuse explanation that is satisfactory to respondents but does not tell them the exact purpose of the study”. The ethics of doing this could, however, be questioned.
Some cultural groups are far more accustomed to discussing certain topics than is the case in other cultures. Tessler (1973) had noted that surveys in developing countries often had to be conducted among very heterogeneous samples of respondents in which attitudes towards a certain topic might be relevant to some groups but seem foolish or even offensive to others.

Bulmer (1993) maintained that data reliability is often low in developing countries because questions are asked to which the respondents do not know the answer, are not familiar with the terminology, have no means of knowing the answer, or are not the questions to which they normally give consideration.

1.14.2 Comparability of Questionnaire Format

It has been found that some questions can be used in identical format across cultures, but others need to be adapted or rewritten to measure the relevant concept. Anderson (1973) had cited the problems associated with non-verbal as opposed to verbal questionnaire techniques. He had found that the complexity of non-verbal approaches (often described as ‘culture free’ or ‘culture fair’) made it difficult to find an equivalent which was appropriate and of similar meaning for another society. He concluded that “the use of non-verbal measures changes the nature of the translation problem but does not avoid it”.

Familiarity with, and the ability to understand, the techniques employed in survey questionnaires varies greatly across cultures. In Nigeria, Back and Stycos (1965) had reported that “respondents could not easily ‘see’ their village on a ten-step rating scale drawn on paper for comparing village standings in the past, present and future. When an on-paper abstraction was fashioned into a small hand-made bamboo ladder, response levels increased”. Flay, Bull and Tamahori (1993) concluded from their study among Polynesians that “every point on a scale should be verbally labelled, so that its meaning is clearly distinguishable from all other points on the scale.” However Tessler (1973) had reported that respondents in Tunisia sometimes became “bewildered by sophisticated items which distinguish, for example, between strong agreement and very strong agreement”. He recommended using simple questions calling for a dichotomous response, such as ‘agree-disagree”, in such circumstances. He also noted the advisability of pilot testing several items to measure each concept, in order to see which items differentiated among the respondents in a valid and consistent manner.

Van der Reis (1984) had found that many black South Africans were not familiar with the concept of a rating scale, whether pictorial, numerical or semantic differential. Verbal rating scales provided the most valid and reliable responses. They were said by respondents to represent the “normal” way of expressing their feelings. In addition it was found that, in the case of less-literate respondents, valid measures could not be obtained from scales with more than three categories. This was partly because of the lack of available verbal equivalents in the vernaculars. “Extremely” and “very” were said, for instance, to be interchangeable in the vernacular. “Very” and “fairly” were also often confusing. In fact it was said that “You cannot distinguish this in writing; it is a matter of intonation and emphasis in African languages”, another very important observation for survey research in Africa.

Bulmer and Warwick (1993) compared the use of closed versus open-ended questions in developing countries and found that closed questions presented a problem for many respondents because they were not used to condensing their thoughts into pre-formed categories. Open-ended questions, on
the other hand, could also be problematic unless the interviewers were skilled and well trained. Alers (1993) reported that among Indians in highland Peru, open-ended questions were more reliable than closed questions because they permitted respondents to answer in their own words, in familiar terms and in categories of their own conception, i.e. ones that were ‘tuned in’ to their cognitive frame of reference. This, they noted, was especially important in developing countries. Earlier, Schuman (1973) had stressed the value of using follow-up probes after closed questions in order to ascertain the respondents’ understanding of the questions.

Another important issue in cross-cultural surveys is whether hypothetical questions can be used successfully in developing countries. Much appears to depend on the complexity of the questions and whether they are within or outside the normal experience of the respondents. Bulmer and Warwick (1993), for instance, stated that “hypothetical questions asked of respondents who are unaccustomed to think in conditional terms have a notoriously high unreliability”. They found in Peru that some rural respondents were embarrassed or confused by hypothetical questions but gave an answer anyway. It was likewise noticed that respondents had difficulties if the questions posed perceived unreal alternatives, such as asking them what they would do if they suddenly had much more money to spend.

In South Africa, van Zyl, Lombard and Lamprecht (2001) have found in their Stated Preference surveys that there was often a reluctance to choose to switch to a different mode from the one currently used, under almost any circumstances. They advocated the need for large ranges in the attribute levels presented, to overcome this problem. They also reported a tendency for respondents to ignore all the attributes presented to them except the few very dominant ones, and indeed found that respondents experienced a general difficulty in considering a large number of attributes and choices. In the light of this finding, they recommended limiting the number of attributes to four and the number of choices per respondent to nine, at least for the less-literate sections of developing countries.

1.14.3 Comparability of context

The comparability of the situations in which the data are collected can also be an important issue. Warwick and Osherson (1973) had particularly stressed the influence of the place in which the interview is conducted, the time of the interview and the presence of third parties during the interview. The first two related to consideration of convenience for respondents and making them feel at ease in the interview setting. A more crucial issue in developing countries is the presence of a third party in the interview situation. Warwick and Osherson had noted that the main problem with this was that higher status individuals often interjected to answer the questions on behalf of the respondent, believing that they were better able to provide an answer than was the respondent. Bulmer (1993) maintained that, in the presence of other persons in the interview, respondents were in any case likely to distort their answers to conform to the prevailing norms and values of their society.

Back and Stycos (1965) had reported much earlier that “personal privacy is neither common nor highly valued in the rural areas of most developing nations. The people live, work and play together for most of their lives and there is an apparent lack of private, individual opinions. Opinions are expressed by families and tribes, and family members, local officials or a leader may insist on being present during the interview and influencing the responses”. Mitchell (1973) had noted that this
was a particular problem if women or children in rural areas were being interviewed for their attitudes and opinions.

Various practical methods of getting around this problem have been developed in the field, notably:

- Making an appointment with the respondent in advance and explaining the need for privacy, which was said to work very well in Africa;
- Interviewing in pairs, with one interviewer doing a “dummy” interview with the third party, while the other interviewer questioned the respondent actually selected;
- Assembling the villagers in a public place and giving them a “dummy” interview in order to appease the leaders, who may feel personally slighted by not having been selected for interview. In the mean time another interviewer took the selected respondents aside for a private interview;
- Changing the location of the interview, for instance to the workplace, away from family influences;
- Asking the respondents to cast a secret ballot, rather than having them give an oral answer; and
- Using many interviewers, so that the fieldwork can be completed quickly before there is time for serious contamination by third parties.

Interviewers can, however, sometimes gain an advantage by using the bystander to improve the quality of factual data pertaining to the respondents, such as their ages, incomes and levels of education.

1.14.4 Comparability of response

A major problem in developing societies is the “courtesy issue” affecting responses. Blacker and Brass (1993) noted that “where high social value is placed on courtesy, respondents avoid open disagreement and keep the atmosphere pleasant”. They recorded an instance in India where respondents expressed the hope that “no-one will ever go back from this village saying we are not hospitable”! Tessler (1973) had earlier reported that there could be serious data distortion in developing countries due to the desire to be “witty and pleasant, to be consistent, to show intelligence and foresight, or to save face”.

Jones (1993) found that the courtesy bias in Asia implied that:

- No-one may disagree openly with a person of higher status;
- The atmosphere between people must be kept pleasant and agreeable, free from anger or contradiction; and
- Nothing should be said which could hurt or affront another, or which they would not like to hear. Things said should please and compliment.

Jones noted, however, that researchers might be able to benefit from the positive side of courtesy, because interviewers would usually be readily invited inside the home (no doors shut in their face!), and also because, in Asia at least, it was not considered discourteous to ask people about their incomes, or what they had paid for specific goods.

Various ways of overcoming this bias have been suggested by these authors, the principal ones being:

- Limit questions to those for which there is no obviously pleasing answer;
- Avoid dichotomous response alternatives such as “agree-disagree”;
• Deliberately load questions to take the onus off the respondent by saying, for instance, “Many people feel this way … and many others feel that way … Which do you lean towards? ”;
• Use pictures and projective techniques so that the respondents can say what the person depicted is doing without having to criticise the act, or relate it personally to themselves; and
• Train interviewers to establish their integrity, and to commend apparently “impolite” responses where appropriate.

1.15 Linguistic Equivalence

Iyengar (1993) defined linguistic equivalence as “validity within that language” i.e. that responses to questions measure what they are intended to measure in that language. Where cultural influences are marked, especially in developing countries, it is possible that very non-literal translations may be needed to achieve validity. Van de Vijver and Leung (1997) maintained that “local idiom, which is often used in instruments that were originally intended for monolingual usage only, has a combination of conciseness and clarity that is often difficult to transfer to other languages. Cohen (1973) had noted earlier that to generate valid and reliable data in Africa, the most obvious problems centred around linguistic equivalence and the construction of questions. In South Africa this is a very real problem as there are eleven official languages, apart from several other minority ones.

Warwick and Osherson (1973) had cited six main aspects to which attention needed to be paid when translating a questionnaire from one language to another:

1.15.1 Lexical meaning

Is the available vocabulary appropriate and are there untranslatable terms? The problem with translating concept “importance” in some South African vernaculars has already been noted. In a study of transport terminology, the authors found that it was often difficult to find terms with precisely the same meaning in local languages. For example, the term “frequency” was most often described by English-speakers as “at regular intervals”, while its Afrikaans translation tended to be interpreted as “on time” and its Xhosa translation as “many vehicles”. The term “convenient” was most frequently interpreted as “close to home” by English-speakers, while in translation it implied “close to work” to Xhosas and “uncrowded” to Afrikaans-speakers.

1.15.2 Grammatical meaning

Does the language require, for instance, commitment to gender?

1.15.3 Context

How should the questions be ordered, how many alternative answers provided, how many of these should be positive or negative etc.?

1.15.4 Response styles

Should dichotomous response formats be used, or will this lead to yea-saying in the culture under study? In South Africa one certainly tries to avoid dichotomous response formats precisely because of the yea-saying tendency.
1.15.5 Salience
Are the translated items salient to the culture and are they as far as possible culture-free or culture-fair?

1.15.6 Equivalence of scale points
Are there exact linguistic equivalents of, for example, “fairly”, “quite”, “many”, “often”, etc? The authors’ experience revealed that many local vernaculars did not have terms for the seven-point scales popular in western countries, and very often not even for five-point scales. It was also observed that the length of scale which was usable depended on the subject under discussion, as respondents were used to making finer discriminations when discussing some topics than others.

Solutions to the problem of linguistic equivalence included:
- Becoming familiar with the relevant culture, in order to be able to construct meaningful and translatable terms;
- Using concepts close to everyday life, which translate into familiar language;
- Ensuring that the concepts used are equivalent rather than the words;
- Using back-translation to check the translated questions; and
- Undertaking extensive pilot testing, especially of a qualitative nature, to check on the interpretation of the question by the respondents in each language group.

Van de Vijver and Leung (1997) developed two other methods (apart from back-translation) for obtaining linguistically equivalent questions:
- Cultural decentering of the questionnaire, which they described as “the removal of words and concepts in a source language that are difficult to translate or are specific to a culture”. A multi-cultural and multi-lingual team of experts then changed the wording in the source language into familiar concepts and terms in order to enhance their translatability; and
- The committee approach, in which bilinguals in complementary areas of expertise translated or adapted the questionnaire. Properly functioning, this approach should provide rigorous testing of the accuracy of translation. Its disadvantage is, however, the lack of an independent evaluation of the committee’s translation.

Anderson (1973) had recommended the back-translation of multiple alternative versions of the questionnaire. In his cross-cultural studies, he had bilingual respondents answer two language versions of the questionnaire, while iterative changes in the translated versions were made until identical responses were obtained. He did question, however, whether bilinguals “think similarly” in both languages.

Flay et al (1993) cautioned that, in their experience, “a failure to back-translate exactly does not necessarily mean that the translation was in error, as the connotation of words may be different in other languages. For example, the word ‘indifferent’ retranslates from Cook Island Maori as ‘couldn’t care less’, but in Maori it lacks the negative connotations of the English form and so seems to be a correct translation”.

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Iyengar (1993) tested English and Telegu questionnaires in India, using two types of reliability tests:

- A test of internal consistency, in which he tested whether similar response patterns were elicited by sets of questions purporting to measure the same concept in each language i.e. whether questions were answered consistently in the two languages; and
- A test for reliability across languages, in which bilingual respondents were given the same questionnaire twice, after the elapse of 8-9 weeks, to see if there was test-retest stability.

He noted that there was a higher degree of consistency in the structure of responses when the questions were factual rather than attitudinal. The more abstract the concept, the greater the impact of language on response stability.

8. INTERVIEWER BIAS

Apart from the normal survey requirements in the selection and training of interviewers, two particular aspects are relevant to multi-cultural, multi-language surveys in developing countries. These are:

- The interviewer approach to the respondent; and
- The relative status of the interviewer and respondent.

1.16 Interviewer approach

Rudolph and Rudolph (1958) had commented, from their experiences in India, that non-sampling error is likely to be greater than sampling error in developing countries and that the qualities and characteristics of the interviewers are consequently very important. Obviously the interviewers must be able to speak the language of the respondents and preferably be part of the same cultural group. Wuelker (1993) reported that “any attempt at sending out non-Asians to interview Asians would be a fiasco. Asians are far too polite to tell a foreigner anything he might not like to hear and a European will always receive rose-tinted answers to his queries for fear of offending him”. Other important interviewer considerations include:

1.16.1 Perception of the role of the interviewer

Back and Stycos (1965) had noted that the role of the interviewer was often misunderstood in developing countries. Rumours tended to spread that the interviewers were census agents, tax collectors, travelling salesmen or government agents. Mitchell (1973) had observed the same concern. It is clearly necessary to establish the nature of any rumours, if any, before fieldwork commences, and to correct this misperception in advance of the survey; or alternatively to move quickly to complete the survey before such rumours spread too far.

1.16.2 Observing local customs

Contrary to the case in developed countries, interviewers in developing societies often cannot start the interview process until they have observed certain local hospitality customs. Back and Stycos (1965) had mentioned the west African practice of pouring libations to one’s ancestors and breaking and eating the kola nut. At the end of the interview, a visit of respect to the family elder might be
expected. All this meant that time had to be expended on these niceties and fewer interviews were accomplished during a normal day’s fieldwork.

1.16.3 Overcoming Suspicions and Fears

Interviewers need to explain to respondents the purpose of the study, the possible benefits for the community (without raising expectations unduly), the reason why the respondent was selected for interview and that approval has been obtained from the chief. Interviewers should be sympathetic to the respondents’ expressions of anger or fear. Hershfield et al (1993) reported that in developing countries respondents often fear that they have done something wrong to have attracted an interview.

Tessler (1973) had suggested that interviewers should put respondents at ease by assuring them that there were no right and wrong answers, that they need not answer questions which they found offensive, and by encouraging them to ask questions about the survey at the commencement of the interview.

Gil and Omaboe (1993) pointed out that, on the basis of their experience in Ghana, the best interviewers in developing countries tended to be teachers, social welfare workers and community development officers, because “they cover the country, know how to deal with the local population and are normally relied upon and respected by the local population, especially rural ones”.

1.17 Relative status of interviewer and respondent

Western survey research is based on the premise that everyone’s opinion is of equal value. Rudolph and Rudolph (1958) had reported, however, that in developing countries (in their case India) lower status respondents often regarded themselves as unworthy to be interviewed. Higher status people considered themselves much better sources of information. In addition, lower status people tended to live in fear of the local elite. Warwick (1993) also commented that a lack of status congruency between interviewer and respondent was particularly common in developing countries and often resulted in biased responses. Different gender, age, educational level, income, occupation and religious beliefs can all contribute towards a lack of status congruency in these societies.

Rudolph and Rudolph noted further that refusals and resistance to being interviewed was most frequently encountered in India among women, the poorly educated and the lower class, who cannot believe that their opinions are of any value. Respondents would say “Why ask me, I am only an ignorant woman? Ask my husband” or “Why ask me, I’m only a poor farmer”. In the Muslim areas, it was not always culturally acceptable that women even undertake interviewing and certainly not of men. Rudolph and Rudolph also reported that in societies where social status was linked to age, younger interviewers had difficulty questioning their elders.

Wuelker (1993) recorded that in Asia, where age is greatly respected, it would be incorrect to send a young man to interview an older one, even if the younger man were better educated, unless he held some official position which entitled him to do so. Thus, in some Asian societies age is a more important determinant of status than educational level.

In Africa, Mitchell (1973) had earlier found in similar vein that, among his Nigerian respondents “the lower the status of the respondent relative to that of the interviewer on the variables of sex, education and age, the greater the level of unco-operation”. However, if there was a good match
between respondent and interviewer, if the study’s purpose was properly explained, and if the household head’s permission to interview family members had been obtained, refusal rates were generally very low. In fact refusals only accounted for three out of 680 people approached in Mitchell’s survey.

9. **THE USE OF MULTIPLE DATA SOURCES TO OVERCOME DATA UNRELIABILITY IN DEVELOPING COUNTRIES**

Many of the earlier researchers in developing countries had found that, in order to attain professional quality standards in survey research, it was preferable to use multiple rather than single methods of data collection. Warwick (1993), for instance, maintained that “the case for multiple data sources is especially strong in the developing countries for the simple reason that the data collected by any one method are often subject to substantial error”. The data collection methods usually used by social researchers are mainly the anthropological approach, participant observation and questionnaire surveys.

1.18 **The particular advantages of multiple methods**

The advantages of multiple data sources are primarily two-fold:

- To increase confidence in the accuracy of the findings, through convergence of the responses obtained from the different methods; and
- To enhance understanding of the social processes underlying the survey findings through, for instance, following-up the survey with an in-depth qualitative study, the sample of respondents for which should be based on their responses to the aspects of the survey in need of further elucidation.

1.19 **The main obstacles to the integration of multiple methods**

The limitations of the use of multiple data sources in developing countries are usually:

- The increased costs of the study, because of the extra time and specialist resources needed. Warwick (1993) mentioned the frequent problem of persuading sponsors of research of the value of such an approach. Sponsors usually asked why the same task could not be accomplished with more rapid and preferably only quantitative methods; and
- The lack of appreciation of the complementarity of qualitative and quantitative approaches. Researchers tended to be trained primarily in one approach and to decry, to a greater or lesser degree, other methods, instead of realising their complementarity. Warwick, and White and Alberti (1993), bemoaned this lack of interdisciplinary collaboration in the design of surveys in developing countries.

In their study of social change in rural Peru, White and Alberti combined survey and anthropological methods and found that the anthropological data confirmed the survey data in all important respects. In addition, the anthropological approach revealed valuable insights into the differences between cultural groups in their perceptions and beliefs. In Africa, Ijomah (1973) had much earlier advocated the use of multiple methods. All these researchers generally agreed that each method might have a different meaning for different cultures. If the results of the different approaches converged, however, it would be highly unlikely that the same bias could account for the findings from the various methods employed.
Much more recently, Van de Vijver and Leung (1997) came to a similar conclusion when they recommended triangulation to enhance the validity of cross-cultural data, using a variety of measures to capture the same construct, and subsequently examining the convergence of the results. In a current study of the use of Stated Preference methods to determine the predominant factors in mode choice decision-making among semi-literate commuters in South Africa (Del Mistro, 2001, unpublished), anthropological methods have been combined with quantitative surveys in an approach which aims to test the validity of the multi-method approach for this topic and target group.

10. IN CONCLUSION

The authors contend that, if valid and reliable data are to be elicited from surveys among multi-cultural and multi-lingual respondents in developing countries, careful pre-planning is essential in order to maintain professional and ethical research standards. Attention needs to be devoted to gaining an understanding of the cultures and languages involved, and their norms, values and limitations. Undue political influence in the survey design should be avoided. Innovative sample frames must be developed, with the assistance of on-the-spot inspection and the use of “gatekeepers” where relevant, so that the samples surveyed are truly representative of the population being studied. Communities should be informed in advance of the value and tradition of survey research, and of the importance (and confidentiality, if required) of their opinions.

Particular attention should be focussed on testing alternative questionnaire formats for equivalence and comprehension in extensive pilot studies. Interviewers should be selected for their status congruency and empathy with the group being interviewed. They should be trained to observe local customs, to explain their role and purpose to respondents in a manner which will overcome any fear or suspicion, and to pursue all the recognised ways of obtaining valid responses from diverse cultural groups.

Finally, researchers undertaking surveys among multi-cultural and multi-lingual respondent samples in developing countries need to appreciate the complementarity of quantitative and qualitative approaches, and to make use of multiple data sources wherever possible, in order to increase confidence in the validity of their survey findings.

11. REFERENCES


