An investigation into some of the factors having a bearing on interviewer bias in the Western Australian market research industry

Daniel N. Edwards

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AN INVESTIGATION INTO SOME OF THE FACTORS HAVING A BEARING ON INTERVIEWER BIAS IN THE WESTERN AUSTRALIAN MARKET RESEARCH INDUSTRY

by

Daniel N. Edwards

A Thesis Submitted in Partial Fulfilment of the Requirements for the Award of

Bachelor of Business (Honours)

at the Faculty of Business, Edith Cowan University

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ABSTRACT

The market research industry, like most industries operating in a highly competitive environment, is faced with a myriad of challenges. One of the foremost challenges is to deliver sound recommendations to clientele based on quality data on the market. One factor having a bearing on data quality is the problem of interviewer bias; interviewers introducing their own source of error into the survey.

This dissertation uses a mass-administered, self-report technique in a study of the interviewing staff of four Western Australian market research firms in an attempt to investigate the factors that constitute interviewer bias.

The three broad areas of concern are the actual biases committed, the job-related factors that may contribute to this behaviour, and the personal characteristics of the interviewer that are also associated with such behaviour. As such, these three areas are correlated with each other to determine their interrelationships. The overriding premise is that job dissatisfaction leads to a decline in job performance, which is moderated by individual characteristics.
It was found that nondirective probing, a biasing behaviour, does occur and is associated with dissatisfaction with training and job status, and the age of the interviewer. Inaccuracy in recording responses is a further biasing behaviour, and is associated with a reported deficiency in the amount of training given to interviewers. Finally, relating to respondents in an unprofessional manner is associated with unsatisfactory supervision, unreasonable survey length, and a disproportionate amount of weekend work.
DECLARATION

I certify that this thesis does not incorporate, without acknowledgement, any material previously submitted for a degree or diploma in any institution of higher education and that, to the best of my knowledge and belief, it does not contain any material previously published or written by another person except where due reference is made in the text.

Signature

Date 23/11/93
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1.0 INTRODUCTION

1.1 An Overview of Market Research

Throughout the modern marketing era of the post-war years formal market research, particularly primary research, has emerged as a critical information source in marketing decision making. As Pride and Ferrell (1989) say, "...the failure of companies, and even entire industries, has been attributed to a lack of marketing research...research findings are essential in planning and developing marketing strategies" (pp. 176-177).

Reasons for this include an intensification of competition, an increase in consumer awareness and complex information needs, and an increasing number of products being marketed by individual organisations. Market knowledge has increased in importance as other sources of competitive advantage have diminished. Again, Pride and Ferrell (1989) maintain that "with the intense competition in today's marketplace, it is not wise to develop a product and look for a market where it can be profitably sold" (p. 176).
1.2 Evidence of Growth

The increased interest in research lies not only with the marketer. Since the early 1980s, courts and administrative agencies in the U.S. have increasingly accepted opinion polls into evidence (Morgan, 1990).

Increasing use of survey methods is also evident in government sectors at the federal, state and local levels (Beed & Stimson, 1985).

1.3 General Problems

Despite its increasing popularity, the market research industry is not without its problems.

Senior marketing executives have cited industry-wide problems as lengthy and boring questionnaires, inaccurate sampling techniques, poor interviewing techniques and the danger of government intervention and control of surveys (Gallup, 1988).

Questionnaire problems give rise to differing perspectives. There is the view that questionnaires are too restrictive; they should be so open-ended so as to allow the respondent to set the parameters of the research (Schlossberg, 1991). Conversely, Sanchez (1992) extols the virtues of questionnaire format,
graphic layout, and question routing instructions in enhancing survey data quality.

Inaccurate sampling techniques implies a greater degree of sampling error - the error introduced when the sample is unrepresentative of the population. Others are concerned with reducing nonsampling error - non-representativeness through refusals and nonresponse (Hornik & Ellis, 1988; Schneider & Rogers, 1990). However, Cagley, Schneider and Johnson (1988) maintain that minimising refusals introduces uninformed responses, which detracts from data quality.

Each of these studies focus on the interviewer as a possible source of problems in research. One further study (Havice & Banks, 1991) compares the performance of the human interviewer and an automated computer technique. The major finding was that people were willing to be more honest with the automated inquirer. Havice and Banks concluded that perhaps some respondents are not comfortable with or do not completely trust the human interviewer.

Therefore, while there may be some disagreement over specific issues, the common thread running through the above studies is the acknowledged importance of the interviewer's role.
1.4 Significance of the Interviewer

The importance of quality interviewing is clearly evident. For instance, U.S. banker Merrill Lynch identify the most important qualities in research firms as highly skilled interviewers and strict monitoring procedures (Grudzina, 1992).

The problem of interviewer bias has prompted the Market Research Society of Australia to take action in the form of Interviewer Quality Control Australia (IQCA); an auditing and accreditation of market research firms employing interviewers on a regular basis (MRSA, 1993).

IQCA requires MRSA member firms to (among other things):

(i) Train and retrain interviewers on all methods of data collection;

(ii) Validate surveys in accordance with MRSA guidelines (validation involves contacting a portion of respondents to check that data is true and accurate); and

(iii) Observe interviewers on at least their first interviewing assignment (M. Morgan-Potter, personal communication, April 16, 1993).
1.5 Interviewer Bias

During the data collection process interviewers introduce their own bias, or error, into surveys (Fowler & Mangione, 1990). Bias, in any form, undermines the quality of the research data. As a result, the client's decision making may not be as sound as it could be.

The broad area of concern in this thesis is to examine what factors constitute interviewer bias.

1.6 Significance of the Study

This study intends to examine the problem of interviewer bias by asking interviewers themselves what they do and, basically, why they do it.

A search of the literature has, so far, failed to find any serious treatment of this important topic in Western Australia. Moreover, Bush, Bush, and Chen (1991) argue that there is little, if any, literature that investigates ways of improving intercept interview quality and efficiency. In view of this, this study attempts to make a contribution to the market research literature.
1.7 Research Questions

1.7.1 Major Research Question

The major research question deduced from the preceding discussion is:

"What are the types and sources of interviewer bias in the Western Australian market research industry?"

1.7.2 Subsidiary Questions

The research question can be broken into the following subsidiary questions which will guide the literature review and methodology:

(i) What do interviewers cite as potential causes of biased behaviour?

(ii) What types of bias-introducing behaviour exist among interviewers?; and

(iii) What type of interviewer primarily does this?
2.0 LITERATURE REVIEW

2.1 General Pitfalls in Market Research

Factors reducing data quality inherently weaken the outcomes of market research. Some are the fault of the researcher, for instance questionnaire design (Gallup, 1988). Other factors are subject to less of the researcher's control (Pol, 1992; Beed & Stimson, 1985).

Pol (1992) examined the effect of external interferences and time constraints on data quality. There is also the phenomenon of response bias, introduced when respondents do not convey their true opinions or characteristics (Beed & Stimson, 1985). The commonality here is that interviewers can play a major part in resolving the above situations. For example, it is up to the interviewer to solicit honest answers from the respondent and to conduct the interview in an appropriate setting (in mall intercept surveys, at least).

However, instead of reducing other sources of error, there is often the danger of interviewers introducing their own source of error - bias. It has been shown that interviewers are responsible for, on average, 7% of total response variance. On sensitive topics such
as the reporting of gambling behaviour, this figure is as high as 14% (Sudman, Bradburn, Blair & Stocking, 1977).

2.2 Preliminary Literature on Interviewer Bias

Interviewer bias distorts the quality of research data to some extent. But the literature found to date is largely concerned only with that bias which reflects inconsistency between interviewers. "Researchers generally ignore biases that are constant over the entire staff of interviewers" (Hyman, Cobb, Feldman, Hart & Stember, 1954, p. 230). Hyman et al. provide two explanations: research is devoted to functional relationships rather than precise data description, and biases ingrained in all interviewers are not subject to remedy.

A number of studies in market research promise the elimination - or minimisation - of interviewer bias as an outcome of their recommendations. Robbbaro (1988) praises self-administered interviewing for its elimination of interviewer misinterpretation and other biases. Similarly, Brown (1987) believes that drop and collect surveys have been neglected of late despite their major advantage - the avoidance of interviewer bias.
2.3 Specific Studies – Biasing Behaviour

Marsh and Scarbrough (1990) maintain that interviewers are a major source of sample bias in quota situations. In a quota situation an interviewer must gain a certain number of interviews with respondents of certain characteristics. Among the particular biases that Marsh and Scarbrough cite are those toward the accessible and (describing them as) low-status individuals. Accessible people include those who spend a greater than average amount of time at home and/or public places, and Marsh and Scarbrough maintain that low-status individuals are more compliant in a face-to-face survey situation.

Brenner (1985) experimented on a group of interviewers and found that recurring problems were inadequate administration, nondirective probing, and irrelevant conversation (p. 34).

Fowler and Mangione (1990) expand on the notion of "inadequate administration"; they cite the specific behaviours introducing bias as:

(i) Not reading questions as worded;
(ii) Not probing directively;
(iii) Relating to respondents "unprofessionally";
(iv) Recording answers inaccurately (p. 14).
More detailed in the study of bias is Gorden (1987), who identifies bias-inducing behaviour as irregular voice tone, gestures, facial expression as well as not reading questions as worded (p. 94).

Groves, Biemer, Lyberg, Massey, Nicholls and Waksberg (1988) go a further in examining the benefits of good verbal delivery:

It seems likely that the speech characteristics of low refusal rate interviewers in introductions — speed, loudness, standard accent, falling tones — contribute to listener perceptions of them as competent and confident. (p. 267)

According to Harristhal (1990), part of good verbal delivery on the part of the interviewer is maintaining control of the interview. To this end, says Harristhal, interviewers should avoid the use of padding language and smoothly go on to the next question.
2.4 Specific Studies - Interviewer Characteristics

Of interest is the potential causes of interviewer bias - internal and external. Internal factors will be dealt with first. These include demographics (gender, race, experience, education and age).

Bean and Medewitz (1988) found that respondents were more likely to respond to female rather than male interviewers in a mail survey.

A significant race-of-interviewer effect was found in a pre-election poll by Finkel, Guterbock and Borg (1991). Their central finding was that:

...white people were 8-11 percentage points more likely to voice support for the black candidate to black rather than to white interviewers, and to voice support for the white candidate to white interviewers than to black.

A possibly more subtle interviewer characteristic in terms of bias is interviewer experience. Contrary to what one might expect, Presser and Zhao (1992) via an experimental methodology found no significant relationship between interviewer experience and
accuracy in asking questions or altering of question wording. However, Presser and Zhao concede that sometimes these two acts of bias may not have been committed through carelessness, but a genuine attempt by the interviewer to improve the questionnaire. That is, an experienced interviewer may change the questionnaire administration out of care, while a less experienced interviewer may change the questionnaire administration out of carelessness.

Hyman et al. (1954) point out that a source of response bias is the respondent’s perception of the interviewer’s demographic profile (p. 203). This point is explained by Churchill (1988), who cites education of the interviewer as a relevant factor in his model of bias in an interview (p. 497). Some respondents may give answers that they see as consistent with the interviewer’s mindset, or educational status.

On the influence of age, Hanson and Marks (1958) maintain that the apparent relationship between age and interviewing performance is really a function of differences between interviewer age groups with respect to other characteristics. It is plausible that the effect of the characteristics of gender, race, experience, and education are inherent in the pseudo relationship between age and interviewing performance that Hyman et al. (1954) assert.
2.5 Specific Studies – Job-Related Characteristics

External factors include payment, supervision, survey design, training, and other job-related characteristics such as status.

Meier (1991) holds that payment is one of the main influences on performance. Similarly, Kreitzman (1990) believes that the very existence of survey interviewing is under threat if there is not improvement in pay, benefits, employment status, interviewer support and survey design.

Sudman et al. (1977) elaborate on the point of survey design. They hold that interviewer expectations affect data quality. Their findings suggest that interviewers who expect a study to be difficult should not be hired for that study. A component of difficulty was identified as survey length. The effect on data quality, however, was described as minimal. This somewhat opposes the stance of Meier (1991), who maintains that survey length is an important factor affecting interviewer attitudes.

Inadequate training cannot be compensated for by intensive supervision, though quality of supervision is a critical determinant of interviewing and data quality (Fowler & Mangione, 1990, p. 118).
Fowler and Mangione (1990) propose an optimum level of interviewer training as between 2 and 5 days. Too much training was seen to be counterproductive (p. 118). Billiet and Loosveldt (1988), however, found only a moderate relationship between training and response quality. They saw a greater relationship between response quality and question structure.

There are indications that when interviewers have certain preferences toward the work the quality of data collection is affected. For instance, Swires-Hennessy and Drake (1992) found a clear interviewer preference for Monday–Thursday calling, and for working between 1.00pm and 5.00pm. The author suspects that when these preferences are denied, job satisfaction is reduced.

Thus, there appears to be a need for research linking the types with potential sources of interviewer bias in market research, especially in Western Australia.
3.0 THEORETICAL FRAMEWORK

The proposed model of this study contains three interrelated sectors:

```
+INTERVIEWER +________+JOB-RELATED +
+CHARACTERISTICS+ I +CHARACTERISTICS+
+++++++ I ++++++++ I
I   I   I   I
I   I   I   V
I   I   I   I
I   ++++++++   I
I-----+BIASING + <-----I
+BEHAVIOUR+
+++++++   
```

This is based on the premise that an insufficient degree of job satisfaction can cause employees to reduce the level of task performance; in this case, dissatisfaction with certain aspects of the market research industry - moderated by personal characteristics - can lead to interviewer bias. This proposition has been ratified by a brief examination of the classical management literature, which is outlined below.

Herzberg (1987) is described by Schermerhorn (1989, p. 231) as claiming that factors that lead to extreme dissatisfaction as company policy and administration, supervision, relationship with supervisor, work conditions, salary, relationship with peers and
subordinates, status and security. All of these factors are of relevance to this study of interviewer bias.

Schermerhorn goes on to discuss the ensuing relationship between performance and satisfaction; in particular the opposing arguments that satisfaction causes performance, performance causes satisfaction, and rewards cause both performance and satisfaction (pp. 232-233).

The position taken in this thesis is that satisfaction causes performance. To put it in the terms of this study, satisfaction with aspects of the role of market research interviewer is associated with a subsidence of interviewer bias. Similarly, dissatisfaction with the job is associated with an increase in interviewer bias. Admittedly though, "job satisfaction alone is not a good predictor of individual work performance" (Iaffaldano and Muchinsky, 1985, cited in Schermerhorn, 1989, p. 232). The other major determinant of job satisfaction cited is rewards.

The author maintains that the consideration of individual characteristics can aid in the prediction of - or rather, association with - individual work performance.
4.0 METHODOLOGY

4.1 Design

A correlational study of an exploratory nature was undertaken in addressing the research question. It is intended to identify potential causes of interviewer bias by examining relationships between behaviour, and interviewer and job characteristics.

4.2 Sample

The study used a sample of 320 market research interviewers (aged over 18) drawn from four Perth market research firms:

1. Donovan Research;
2. The REARK Group;
3. The Marketing Centre; and

Anecdotal evidence would suggest that collectively these four firms capture the vast majority of research contracts in Western Australia. These companies also employ the vast majority of Perth interviewers, which is further testament to their validity as a sampling frame.
4.3 Materials

Materials required include one 5 page questionnaire per subject and one (preferably lockable) deposit box per market research firm.

4.3.1 Questionnaire

The questionnaire (see Appendix - Questionnaire) addresses the three subsidiary research questions in the form of sections A, B, and C. Shown below are the subsidiary research questions and the items on the questionnaire that they correspond to:

<table>
<thead>
<tr>
<th>Subsidiary Question</th>
<th>Corresponding Survey Qns</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Causes</td>
<td>Q's 1,2,3,4,5,6,7,15B</td>
</tr>
<tr>
<td>2. Behaviour</td>
<td>Q's 8,9,10,11</td>
</tr>
<tr>
<td>3. Type of Interviewer</td>
<td>Q's 12,13,14,15A,16</td>
</tr>
</tbody>
</table>

The cover letter was signed by the study's supervisor, Marc G. Saupin, instead of the author so as to engender some degree of academic respect (and urgency) among the subjects, in a bid to boost the response rate.

Section A of the questionnaire (Q's 1-7) and Q15B address the potential causes of interviewer bias which were raised in the literature review. This section was
placed first because the questions regarding actual biases committed were thought to be too sensitive to be placed at the beginning. Q15B follows a filtering instruction after Q15A; it is a question of relevance only to those interviewers experienced in door-to-door interviewing.

Each of these questions employ a seven point semantic-differential scale. Gay and Diehl (1992) state that a semantic-differential scales "usually have five to seven intervals" (p. 175).

Section B (Q's 8-11) addresses the issue of what biasing behaviour the subject has actually engaged in. The four behaviours addressed are those that best represent a common thread in the literature (see 2.3 Specific Studies - Biasing Behaviour). These items were embodied in the work of Fowler and Mangione (1990). Questions 8 - 11 were asked in the third person so as to reduce sensitivity on the part of the subject. However, the author believes that in this instance where one asks about specific behaviour, the only frame of reference for the vast majority of individual respondents is their own individual behaviour. The seven point scales in this section were developed after examination of an actual market research questionnaire that contained questions concerning frequency of a certain behaviour. Reference
to this document was not permitted for business security reasons.

Section C addresses the component of "interviewer characteristics". The relevant factors that were found in "2.4 Specific Studies - Interviewer Characteristics" were included in this section. The item concerning race of interviewer was omitted for obvious ethical reasons.

Question 12 (age) and question 14 (education) were also based on scales conventionally used in a certain Perth market research. Question 13 (experience) was constructed with the advice of one of the participating firms that the median tenure for a market research interviewer is approximately six months.

Question 17 is an additional open-ended question requested by the field management of one of the participating firms. It was requested so as to explore the reasons why many interviewers refuse to do door-to-door interviewing. The inclusion of "Telephone" and "Intercept" in this question was originally a disguise for the door-to-door item, but will be included in the results section. The results of Question 17 will not be linked to other items in the questionnaire, but will be briefly mentioned in this thesis.
4.3.2 Reliability and Validity

To evaluate the reliability of the instrument, consistency between Q6 (Weekend Work) and Q7 (Evening Work) was checked for. The correlation between the two items is 0.811, sufficiently high to indicate a degree of inter-item reliability in the instrument.

It would have been desirable to examine the test-retest reliability of the questionnaire; that reliability which is a function of varying administration times. The questionnaire in this case was administered over a three week period. The reliability of the questionnaire can be questioned, in that the effect of different administration times (of the year, week, day, etc.) on the results is unknown.

The face validity of the instrument is reinforced by the reliability of the questions, which are clear and unambiguous, and the precise response sets made available.

Content validity in this case is satisfactory in the Western Australian context. That is, all the factors relating to interviewer bias that could be deduced from sources available in Western Australia were considered. Factors not appropriate to the methodology
employed, however, were excluded from further consideration.

The construct validity of the instrument, however, is uncertain. The instrument attempts to measure the overall construct of interviewer bias with the use of a somewhat exploratory theoretical framework; not a model embedded in the classical market research literature.

4.4 Procedure

The questionnaires and boxes were delivered by the author to each firm's field management office. Field management then distributed a questionnaire to each interviewer as soon as possible. Each field manager systematically distributed one questionnaire to each interviewer the field manager came into contact with over the data collection period. The interviewers returned the completed questionnaires to the box at the office over a three week period. The author gathered the questionnaires at regular intervals.

4.5 Limitations

There was, to the author's knowledge, no complete framework available for a study of interviewer bias. As a result, a theoretical framework was developed
piecemeal. This may undermine the construct validity of the study.

As a considerable proportion of market research interviewers work only sporadically, a low sample or slightly nonrepresentative sample was always a possibility. The response rate was satisfactory, though could have been improved with a longer data collection period. The sample may have been overrepresented by full-time interviewers, which anecdotal evidence suggests are mainly middle aged females.

There were, perhaps as a result of the bias mentioned above, unsatisfactory category sizes in some variables such as Q12 (Age) and Q13 (Interviewing Experience) - as the results section will reveal.

With the sensitive questions of Section B, and possibly Section A, suspicion on the part of the respondent may have biased the results. A completely accurate picture of interviewer attitudes and behaviours may not have been gained. Further bias may have been created by asking Section B in the third person, although this was intended to offset the bias created by suspicion.
5.0 RESULTS

5.1 Pilot Study

After management approval of the questionnaire a copy was administered to five individual interviewers within one of the participating firms. They were asked to point out any confusing items in the questionnaire or any questions that they felt were too intrusive. No comment was made on either of these counts.

5.2 Response

The first development in the data collection process was the exclusion of one of the participating market research firms prior to the distribution of the questionnaires to the entire sample of interviewers. The contact person within that particular organisation ignored repeated requests for feedback and/or approval with regard to the draft questionnaire. Eventually, the author went ahead with the data collection within the other three firms (who approved of the questionnaire). When the fourth firm replied with requests for alteration to the questionnaire, it was too late and the author withdrew that firm from the study.
Consequently, the sample size was reduced by 110, to 210.

By the cut-off date for data collection 81 questionnaires had been returned, representing a response rate of 38.57%. This is thought satisfactory given the mass-administration technique employed.

5.3 Analytical Framework

An initial impression of interviewer's opinions and characteristics is gained by examining the descriptive statistics for each item. To this end, mean, standard deviation, and frequency counts are used where appropriate.

To investigate the relationship between job characteristics and biasing behaviour correlational analysis is employed. This will use the Pearson correlation efficient since Figures 1, 2, 3 and 4 illustrate a normal distribution throughout Section B.

To investigate the relationship between interviewer characteristics and biasing behaviour one-way Analysis of Variance (ANOVA) and t-test for independent samples are employed where appropriate.
The results of these analyses are contrasted with the literature contained within the literature review. The entire thesis is presented to the management of each participating firm to aid in the development of the discussion and conclusion sections.

5.4 Descriptive Statistics

The sample's overall response to each semantic-differential scale (Section A and Q15B - Job-Related Characteristics) and each ranking scale (Section B - Biasing Behaviour), by way of mean and standard deviation, is summated in Table 1 below.

<table>
<thead>
<tr>
<th>Question</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>81</td>
<td>5.01</td>
<td>1.50</td>
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<tr>
<td>2</td>
<td>80</td>
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</tr>
<tr>
<td>11</td>
<td>80</td>
<td>5.83</td>
<td>0.99</td>
</tr>
<tr>
<td>15B</td>
<td>81</td>
<td>1.23</td>
<td>1.43</td>
</tr>
<tr>
<td>Overall Average</td>
<td>4.15</td>
<td>1.37</td>
<td></td>
</tr>
</tbody>
</table>
There is irregularity in the number (N) of responses to each question as one respondent refused to complete every item in the questionnaire and one neglected to answer Q7.

Training

The first two questions deal with interviewer's impressions of training in the market research industry. Table 1 shows that the interviewer is, on average, quite satisfied with the quality of training ($\bar{X} = 5.01$) and feels that the quantity of training is of borderline adequacy ($\bar{X} = 4.73$). There is only moderate consensus on this issue, reflected in the standard deviations of 1.50 and 1.48.

Supervision

The mean response of 5.64 to Q3, which asks opinions of market research supervision, indicates that the interviewer is very satisfied with this aspect of the job. As shown by a standard deviation of 1.33, there is reasonable consensus in this view.

Payment

The subjects are generally moderately satisfied ($\bar{X} = 4.57$) with the payment they receive from interviewing. However, opinions vary widely in this instance, as the standard deviation of 1.70 suggests.
Job Status

As seen in the mean of 3.15, interviewers perceive their job to be of quite a low status in comparison to other lower white collar occupations such as sales. Again, there is only a low to moderate degree of consensus on this issue (SD = 1.54).

Weekend and Weekday Work

Questions 6 and 7 both have a mean of 5.11. That is, interviewers find the proportion of weekday work to evening and weekend work quite acceptable. With standard deviations of 1.45 and 1.51 respectively, these issues garner only moderate consensus.

Probing, Altered Question Wording, Accuracy in Recording Responses & Unprofessional Manner

For questions 8, 9, 10 and 11 frequencies will be examined instead of means and standard deviations, as the scales in Section B call for an examination of each category. A large response in one category would skew the mean, undermining the validity of the findings. These frequencies are presented in Table 2 overleaf. For comparison, the response that best approximates the mean is highlighted in bold print.
Table 2

Frequency Table for Questions 8, 9, 10, and 11

<table>
<thead>
<tr>
<th>Question</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>NR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q8</td>
<td>13</td>
<td>36</td>
<td>16</td>
<td>5</td>
<td>5</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Q9</td>
<td>1</td>
<td>6</td>
<td>7</td>
<td>7</td>
<td>17</td>
<td>36</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>Q10</td>
<td>25</td>
<td>45</td>
<td>5</td>
<td>2</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Q11</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>1</td>
<td>14</td>
<td>48</td>
<td>14</td>
<td>1</td>
</tr>
</tbody>
</table>

NR = No Response

As can be seen in Table 2, each of Question 8 (inadequate probing), 9 (altered question wording), 10 (accuracy in recording responses), and 11 (unprofessional manner) generated responses in two or three large clusters, that did not always centre around the mean. There is a certain skewness in the response to Section B. Furthermore, standard deviations offer little in the analysis of these items.

Door-to-Door Survey Length

Market research interviewers feel that door-to-door surveys are far too long, as the mean of 1.23 for Q15B indicates. Only a moderate portion of the sample feels any different to this; the standard deviation is 1.43.

Section C

The breakdown of responses to each categorical scale (Section C - Interviewer Characteristics) is presented overleaf in Table 3.
Table 3

Frequency Tables for Questions 12 to 15A, and Question 16

<table>
<thead>
<tr>
<th>Description</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Q12 Age</strong></td>
<td></td>
</tr>
<tr>
<td>1 Under 24</td>
<td>19</td>
</tr>
<tr>
<td>2 24 - 29</td>
<td>6</td>
</tr>
<tr>
<td>3 30 - 39</td>
<td>25</td>
</tr>
<tr>
<td>4 40 - 54</td>
<td>28</td>
</tr>
<tr>
<td>5 55 or above</td>
<td>3</td>
</tr>
<tr>
<td><strong>Q13 Interviewing Experience</strong></td>
<td></td>
</tr>
<tr>
<td>1 &lt; 1 month</td>
<td>5</td>
</tr>
<tr>
<td>2 1 - 3 months</td>
<td>9</td>
</tr>
<tr>
<td>3 3 - 6 months</td>
<td>5</td>
</tr>
<tr>
<td>4 6 - 9 months</td>
<td>5</td>
</tr>
<tr>
<td>5 9 - 12 months</td>
<td>5</td>
</tr>
<tr>
<td>6 &gt; 12 months</td>
<td>52</td>
</tr>
<tr>
<td><strong>Q14 Education</strong></td>
<td></td>
</tr>
<tr>
<td>1 Primary/ some secondary</td>
<td>6</td>
</tr>
<tr>
<td>2 Completed secondary</td>
<td>25</td>
</tr>
<tr>
<td>3 Some tertiary</td>
<td>35</td>
</tr>
<tr>
<td>4 Degree</td>
<td>11</td>
</tr>
<tr>
<td>5 Other tertiary</td>
<td>3</td>
</tr>
<tr>
<td><strong>Q15A Survey Technique Worked On</strong></td>
<td></td>
</tr>
<tr>
<td>1 Telephone</td>
<td>72</td>
</tr>
<tr>
<td>2 Intercept</td>
<td>37</td>
</tr>
<tr>
<td>3 Other (shadow shopping, etc.)</td>
<td>21</td>
</tr>
<tr>
<td>4 Door-to-Door</td>
<td>38</td>
</tr>
<tr>
<td><strong>Q16 Gender</strong></td>
<td></td>
</tr>
<tr>
<td>1 Female</td>
<td>66</td>
</tr>
<tr>
<td>2 Male</td>
<td>15</td>
</tr>
</tbody>
</table>

As depicted in Table 3, the bulk of the sample were middle-aged females of secondary or some tertiary education that work on all survey techniques, especially telephone. Table 3 also shows the overwhelming majority of the sample to be of at least 12 months experience in market research interviewing. Unfortunately, the number of responses in the other
categories of Q13 are quite small; threatening the reliability of this item. This will be taken into account in forthcoming analyses.

**Question 17**

The responses to the open-ended question, Question 17, were categorised and are summarised below in Table 4.

<table>
<thead>
<tr>
<th>Dislike</th>
<th>Q17A</th>
<th>Q17B</th>
<th>Q17C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surveys Too Long</td>
<td>15</td>
<td>13</td>
<td>6</td>
</tr>
<tr>
<td>Bad Weather</td>
<td>15</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Repetition/Boredom</td>
<td>3</td>
<td>12</td>
<td>1</td>
</tr>
<tr>
<td>Refusals/Stress/Embarrassed</td>
<td>7</td>
<td>11</td>
<td>8</td>
</tr>
<tr>
<td>Lack of Breaks/Facilities</td>
<td>1</td>
<td>11</td>
<td>1</td>
</tr>
<tr>
<td>Unsafe Locations</td>
<td>11</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Poorly Written Questions</td>
<td>3</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>Rude Respondents</td>
<td>6</td>
<td>9</td>
<td>6</td>
</tr>
<tr>
<td>Vicious Dogs</td>
<td>9</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Too Much Gear</td>
<td>8</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>Working Weekends/Mealtimes</td>
<td>4</td>
<td>7</td>
<td>1</td>
</tr>
<tr>
<td>Intrusive</td>
<td>7</td>
<td>3</td>
<td>-</td>
</tr>
<tr>
<td>Trouble Meeting Quotas</td>
<td>6</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Impersonal</td>
<td>-</td>
<td>6</td>
<td>-</td>
</tr>
<tr>
<td>Finding Locations/Distance</td>
<td>5</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Physical Discomfort</td>
<td>1</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Complex Question Routing</td>
<td>2</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Noise Levels</td>
<td>-</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Respondents Suspicious</td>
<td>2</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Unsatisfactory Pay</td>
<td>2</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>Other~</td>
<td>7</td>
<td>13</td>
<td>5</td>
</tr>
</tbody>
</table>

| No Response                     | 34   | 28   | 49   |

~ = Gates, Talkative Respondents, Office Politics, Lack of Briefing, Paperwork, Exhaustion of Samples.
5.5 Results for Subsidiary Research Question 1

Any relationship found in the results section is deemed supportive of the theoretical framework, as the emphasis in this thesis is on potentially causal relationships, rather than magnitude of effect on market research data quality.

To investigate the relationship between job-related characteristics and biasing behaviour, each item in Section A (plus Q15B) has been correlated with each item in Section B. Table 5 below presents these Pearson correlations.

<table>
<thead>
<tr>
<th>Questions</th>
<th>Q8</th>
<th>Q9</th>
<th>Q10</th>
<th>Q11</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trng. Qnty. Q1</td>
<td>-0.2422</td>
<td>0.0001</td>
<td>-0.0196</td>
<td>0.1322</td>
</tr>
<tr>
<td>Trng. Qnty. Q2</td>
<td>-0.4113</td>
<td>0.0358</td>
<td>-0.2463</td>
<td>0.0727</td>
</tr>
<tr>
<td>Supervision Q3</td>
<td>-0.0748</td>
<td>0.2019</td>
<td>-0.1808</td>
<td>0.3475</td>
</tr>
<tr>
<td>Payment Q4</td>
<td>-0.0133</td>
<td>0.0298</td>
<td>-0.0982</td>
<td>0.0042</td>
</tr>
<tr>
<td>Job Status Q5</td>
<td>-0.2415</td>
<td>0.1031</td>
<td>-0.0913</td>
<td>-0.0669</td>
</tr>
<tr>
<td>Weekend Wk. Q6</td>
<td>-0.1009</td>
<td>0.1777</td>
<td>-0.1474</td>
<td>0.1971</td>
</tr>
<tr>
<td>Evening Wk. Q7</td>
<td>-0.1208</td>
<td>0.1654</td>
<td>-0.1144</td>
<td>0.1213</td>
</tr>
<tr>
<td>Q15B Length</td>
<td>0.0283</td>
<td>0.0146</td>
<td>-0.0348</td>
<td>-0.2139</td>
</tr>
</tbody>
</table>

N = 74
df = 70
p < 0.10
**Training Quality**

Using an exploratory significance level of 90% (at which a significant correlation coefficient with 70 degrees of freedom is 0.1954), correlations between perception of training quality and altered question wording, accuracy in recording responses, and an unprofessional manner are insignificant (0.0001, -0.0196, and 0.1322 respectively). The relationship between perception of training quality and inadequate probing, with a correlation coefficient of -0.2422, is significant. The figure is negative only because of the design of the scales. Any one act of bias constitutes interviewer bias as data quality is affected in some way. Given this, the finding regarding training quality is consistent with the weak relationship found by Billiet and Loosveldt (1988); "the trained interviewers succeeded in obtaining more complete information". In particular, Billiet and Loosveldt (using a simple experimental design) found that better trained interviewers were less likely to make leading (eg. suggestive) probes. Of course, the experimental design would provide more reliable evidence.

**Training Quantity**

The correlations between perception of training quantity and altered question wording, and an unprofessional manner are insignificant (0.0358 and
Correlations between perception of training quantity and inadequate probing, and accuracy in recording responses are significant with coefficients of -0.4113 and -0.2463 respectively. That is, the more satisfied the interviewer is with the amount of training, the less likely he or she is to probe incorrectly or record responses inaccurately. Whether maximum satisfaction is gained from two to five days training, as Fowler and Mangione (1990) maintain, is a topic of further research.

**Supervision**

The correlations between opinion of supervision and inadequate probing, and accuracy in recording responses are insignificant (-0.0748 and -0.1808 respectively). The correlations with altered question wording and an unprofessional manner are significant with coefficients of 0.2019 and 0.3475 respectively. The correlation with altered question wording, however, is insignificant at significance level of 95% (at which the minimum correlation coefficient required is 0.2319). This is somewhat inconsistent with the findings of Fowler and Mangione (1990), who state that supervision is critical to interviewer performance. Again, the more solid experimental method was employed.
Payment
There are no significant correlations between opinion of payment and any of the four constructs in Section B (-0.0133, 0.0298, -0.0982, and 0.0042 for Q’s 8, 9, 10, and 11 respectively). These findings were in stark contrast with the findings of Meier (1991) and Kreitzman (1990), who both maintain that adequate payment is critical to interviewer performance. This contrast is not as serious as earlier ones, however, in that both Meier and Kreitzman employed exploratory, historical methods in their investigation. They would have the same data weaknesses as this self-report study.

Job Status
Correlations between perception of job status and altered question wording, accuracy in recording responses, and an unprofessional manner are insignificant (0.1031, -0.0913, and -0.0669 respectively). The correlation between perception of job status and inadequate probing - -0.2415 - is significant. Kreitzman (1990) maintains that job status is also critical to interviewing performance; implying that there should be more correlation between this factor and biasing behaviour.
**Weekend Work**

The correlations between attitudes towards weekend work and inadequate probing, altered question wording, and accuracy in recording responses are insignificant (-0.1009, 0.1777, -0.1474 respectively). The correlation with unprofessional mannerisms is significant at 0.1971. This correlation, however, is insignificant at a significance level of 95%. The mean for Question 6 is 5.11, indicating that interviewers are reasonably satisfied with the level of weekend work. However, the association with biasing behaviour is weak at best. Swires-Hennessy and Drake (1992), however, would imply a correlation between interviewer behaviour and attitude towards working Saturday or Sunday. Their work, though, had employed a field experiment methodology, improving reliability.

**Evening Work**

There are no significant correlations between attitude to evening work and any of the four constructs in Section B. The coefficients are -0.1208 for Q8, 0.1654 for Q9, -0.1144 for Q10, and 0.1213 for Q11. The inconsistency with Swires-Hennessy and Drake (1992) is similar to that of "Weekend Work" above.

**Door-to-Door Survey Length**

The correlations between feeling towards door-to-door survey length and inadequate probing, altered question
wording, and accuracy in recording responses are insignificant; 0.0283, 0.0146, and -0.0348 respectively. The correlation with unprofessional manner, at -0.2139, is significant. This correlation, however, is insignificant at a significance level of 95%. This would seem to be consistent with the findings of Sudman et al. (1977), who cited survey length as being only a weak influence on interviewer behaviour.

5.6 Results for Subsidiary Research Question 2

Table 1 on page 26 shows that the biases dealt with in Section B are committed infrequently, at least on a self-report basis.

Inadequate probing occurs about 25% of the time, extrapolating from the Question 8 mean of 2.50. Figure 1 below plots the response to Question 8.
Changes in question wording occur about 30% of the time, according to Question 9's mean of 5.06. Figure 2 below plots the response to Question 9.

Inaccuracy in recording responses is rare, perhaps below 10% of the time, as indicated by Question 10's mean of 1.91. Figure 3 overleaf plots the response to Question 10.
The same applies to interviewers acting in an unprofessional manner (e.g., getting off the subject); the mean for Question 11 is 5.83. Figure 4 below plots the response to Question 11.
It would be cynical to expect interviewers in a professional setting to commit biases more often than not. Sudman et al. (1977) maintain that interviewers are responsible for, on average, 7% of response variance. This would seem consistent with the responses to Section B. While the above may not appear to constitute a critical problem for the market research industry, it is perhaps the most manageable factor in response variance and data quality in comparison to such factors as response bias and inadequate sampling techniques.

5.7 Results for Subsidiary Research Question 3

5.7.1 Age

One-way Analysis of Variance (ANOVA) tests were carried out to ascertain the relationship between interviewer age group (Q12) and inadequate probing (Q8), altered question wording (Q9), accuracy in recording responses (Q10) and unprofessional manner (Q11). This is the appropriate test of significance given that Q12 is a variable of a categorical nature and Q's 8, 9, 10 and 11 are variables of a numerical nature. Also, the distribution of the scores on the items being considered is near-normal; another assumption of the ANOVA test of significance. The
subjects were also selected independently of each other. The results are set out below.

Inadequate Probing

H0: There is no relationship between age group and carrying out inadequate probing.

H1: There is a relationship between age group and carrying out inadequate probing.

@ = 0.10

F = 4.730, p = 0.002

Since p < @, H0 is rejected. There is a relationship between interviewer age group and the carrying out of inadequate probing. The relationship is such that interviewers aged between 24 and 29, and 40 and 54 believe to a greater degree than other age groups that interviewers probe inadequately. The overall response to Q8 was 2.5. However, the size of the 24 to 29 age group (6) and the above 55 age group (3) were so small as to bring into question the reliability of this finding.

Altered Question Wording

H0: There is no relationship between age group and altering question wording.

H1: There is a relationship between age group and altering question wording.

@ = 0.10

F = 0.101, p = 0.982
Since $p > \theta$, $H_0$ is accepted. Interviewers of different age groups report the same degree of altered question wording, ie. about a third of the time.

**Accuracy in Recording Responses**

$H_0$: There is no relationship between age group and inaccuracy in recording responses.

$H_1$: There is a relationship between age group and inaccuracy in recording responses.

$\theta = 0.10$

$F = 1.576$, $p = 0.189$

Since $p > \theta$, $H_0$ is accepted. Interviewers of different age groups report the same degree of inaccuracy in recording responses, ie. only on rare occasions.

**Unprofessional Manner**

$H_0$: There is no relationship between age group and interviewing in an unprofessional manner.

$H_1$: There is a relationship between age group and interviewing in an unprofessional manner.

$\theta = 0.10$

$F = 0.558$, $p = 0.694$

Since $p > \theta$, $H_0$ is accepted. Interviewers of different age groups report the same incidence of relating to respondents in an unprofessional manner. ie. only on rare occasions.
In summary, age of the interviewer is associated only with inadequate probing. This finding is somewhat consistent with the work of Hanson and Marks (1958), who found an apparent difference among ages, using an historical research method.

5.7.2 Interviewing Experience

As for "5.7.1 Age", one-way ANOVA was employed to ascertain the relationship between extent of interviewing experience (Q13) and each of the biasing behaviours in Section C (Q's 8, 9, 10 and 11). The results are set out below.

Inadequate Probing

H0: There is no relationship between extent of interviewing experience and carrying out inadequate probing.

H1: There is a relationship between extent of interviewing experience and carrying out inadequate probing.

θ = 0.10

F = 1.318, p = 0.266

Since p > θ, H0 is accepted. Interviewers of differing levels of experience report the same degree of inadequate probing.
Altered Question Wording

H0: There is no relationship between extent of interviewing experience and altering question wording.
H1: There is a relationship between extent of interviewing experience and altering question wording.

@ = 0.10
F = 1.506, p = 0.198
Since p > @, H0 is accepted. Interviewers of different levels of experience report the same degree of altered question wording.

Accuracy in Recording Responses

H0: There is no relationship between extent of interviewing experience and inaccuracy in recording responses.
H1: There is a relationship between extent of interviewing experience and inaccuracy in recording responses.

@ = 0.10
F = 0.856, p = 0.515
Since p > @, H0 is accepted. Interviewers of different levels of experience report the same degree of inaccuracy in recording responses.

Unprofessional Manner

H0: There is no relationship between extent of interviewing experience and relating to respondents in an unprofessional manner.
H1: There is a relationship between extent of interviewing experience and relating to respondents in an unprofessional manner.

@ = 0.10

F = 0.270, p = 0.928

Since p > @, H0 is accepted. Interviewers of different levels of experience report the same incidence of relating to respondents in an unprofessional manner.

Interviewing experience is therefore unassociated with the problem of interviewer bias. This is consistent with the findings of Presser and Zhao (1992), whom, through the experimental method, found no association between interviewer experience and biasing behaviour, in particular accuracy in recording responses.

5.7.3 Education

As before, one-way ANOVA was employed to ascertain the relationship between highest level of education attained (Q14) and each of the biasing behaviours in Section C (Q's 8, 9, 10, 11). The results are set out below.

Inadequate Probing

H0: There is no relationship between education and carrying out inadequate probing.
H1: There is a relationship between education and carrying out inadequate probing.
\( \theta = 0.10 \)
\( F = 1.784, \ p = 0.141 \)

Since \( p > \theta \), \( H_0 \) is accepted. Interviewers of different educational status report the same degree of inadequate probing.

**Altered Question Wording**

\( H_0 \): There is no relationship between education and altering of question wording.

\( H_1 \): There is a relationship between education and altering of question wording.

\( \theta = 0.10 \)
\( F = 1.689, \ p = 0.162 \)

Since \( p > \theta \), \( H_0 \) is accepted. Interviewers of different educational status report the same degree of altered question wording.

**Accuracy in Recording Responses**

\( H_0 \): There is no relationship between education and accuracy in recording responses.

\( H_1 \): There is a relationship between education and accuracy in recording responses.

\( \theta = 0.10 \)
\( F = 0.999, \ p = 0.413 \)
Since \( p > \theta \), \( H_0 \) is accepted. Interviewers of different educational status report the same degree of accuracy in recording responses.

**Unprofessional Manner**

\( H_0: \) There is no relationship between education and relating to respondents in an unprofessional manner.

\( H_1: \) There is a relationship between education and relating to respondents in an unprofessional manner.

\( \theta = 0.10 \)

\( F = 0.362, \ p = 0.835 \)

Since \( p > \theta \), \( H_0 \) is accepted. Interviewers of different educational status report the same incidence of relating to respondents in an unprofessional manner.

In this study, education has been found to have no association with any biasing behaviour. This is inconsistent with the view of Churchill (1988). Churchill’s method of investigation is unknown.

**5.7.4 Gender**

A t-test for independent samples was used to compare male and female interviewers (Q16 - Gender) on the reported biases in Section C (Q’s 8, 9, 10 and 11). This was the appropriate test of significance given that each item in Section C is numerical and Q16 is of two non-matched groups. That is, the subjects are
selected independently of each other. The results are set out below.

**Inadequate Probing**

H0: Males and females report the same degree of inadequate probing.

H1: Males and females report different degree of inadequate probing.

\[ \theta = 0.10 \]

\[ X_m = 2.533, X_f = 2.492 \]

\[ t = 0.117, p = 0.908 \]

Since \( p > \theta \), H0 is accepted. Males and females report the same degree of inadequate probing.

**Altered Question Wording**

H0: Males and females report the same degree of altered question wording.

H1: Males and females report different degrees of altered question wording.

\[ \theta = 0.10 \]

\[ X_m = 5.267, X_f = 5.015 \]

\[ t = 0.609, p = 0.549 \]

Since \( p > \theta \), H0 is accepted. Males and females report the same degree of altered question wording.

**Accuracy in Recording Responses**

H0: Males and females report the same degree of accuracy in recording responses.
H1: Males and females report different degrees of accuracy in recording responses. 
\[ \theta = 0.10 \]

\[ X_m = 1.867, X_f = 1.923 \]

\[ t = 0.251, \ p = 0.804 \]

Since \( p > \theta \), \( H_0 \) is accepted. Males and females report the same degree of accuracy in recording responses.

**Unprofessional Manner**

\( H_0: \) Males and females report the same incidence of relating to respondents in an unprofessional manner. 

\( H_0: \) Males and females report different incidence of relating to respondents in an unprofessional manner. 

\[ \theta = 0.10 \]

\[ X_m = 5.600, X_f = 5.877 \]

\[ t = 0.813, \ p = 0.4271 \]

Since \( p > \theta \), \( H_0 \) is accepted. Males and females report the same incidence of relating to respondents in an unprofessional manner.

Gender, according to this study, is not associated with any acts of interviewer bias. Bean and Medewitz (1988), however, imply an association using an experimental method.
6.0 DISCUSSION

The proposed model of interviewer bias has been only marginally supported in this research. Of the job-related characteristics posited, interviewer payment and the proportion of evening work to weekday work had no association with any of the biasing behaviours posited. The inconsistencies with existing literature in these cases may have been due to methodological differences; the majority of specific studies employed more reliable experimental methods.

Inadequate probing was reported as occurring about a third of the time. This behaviour was linked to the job-related characteristics of training quality, training quantity, and job status. That is, dissatisfaction with these aspects of the market research job environment leads to a decrease in job performance, which manifests itself in the act of inadequate, nondirective probing. Conversely, satisfaction with these job aspects may help explain an absence of this behaviour. Furthermore, certain age groups are more likely to report this particular behaviour.

Similarly, inaccuracy in recording responses by interviewers - which is reported as occurring only occasionally - is associated with dissatisfaction with
the quantity of training. Possibly, interviewers see recording responses as a learned skill.

Relating to respondents in an unprofessional manner — which is reported as occurring occasionally — is associated with dissatisfaction with supervision, the proportion of weekend work to weekday work, and the length of door-to-door surveys. These three job-related factors have a common thread; they are prominent considerations in the execution of door-to-door surveys. This survey technique is supervision intensive, is almost always carried out on weekends, and involves the longest, most complex questionnaires. In trying to improve the professionalism and image of its interviewers, a market research firm should target the door-to-door projects first.

Most of the job-related factors that have arisen so far in this discussion — training quantity, payment, job status, and survey length — are the factors that interviewers are most dissatisfied with. The correlations were in the appropriate direction to support the general notion that job dissatisfaction manifests itself in a decline in job performance.

Altering of question wording by interviewers — which is reported as occurring about a third of the time —
was found to not be a relevant factor in this study of interviewer bias.

There were consistencies with existing literature in some of the findings, and inconsistencies in other cases. It is difficult to reconcile these inconsistencies, except for methodological differences whereby the previous study employed more rigorous research that accounted for other variables.
7.0 CONCLUSIONS

The market research professional is doubtless aware of the importance of data quality in this competitive era in which information is at a premium. This study has attempted to explicate a small factor in data quality considerations; interviewer bias.

Further, more involved, research should explore some of the other factors bearing on the problem of interviewer bias in an attempt to identify the confounding variables in this study. This might be of an experimental method to improve reliability, or a survey method grounded in psychological theory to allow for the inclusion of interviewer expectations and motives. Such research could also facilitate an improved investigation of interviewer characteristics. As such, the potential causes of biased behaviour would begin to take shape.

The author, along with the management of the participating firms, feels that some of the findings in this study are inconsistent with common knowledge about interviewer bias. That is (with particular reference to Section B of the questionnaire), interviewer bias occurs more often than what was found in this study. Hence, a weakness of the self-report survey technique is respondent denial; respondents
providing answers that they aspire to, not answers that reflect their true self. This phenomenon of denial could quite possibly be a confounding variable in this study.

On a more general level, further research could investigate factors detracting from data quality that lie outside the domain of the interviewer. Such research would involve looking at questionnaire design, the behaviour of the respondent, or broader considerations to do with market dynamics.
8.0 REFERENCES


