An Examination of Investigative Interviewing Techniques using Road Crash Incidents as Stimuli

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Key Words

Cognitive Interview, Investigative Interview, Road Incidents, Communication, Police Interview, and Witness Recall
Abstract

The investigative interviewing of eyewitnesses is an important part of the judicial system and is essential in police investigations to identify culpable parties. However, interviewing witnesses to elicit accurate recall is not without some flaws (Ainsworth, 2002). Researchers have acknowledged that recall of information is a complex process vulnerable to variables which impede the retrieval of accurate information (Gudjonsson, 1996; Loftus, 1979; 1992).

To improve witness recall, psychologists developed the Cognitive Interview (CI) procedure to help interviewers retrieve more correct information from witnesses (Fisher & Geiselman, 1992). The use of the CI has been shown to increase accuracy in many populations (Memon, Holley, Wark, Bull, & Koehnken, 1996; Milne & Shaw, 1999). However, there are some criticisms of the CI. For example, the CI may cause confusion for witnesses (Kebbell, Milne, & Wagstaff, 1999), takes longer to administer than a standard police interview (Croft, 1995) and contain components which are reported to undermine the effectiveness of this procedure (Boon & Noon, 1994). This research program utilised three studies in a multimethod approach to evaluate investigative interviewing procedures, from an experimental and applied perspective. The overarching aim of this research was to identify a parsimonious, effective and efficient interview procedure which overcame some of the limitations recognized in the CI.

The first study employed an experimental methodology to test the effectiveness of the CI and two alternative versions of the CI, to determine which interview procedure resulted in the most correct and least incorrect amounts of information being elicited from student witnesses to a road incident stimulus. Results indicated that the truncated group utilizing mnemonics Tell All and Reinstate Context
elicited as much correct and less incorrect information than the ‘Full CI’ group, and took less time to administer.

Study Two examined the perceptions of the interview procedure from the witnesses’ perspective. Witnesses were asked to complete a questionnaire which was designed to investigate what the participants thought about how the interview was conducted. Results indicated that, overall, the witnesses found that the interviewers engaged in practices and behaviours at a similar skill level and appreciated the rapport building and clarity of the interviewers. A content analysis revealed that the witnesses favoured some mnemonics over others. The qualitative statements made in regard to questions in the questionnaire are presented.

Study Three used a triangulation methodology to determine what the Queensland Police Service officers were currently trained in and practising in the field. Secondary sources, a questionnaire, focus group and case study methodologies were used to make this determination. Findings indicated that there were areas where the police service could improve training of officers to help facilitate interviewing of witnesses.

The integration of the findings from the three studies will help to inform the current state of research in the area of investigative interviewing. In particular, this research provides a target examination of interviewing practices in a sub-section of the Queensland Police Service. The findings from the three studies were used to identify an interview procedure which obtained more correct information, did not gain an increase in incorrect information, reduced the time required to conduct the interview, was not confusing for the witnesses, or the officers, and contained no inherent problems for the judicial system. Further recommendations are made for the use of interview protocols for investigative interviewing of road incidents.
Table of Contents

Keywords ii
Abstract iii
Table of Contents v
List of Figures xiii
List of Tables xiv
Acknowledgements xvi
Statement of original authorship xvii

Chapter One: Introduction to the Thesis 1
1.1 Introduction 2
1.2 The Research Area 3
1.3 The Research Objectives 5
1.4 Introduction to Methodology 7
1.5 Demarcation of Scope 9
1.6 Overview of Thesis 11
1.7 Chapter Summary 14

Chapter Two: Memory and Eyewitness Recall 15
2.1 Introduction 16
2.2 Basic Principles of Memory Processes 17
  2.2.1 Working Memory 17
  2.2.2 Synergistic Eaphory 19
  2.2.3 Report Option 19
  2.2.4 Encoding Specificity and Varied Retrieval 22
2.3 Three Stages of Memory 23
  2.3.1 Encoding 24
  2.3.2 Storage 27
  2.3.3 Retrieval 29
  2.3.4 Confidence and Accuracy 31
2.4 Psychological Experiments with Witnesses 33
2.5 Chapter Summary 34
Chapter 3:  Legal Perspectives on the Eyewitness

3.1 Importance of Investigative Interviewing to the Forensic Community
   37
3.2 Training Officers in Investigative Interviewing
   38
3.3 Road Incident Statistics
   41
3.4 Chapter Summary
   43

Chapter Four: The Cognitive Interview Procedure

4.1 The Cognitive Interview (CI)
   45
4.2 The Enhanced CI
   47
   4.2.1 Communication Skills
      47
   4.2.2 Rapport
      48
   4.2.3 Transfer Control
      49
   4.2.4 Interruptions and Verbal and Non-Verbal Communication
      50
4.3 Empirical Evidence of the Effectiveness of the CI
   51
   4.3.1 Training of the CI
      51
   4.3.2 Comparisons between the CI and Control Interview
      54
   4.3.3 Correct Information
      55
   4.3.4 Incorrect Information
      56
   4.3.5 Accuracy
      57
   4.3.6 Forensic Relevance
      58
4.4 Individual Components of the CI
   59
4.5 Brief Overview of the Unique Contributions of the Thesis
   63
4.6 Chapter Summary
   66

Chapter Five: Methodological Rationale

5.1 Introduction to Methodology
   69
5.2 Experimental Psychology and Applied Psychology
   69
5.3 Action Research
   71
5.4 Research Methodology
   72
   5.4.1 Study One: Experimental Recall Task
      74
5.4.2 Study Two: Exploration of the Witnesses’ Perspective 75
5.4.3 Study Three: Queensland Police Service 77
5.5 Chapter Summary 79

Chapter Six: Experimental Recall Task 80

6.1 Introduction 82
6.2 Statement of Hypothesis 83
6.3 Method 87
   6.3.1 Method for Participants As Witnesses 87
      6.3.1.1 Participants 87
      6.3.1.2 Materials 88
      6.3.1.3 Procedure 90
   6.3.2 Method for Participants As Interviewers 91
      6.3.2.1 Participants 91
      6.3.2.2 Materials 92
      6.3.2.3 Procedure 94
   6.3.3 Coding of Content and Scoring Recall 99
      6.3.3.1 Coding of Video of Traffic Incident 99
      6.3.3.2 Scoring of Recall 100
6.4 Design 102
6.5 Results 102
   6.5.1 Data Screening 103
   6.5.2 Interrater Reliability 104
   6.5.3 Descriptive Data 104
   6.5.4 Preliminary Analysis 105
   6.5.5 Duration of Interview 106
   6.5.6 Recall 108
   6.5.7 Accuracy 111
   6.5.8 Percentages Correct and Incorrect of Recalled Information 112
   6.5.9 Confabulation 114
6.6 Section Discussion
   6.6.1 Duration of Interview
   6.6.2 Correct Recall
   6.6.3 Incorrect Recall
   6.6.4 Accuracy
   6.6.5 Percentage Correct
   6.6.6 Free Recall and Tell All Phases
   6.6.7 Confabulation

6.7 Section Summary

6.8 Phase Two: Details Crucial to Police Investigation
   6.8.1 Aims
   6.8.2 Research Questions

6.9 Method
   6.9.1 Participants
   6.9.2 Materials and Procedure

6.10 Results

6.11 Discussion

Chapter Seven: Exploration of Witnesses’ Perceptions

7.1 Witness Perceptions of the Interview Process
   7.1.1 Aim
   7.1.2 Hypotheses

7.2 Method
   7.2.1 Participants
   7.2.2 Materials
   7.2.3 Procedure
   7.2.4 Analysis

7.3 Quantitative Results
   7.3.1 Part A: Rapport and Interview Process
   7.3.2 Part B: Individual Mnemonics
   7.3.3 Perceived Accuracy and Completeness

7.4 Qualitative Results
   7.4.1 Coding
7.4.2 Results

7.4.2.1. Rapport

7.4.2.2 Probing Questions

7.4.2.3 Mnemonics

7.4.3.4 Suggestions

7.5 Discussion

7.5.1 Length of Interview

7.5.2 Perceptions of Interview Procedure

7.5.3 Information Triggered

7.5.4 Confusion Items

7.5.5 Perceptions of Accuracy and Completeness

7.5.6 Rapport

7.5.7 Probing Questions

7.5.8 Mnemonics

7.5.9 Suggestions

7.6 Limitations

7.7 Chapter Summary

Chapter Eight: Interview Procedures of the Queensland Police Service

Accident Investigation Squad

8.1 Interview Procedures of the QPS AIS

8.1.1 Police and Psychologists Working Together

8.2 Phase One: Evaluation of QPS AIS Training Manuals

8.2.1 Aims

8.3 Method

8.3.1 Materials and Procedure

8.4 Results

8.4.1 Memory Cues

8.4.2 Social Dynamics

8.4.3 The Interviewer

8.4.4 Questioning

8.5 Section Discussion

8.7 Phase Two: Questionnaire
8.7.1 Aims
8.7.2 Hypothesis
8.8 Method
8.8.1 Participants
8.8.2 Materials and Procedure
8.9 Results
8.10 Section Discussion
8.11 Phase Three: Focus Group
8.11.1 Aims
8.12 Method
8.12.1 Participants
8.12.2 Materials and Procedure
8.12.3 Coding and Analysis of Transcripts
8.13 Results
8.13.1 Social Dynamics: Facilitation of Interview
8.13.1.1 Purpose
8.13.1.2 Convenience
8.13.1.3 Agreeableness
8.13.1.4 Props
8.13.2 Qualities of Questioning
8.13.2.1 Initial Query
8.13.2.2 Timeline
8.13.2.3 Matrix
8.13.3 Avoiding Negative Behaviour
8.13.3.1 Avoid Hearsay
8.13.3.2 Avoid Terminology
8.13.3.3 Avoid Sabotaging Witness Confidence
8.13.3.4 Avoid Suggestive Questions
8.13.3.5 Avoid Interruptions
8.13.3.6 Avoid Offending the Witness
8.13.4 Parallels with CI Recommendations
8.13.4.1 Mentally Reinstate Context
8.13.4.2 Physically Reinstate Context
8.13.4.3 Change Time 202
8.13.5 Perception of Witness Veracity 203
   8.13.5.1 Witness Accuracy 203
   8.13.5.2 Physical Evidence Versus Witness Reports 205
8.13.6 Comments Specific to CI Mnemonics 205
   8.13.6.1 Tell All 206
   8.13.6.2 Reinstate Context 207
   8.13.6.3 Change Time 207
   8.13.6.4 Change Perspective 207
   8.13.6.5 Transfer Control 208
8.14 Section Discussion 208
   8.14.1 Memory 209
   8.14.2 Facilitation of Interview Process 210
   8.14.3 Questioning Skills 211
   8.14.4 Perception of Witness Veracity 211
8.15 Phase Four: Case Study 213
   8.15.1 Participants 214
   8.15.2 Materials and Procedure 214
   8.15.3 Criteria for Case Study 214
8.16 Results 215
   8.16.1 Memory 215
   8.16.2 Social Dynamics 216
   8.16.3 Communication and Questioning 216
8.17 Section Discussion 218
8.18 Chapter Discussion 219

Chapter Nine: Discussion 221
9.1 Introduction to General Thesis Discussion 222
9.2 Review of Findings 222
   9.2.1 Experimental Recall Task 222
   9.2.2 Exploration of Witness Perceptions 223
   9.2.3 Interview Procedures of the QPS AIS 224
   9.2.4 Integration of Findings 225
9.2.4.1 Mnemonics 226
9.2.4.2 Communication Skills 227
9.2.4.3 Overall Understanding of Incident 228

9.3 Contribution to Theory and Research 228
9.4 Application of Research Findings 231

9.4.1 Recommendations for Policy and Practice 231

9.5 Strengths and Limitations 235
9.6 Suggestions for Future Research 237
9.7 Concluding Remarks 238

Reference List 240
Appendices 267
List of Figures

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.1</td>
<td>Flowchart of the Methodological Design of the Three Studies</td>
<td>78</td>
</tr>
<tr>
<td>6.1</td>
<td>Flowchart of the Design of Study One</td>
<td>93</td>
</tr>
<tr>
<td>6.2</td>
<td>Flowchart of the Experimental Groups and which Mnemonics were Included in Each</td>
<td>90</td>
</tr>
<tr>
<td>6.3</td>
<td>Representation of the Development of the Training Program</td>
<td>95</td>
</tr>
<tr>
<td>6.4</td>
<td>Representation of the Training Procedures Undertaken by The Interviewers in the Four Experimental Groups</td>
<td>102</td>
</tr>
<tr>
<td>6.5</td>
<td>Mean Time in Minutes Each Interview Took to Conduct</td>
<td>107</td>
</tr>
<tr>
<td>6.6</td>
<td>Correct and Incorrect Total Recalled by Group</td>
<td>109</td>
</tr>
<tr>
<td>6.7</td>
<td>Graph Illustrating Pattern of Recall of Important Details Across Groups</td>
<td>130</td>
</tr>
<tr>
<td>7.1</td>
<td>Flowchart of the Design of Study Two</td>
<td>137</td>
</tr>
<tr>
<td>7.2</td>
<td>Representation of Instances of Comments Which Reflect Rapport Building</td>
<td>146</td>
</tr>
<tr>
<td>7.3</td>
<td>Representation of Instances of Comments Which Reflect Questioning</td>
<td>148</td>
</tr>
<tr>
<td>7.4</td>
<td>Representation of Instances of Comments Which Reflect Mnemonics</td>
<td>151</td>
</tr>
<tr>
<td>7.5</td>
<td>Representation of Instances of Comments Which Reflect Suggestions from Witnesses</td>
<td>154</td>
</tr>
<tr>
<td>8.1</td>
<td>Flowchart of the Design of Study Three</td>
<td>169</td>
</tr>
</tbody>
</table>
List of Tables

Table 6.1  Age Group and Gender  105
Table 6.2  Experimental Groups and Gender  105
Table 6.3  Means, Standard Deviations, Minimum and Maximum Time (in Minutes) to Conduct The Interview  108
Table 6.4  Post Hoc Differences in Time Between Groups  108
Table 6.5  Total Number of Correct and Incorrect Details by Group  109
Table 6.6  Mean and Standard Deviation for Correct and Incorrect Recall by Group  110
Table 6.7  Post Hoc Differences Between Groups on Correct Information  110
Table 6.8  Overall Scores for Accuracy and Inaccuracy of Recall By Groups  111
Table 6.9  Percentage Correct and Percentage Incorrect Recalled By Groups  112
Table 6.10  Means, Total Correct, Incorrect, Total Volunteered And Accuracy For Collapsed Groups Receiving Free Recall And Tell All.  113
Table 6.11  Totals, Means and Standard Deviations for Total Correct by Interview Phase and Group  113
Table 6.12  Totals, Means and Standard Deviations for Total Incorrect By Interview Phase and Group  114
Table 6.13  Very Important Details as Identified by QPS AIS  126
Table 6.14  Moderately Important Details as Identified by QPS AIS  128
Table 6.15  Not Important Details as Identified by QPS AIS  129
Table 6.16  Post hoc Differences Between Groups on Important Information  130
Table 8.1  Police Officers Perceptions of Witnesses  183
Table 8.2  Themes Identified to Represent Social Dynamics: Facilitation of the Interview Process  190
Table 8.3  Themes Identified to Represent Qualities of Questioning  193
Table 8.4  Themes Identified to Represent Active Avoidance of Negative Interview Behaviours  195
Table 8.5  Themes Identified to Represent Parallels with CI Mnemonics  201
Table 8.6  Themes Identified to Represent Perceptions of Witness Veracity  203
Table 8.7  Feedback from Introduction of Specific CI Mnemonics  206
Table 9.1  Matrix of Identified Protocols  226
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“The work contained in this thesis has not been previously submitted for a degree or diploma at any other higher education institution. To the best of my knowledge and belief, the thesis contains no material previously published or written by another person except where due reference is made.”

Signature:____________________________________

Date:____________________________________
Chapter One: Introduction to the Thesis

1.1 Introduction

1.2 The Research Area

1.3 The Research Objectives

1.4 Introduction to Methodology

1.5 Demarcation of Scope

1.6 Overview of Thesis

1.7 Chapter Summary
An Examination of Investigative Interviewing Techniques Using Road Crash Incidents as Stimuli

1.1 Introduction

With respect to investigative interviewing, eliciting information from eyewitnesses is an extremely important part of the legal system. Witness testimony of events is utilised to identify guilty parties and to exonerate the innocent. Relevant to eyewitness testimony is the underlying acceptance by the general public, and therefore members of juries, that confident witnesses are normally correct (Brewer & Burke, 2002; Buckhout, 1974). Eyewitness recall is perceived by the public as being very reliable (Wakefield & Underwager, 1998). Law enforcement personnel also tend to identify witnesses’ recall as generally correct and support the notion that witnesses are the most important part of an investigation (Kebbell & Milne, 1998). However, psychological research studies and the legal system have demonstrated that witness recall can be flawed (see Cutler & Penrod, 1995; Fisher & Geiselman, 1992; Loftus, 1979; 1992). Ainsworth (1998) stated that the criminal justice system relies heavily on information provided by the witness and that this system may have unrealistic expectations about the witnesses’ ability to provide objective and accurate information.

In light of findings concerning the inaccuracies of witness reports, the importance of retrieving accurate information from witnesses is an area of research which has received increased attention (Allwood, Ask, & Granhag, 2005; Frowd, Carson, & Ness, 2005; Ginet & Py, 2001; Wells & Malpass, 2000; Wells, Small, Penrod, Malpass, Fulero, & Brimacombe, 1998; Whitehouse, Orne, Dinges, Bates, Nadon, & Orne, 2005). Researchers have developed procedures which help witnesses to retrieve information in an attempt to improve the accuracy of witness reports.
Evaluation of Interview Procedures

(Fisher & Geiselman, 1992). The purpose of improving witness recall overall is to increase the amount of correct information and decrease the amount of incorrect information the witness provides.

The purpose of Chapter One is to provide the reader with an introduction into the research area and the research objectives of the thesis. This chapter establishes the main issues concerning interview procedures and eyewitness processes, and then identifies the main research objectives. The methodological approaches used in the studies and the thesis structure are presented. The delineation of the scope of the research program will also be highlighted.

1.2 Research Area

The main focus of the research is interviewing procedures; examined in an experimental and an applied setting. However, as witness recall is an important part of investigating the effects of interview protocols, discussion of recall and memory processes is included. Eyewitness testimony involves three key stages. Firstly, the witness must accurately encode the information. Secondly, the witness must retrieve the information correctly. Lastly, that information must be applied as testimony in the legal setting (Stewart, 2002). The recall of information is a complex process in itself. That is, the witness must view or perceive the incident, then attempt to store the memory uncontaminated by extraneous variables, thereby allowing the retrieval of an accurate memory from the memory stores (Baddeley & Hitch, 1974; Tulving, 1982; Wells & Malpass, 2000). Many variables can act at any, or all, of these stages to contaminate, or deteriorate, the memory trace (Blank, 1998). The types of variables that can influence recall at each stage of memory will be discussed in more detail in subsequent chapters. Following this complex procedure of creating and accessing a
memory clearly, the witness must be able to accurately convey the details of that memory trace to another person. A law enforcement officer must interview the witness to obtain the details of the event. The witness may then be called to testify in court some time after the original incident.

It is generally accepted that there is little influence the legal system can have over the witnesses’ internal processes concerning their correctness of recall, or the factors surrounding the event (Py & Rainis, 2001). However, there are measures that can be implemented in the area of the legal processes that can affect the resultant accuracy of recall (Wells & Malpass, 2000). In particular, certain types of interview procedures have been shown to increase the accuracy of eyewitness reports (see Allwood, Ask, & Granhag, 2005; Campos & Alonso-Quecuty, 1998; Davis, McMahon, & Greenwood, 2005; Geiselman & Fisher, 1989; Koehnken, Milne, Memon, & Bull, 1999; Memon, Holley, Wark, Bull, & Koehnken, 1996). As the literature review will argue in more detail, prescribed interview procedures have been shown to increase accuracy over a ‘control’ condition, in which interviewing officers ask ‘what happened’ as an open ended question (Koehnken et al., 1999). Interview procedures, developed to aid interviewers to gain more accurate information from eyewitnesses, have been shown to increase accuracy by up to 63% compared to a control condition (Fisher, Geiselman, & Amador, 1989).

The Cognitive Interview is one such procedure. Developed by cognitive psychologists, Fisher and Geiselman (1992), the Cognitive Interview specifically recommends four mnemonics combined with communication skills to be used by interviewers to help witnesses retrieve more correct information. The use of this procedure has been shown to increase accuracy in witness recall significantly; but the procedure is not without some criticism. For example, the complexity of the
procedure has led police officers who are trained in the Cognitive Interview, to not use it as trained (Clarke & Milne, 2001), thereby reducing the procedure’s effectiveness. The overarching research aim for this thesis is to identify an interview procedure which produces accurate information from eyewitnesses, is easily understood by the witnesses, is not time consuming and has the potential to be easily adopted by police officers. The series of studies herein examines interview protocol and how experimental research studies can help to inform current police practices. The following section will outline the main research objectives of the thesis.

1.3 The Research Objectives

The underlying rationale of the study is that improvement in police interviewing protocols can facilitate an increase in the amount of accurate testimony from an eyewitness, which in turn increases the reliability of the judicial system (Ede & Shepherd, 1997). Specifically, this thesis examines whether a shorter interview procedure can elicit as much accurate information from eyewitnesses of road accidents as a longer, more complex interview procedure. The Enhanced Cognitive Interview (ECI) will be the tool utilised in this current study to ascertain which of the tested interview protocols best elicits accurate information from witnesses to a road incident. The ECI will be utilised to identify useful mnemonics for investigative interviewing experimentally, the ease of use of the mnemonics will be assessed through witness self-reports and the Queensland Police Service’s (QPS) interviewing standards will be evaluated using the ECI as a ‘best practice’ point of comparison.

In order to fulfil the criteria of an effective and useful procedure, the findings need to identify an interview procedure which elicits the most correct information, while not inflating the incorrect information provided by the witnesses. In addition,
the procedure must be easily understood by the witnesses and also easily
demonstrated to and utilised by the police officers for whom its use is intended.

In addition to identifying the most effective and efficient interview procedure,
this thesis makes unique contributions to the understanding of investigative
interviewing. Different versions of an interview protocol will be tested
experimentally to identify the procedure which elicits the most accurate information.
While the testing of the different versions of the interview protocol is not exhaustive,
it will provide further research into an expanding area, adding to the practical
knowledge concerning optimal ways to interview witnesses. Adhering to a strict
experimental design will allow the comparison of the findings from this study with
previous research in the area (Bekerian & Dennett, 1993; Boon & Noon, 1994; Fisher
& Geiselman, 1992; Koehnken et al., 1999; Milne & Bull, 1998; Milne & Shaw,
1999).

As it has not been covered in previous research, the present studies will
investigate the perceptions of the witnesses with regard to their views about the
interview process. Such an investigation will clarify previously held assumptions
about the witnesses’ understanding of the interview process (Boon & Noon, 1994).

The research objectives include determining what the Queensland Police
Service Accident Investigation Squad (QPS AIS) officers actually say they do when
interviewing cooperative witnesses. That is, the study will identify the procedures
currently used by this group. The Accident Investigation Squad officers were chosen
as the population for this objective because they are officers who deal almost
exclusively with investigative interviews with witnesses of road incidents. The
findings obtained from these research objectives will illustrate the current state of
investigative interviewing in Queensland conducted by QPS AIS officers by
determining what the police officers currently do. The findings from these three main areas will compliment each other, as distinctions can be made between what is a useful interview procedure from an experimental viewpoint and what the police currently do from a real world perspective. The similarities and differences can then be examined to determine what the police officers would have to do to improve their current practices. Having outlined the research area and objectives, the following section provides specific details of the methodological approaches used to complete these aims.

1.4 Introduction to Methodology

The thesis comprised a multimethod research approach (Padgett, 1998) to evaluate interview protocol to determine which of the tested interview protocols assists best in gaining accurate information from eyewitnesses, without taking a long time to administer. The methodological approaches include: experimentally designed research, questionnaires, secondary data, focus groups and a case study. Multiple populations were also used to strengthen the validity of the overall results. Student populations were engaged to participate in the experimental design. Several previous studies evaluating the CI have used students as witnesses (eg., Chapman & Perry, 1995; Finger & Pezdek, 1999; Geiselman, Fisher, MacKinnon, & Holland, 1985; Ginet & Py, 2001). Additionally, postgraduate students and provisionally registered Psychologists were recruited to perform as interviewers in the first study. The Queensland Police Service officers were invited to provide expert opinion, as they rely on accurate eyewitness reports in their professional roles.

The first study was conducted to determine an effective interview protocol for interviewing witnesses to road incidents, by employing experimentally designed
quantitative research. Study Two investigated quantitatively and qualitatively what the eyewitnesses’ perceptions of the interview procedure were. Study Three examined what the police services current practice was with respect to training and implementing interview procedures and also employed triangulation, whereby secondary data and both quantitative and qualitative data were utilised to determine what the police officers indicate they currently do.

More specifically, Study One was an experimental quantitative exercise, requiring four different groups, each utilising a different interview protocol (i.e., different combinations of mnemonics) (Blaikie, 2000). In order to fulfil the aims of this study, an interview training procedure was developed from previous and current literature on interview procedures and communication skills, in order to train interviewers in the interview procedure. The training program was produced after reviews of various papers on communication skills, interviewing techniques and skills needed for interviewing witnesses. Interviewers were then trained in the interview protocol; following the training, interviewers were asked to interview witnesses to a road incident video. Recall results indicated which of the tested interview protocols elicited the highest amount of recall. Further, police officers were asked to rate the details from the video according to importance; these important details were then used to recalculate recall scores to determine which interview protocol elicited the most important details.

In the second study, in addition to the analysis of quantitative data, a content analysis approach was utilised, which was used to quantify qualitative data (Neuendorf, 2002) and to provide insight into how the witnesses felt the interviews were conducted. This was achieved through the use of a questionnaire. The
witnesses were asked to complete a questionnaire aimed at eliciting feedback and to comment on how the interviews were conducted (i.e., to gain the witness perspective).

Study Three takes the interview protocol into the practical arena by gathering information from the Queensland Police Service (QPS). Using a triangulation approach, (Denzin & Lincoln, 1994), this stage investigated several different types of data. The first data type was secondary sources, from the Queensland Police Service training manuals that were examined and analysed qualitatively to ascertain what the police service was training their officers to do in the witness interview situation.

Next, both quantitative and qualitative data was collected. A questionnaire was developed to ascertain the workloads and training history of the officers. The officers were also asked to comment on their perceptions of eyewitnesses in terms of accuracy in information recall. In addition, the officers participated in a focus group, to explore their perceptions of current procedures and what they actually do when interviewing cooperative witnesses. A case study was then conducted where the researcher observed a police interview in the field. Evaluating the current police practices in line with the Cognitive Interview recommendations, allowed for a comparison of the state of current police interviewing with a ‘best practice’ approach, namely the CI.

Although the research program involved a comprehensive methodology that answered many of the questions in the area, there are some issues that are not within the scope of this thesis, which will be described in the following section.

1.4 Demarcation of Scope

There are a range of different protocols which can be used to interview people, and some of these are intended for different audiences, such as the different interview procedures used for cooperative witnesses versus suspects (see Medford, Gudjonsson,
& Pearse, 2003; Navarro, 2003). In addition, there are a number of ways to design a study that can test the research questions and therefore, it is important to identify the scope of the thesis. The focus of the thesis is to investigate the impact of different interview variants on the resultant recall from witnesses. However, it is not feasible to test every variant of interviewing procedures available, thus the interview protocols were delineated according to theory and previous research, endeavouring to reduce gaps in the literature.

Further, the scope of this thesis, coupled with ethical constraints precluded the opportunity to interview real life witnesses or have access to real life witness transcripts, as specified by the Queensland Minister for Policing. One interview was available for observation, but due to ethical constraints this interview could not be taped for further reference.

This research will not be directed at identifying interview procedures for suspects or other uncooperative witnesses. The investigative interviewing techniques utilised in this study are best suited for use with cooperative witnesses.

The experimental stage of this research dealt with the recall of a stimulus presented on video. The witnesses were not expected to participate in a ‘real life’ incident, as the stimulus and recall situation were primarily in an experimental setting. Additionally, this research examined the recall of a road incident, and events outside of road incidents, such as robberies and assaults were not included in the current research studies.

In order to broaden the scope of the project to include an applied approach, the Queensland Police Service Accident Investigation Squad (QPS AIS) were invited to participate in the research. As the QPS AIS is a specialist group of officers who mainly deal with road incidents and therefore road incident witnesses, the scope of
this research precludes reference to officers or detectives employed in different areas of the police service.

Finally, the provision of specific guidelines, in the form of a training manual or a formal policy document will not be provided. However, a preliminary list of recommendations will be provided that could form the basis of future research and in collaboration with the Queensland Police Service, begin to formulate specific training and interviewing guidelines.

The following section outlines the structure of the thesis.

1.6 Overview of Thesis

Chapters Two, Three and Four review the relevant literature to the research studies. Chapter Two introduces fundamental memory theory principles which form the basis of how humans remember information (see Baddeley & Hitch, 1974; Tulving, 1982). Memory principles include basic cognitive theory central to information processing. Additionally, Chapter Two draws upon theoretical and empirical literature to discuss eyewitness recall and the factors impacting on witnesses’ abilities to accurately recall information. Memory and perception literature is discussed and includes information on encoding, storage and retrieval of information. Additionally, errors in recall, the effects of system and estimator variables (Py & Rainis, 2001), and how they influence the way in which eyewitnesses remember information, is also reviewed.

Chapter Three outlines the importance of accurate recall to the forensic community. In particular, the chapter highlights the current trends toward police and psychologists working together in order to increase the resultant accuracy of eyewitness testimony (Wells et al., 1998; Wells & Malpass, 2000). The training of
officers to interview cooperative witnesses and the implications of those standards of training are discussed (Ede & Shepherd, 1997).

Chapter Four concludes the literature review component of the thesis and examines a topical and well researched interview protocol called the Cognitive Interview (CI) and its expanded version; the Enhanced Cognitive Interview (ECI) (Fisher & Geiselman, 1992). The CI/ECI was developed by psychological professionals to increase accuracy of recall from memory of witnesses for application in forensic settings. The application of the CI/ECI to cooperative witnesses has shown that theoretically sound, research-based interview procedures are valid techniques to increase the amount of accurate information recalled by witnesses (Allwood, Ask, & Granhag, 2005; Fisher & Geiselman, 1992; Koehnken et al., 1999; Koehnken, Schimossek, Aschermann, & Hofer, 1995).

Chapter Five provides a detailed description of the methodology used in the research. This thesis utilises both an experimental and applied approach to answering the research questions. The three studies each add an important component to the research. The experimental design of the first study allowed for a controlled examination of the influence of each of the interview protocols on increasing witness recall. The ranking of important details in the video, by police officers and the subsequent recoding of the witnesses recall to include only important details is also a distinctive part of this thesis. The second study was unique in that it obtained feedback from the witnesses on their perceptions of the interview process. The applied component of the research is presented in study three where QPS AIS officers were asked to provide information on their present interviewing protocols. Chapters Six, Seven and Eight provide results of the three studies outlined. Chapter Six reports key findings from Study One, each implicated in the general research objectives and
hypothesis. The results from the experimental study were analysed to identify the most effective and efficient interview procedure of those tested.

Chapter Seven examines the quantitative and qualitative results from the questionnaire used in Study Two. The second study evaluated the feedback gained from the witnesses as to how the interview was conducted, the interviewer’s skills and the interview protocol itself. Using content analysis to examine qualitative data, this section reports on the written comments made by the participants with respect to the interviewer’s skills and the interview process.

The third study in the series is reported in Chapter Eight; the procedures that the Queensland Police Service Accident Investigation Squad utilise when interviewing witnesses are identified. Study Three uses a triangulation approach to determine, from various types of data collection, what protocol was used currently by officers in the Queensland Accident Investigation Squad. Firstly, QPS training manuals were examined as secondary data to determine the protocols officers were trained in. Secondly, the officers were asked to complete a brief questionnaire concerning workload, training and what the officers’ perceptions were of eyewitness recall. Additionally, the officers were brought together for a focus group, to discuss a range of topics related to investigative interviewing. Finally, an officer’s ‘real world’ interview was observed and findings are presented as a case study. Findings were compared to ‘best practice’ recommended protocols espoused by the CI.

Chapter Nine presents the overall conclusions to the research and discusses the integration of findings from the three studies conducted. Implications from the studies are reviewed and the overall strengths and limitations of the thesis are discussed. Finally, preliminary recommendations are made, which highlight the
implications for policy, future training and implementation of improved interviewing procedures.

1.7 Chapter Summary

The previous sections have outlined the overall research area. Interview procedures have been developed, which help witnesses to produce more information. Using multiple methodological approaches, this thesis investigated the most effective and efficient interview procedure for use with witnesses of road incidents. Attention now turns to the seminal works and current literature in the area of memory processes.
Chapter Two: Memory and Eyewitness Recall

2.1 Introduction

2.2 Basic Principles of Memory Processes
   2.2.1 Working Memory
   2.2.2 Synergistic Ecphory
   2.2.3 Report Option
   2.2.4 Encoding Specificity and Varied Retrieval

2.3 Three Stages of Memory
   2.3.1 Encoding
   2.3.2 Storage
   2.3.3 Retrieval
   2.3.4 Confidence and Accuracy

2.4 Psychological Experiments with Witnesses

2.5 Chapter Summary
Perception and memory are decision-making processes affected by the totality of a person’s abilities, background, attitudes, motives and beliefs, by the environment and by the way [their] recollection is eventually tested (Buckhout, 1974, p. 24).

2.1 Introduction

The focus of this thesis is on the impact of interviewing protocols for the enhancement of witnesses’ recall of incidents; however it is useful to review relevant memory theories which illustrate how individuals encode, store and retrieve information. Many theories have been put forward to explain the complex processes that occur when a person views a stimulus and subsequently creates a memory trace of that stimulus (Baddeley & Hitch, 1974; Hasselhorn, 1995; Tulving, 1983). Creating a memory trace, is only one of the stages in the memory process, which include creating, storing and later accessing a particular memory. Many factors influence the encoding, storage and retrieval of a memory (Loftus, 1979). The debate surrounding memory is very relevant. Memory can be seen as an active and distortion-inclined process (Gudjonsson, 1996). It is now accepted that memory is not a video recording which can be replayed with accuracy, but rather a complex phenomenon with inherent plasticity (McConkey & Sheehan, 1995), and is influenced by pre-existing schema and postevent information, which can lead to memory distortions (Ceci & Loftus, 1994; Loftus & Burns, 1982; McConkey & Sheehan, 1995; Tuckey & Brewer, 2003).

Moderating factors, such as arousal or attention, have been shown to affect the ability to accurately recall information under a wide range of cognitive conditions (Cook & Wilding, 2001; Porter, Spencer, & Birt, 2003). The accuracy of memory in the eyewitness testimony domain is extremely relevant to both psychological and forensic areas (Kassin, Ellsworth, & Smith, 1989; Loftus, 1979; Trouve & Libkuman,
1992; Ward & Loftus, 1985). Crucial to eyewitness memory and its accuracy are basic memory principles. The psychological theory behind how humans remember is a vital link toward understanding eyewitness recall. Several theories about how we remember, including perception, attention, retention and retrieval, directly influence the current research on eyewitness recall. These basic memory theories and their contribution toward understanding eyewitness recall and therefore how interview procedures can facilitate the retrieval process are described in the next section.

2.2 Basic Principles of Memory Processes

Different memory theories illustrate the ways humans recall information and are therefore relevant to the discussion of eyewitness retrieval (Nelson & Goodmon, 2003). The assertion that memory can be corrupted at any stage, prior to, or during the recall process, underpins the notion that many variables may influence the retrieval of accurate memories (Py & Rainis, 2001). Memory theories can help to identify how each of these variables affects memory and highlight areas where improvements can be made to help aid the retrieval of accurate memories. The following theoretical principles define the way in which humans perceive, encode and retrieve information.

2.2.1 Working Memory

Baddeley and Hitch (1974) first developed the theoretical understanding of a working memory system to highlight the role of short-term memory in performing complex cognitive tasks. This development was important in illustrating that working memory is a complex arrangement of systems, as opposed to a unitary store of information as previously asserted by memory theorists (Weinert & Schneider, 1995).
The most important feature of Baddeley’s (1986; Baddeley & Hitch, 1974) working memory is that there is a hierarchy which supervises and coordinates other systems which are specialised for different types of information. This system of hierarchy facilitates the organisation of categories, which are important for memory strategies and retrieval (Rabinowitz & Goldberg, 1995).

To expand on the working memory theory, where memory is a system working with a person’s knowledge base, Collins and Loftus (1975) developed the Spreading Activation Theory, which is conceptualized as an input of information which activates related nodes in an associative network. Activation then spreads from those nodes to related nodes through the links, across the network. How far the association spreads is determined by the strength of the associations between concepts (Anderson & Pirolli, 1984; Rabinowitz & Chi, 1987). Hasselhorn (1995) conceptualises spreading activation theory as a “representation and activation of the knowledge base in terms of a semantic network” (p. 146). In this way, “concepts are represented as nodes that are interconnected by associative links” (Hasselhorn, 1995, p. 146). The use of strategies to help highlight associations between stored information is fundamental to organizing and categorizing memory so that the information is more readily accessible during retrieval. Recall of one particular node may lead to the recall of other nodes that were semantically, thematically, categorically or otherwise linked (Bower, 1970; Rabinowitz & Goldberg, 1995). These concepts, namely the assertion that the activation of one node may activate another node, in a way that may be very difficult for the experimenter to predict, has its origins in the varied retrieval principle which will be discussed further below.
2.2.2 **Synergistic Ecphory**

The next theoretical principal that is relevant to eliciting accurate eyewitness recall is synergistic ecphory, a process of encoding and retrieving accurate information. Essentially, according to Tulving’s (1982, 1983) theory, this is the process that checks the information that has been retrieved and decides if it is correct or not. As stated by Hasselhorn (1995) “information acquired during a learning episode and thus represented in one’s knowledge base, can be retrieved by synergistic ecphory” (p. 148). Synergistic ecphory, includes two kinds of processes, ecphory and conversion (Tulving, 1983).

Ecphory refers to the associated links working together to establish and activate the memory trace and conversion relates to transforming potential memory into conscious awareness (Tulving). Ecpohoric processes are utilised by retrieval cues and are responsible for the activation of potentially relevant nodes in the knowledge base. Then the conversion process checks the pieces of knowledge activated by ecphory, to determine if the information is correct or not. This process then regulates the output, whether that is a behaviour or an answer, in a memory situation (Tulving, 1983; Weinert & Schneider, 1995). Synergistic ecphory aligns with propositions espoused by Koriat and Goldsmith (1996) concerning the report option decision processes people experience when deciding on what answer, if any, to volunteer in a memory recall situation.

2.2.3 **Report Option**

Koriat and Goldsmith (1996) examined signal detection theory for recognition and with concepts from metamemory, attempted to explain free-report memory regulation. Signal-detection theory and information from meta-memory have
implications for how people regulate what they report in their recall statements. Both imply that when reporting information from memory, people will attempt to monitor and control their output, editing out information that is likely to be wrong (Goldsmith, Koriat, & Weinberg-Eliezer, 2002). The monitoring mechanism subjectively assesses the correctness of the potential memory responses and the control mechanism determines whether to volunteer the best available answer, similar to the distinction between ecphory and conversion (Tulving, 1982; 1983). Control mechanisms work to set a confidence threshold or response criteria, where the answer is volunteered if it is deemed to be correct. To further explain how people screen information to determine what to report, two main principles are introduced. Firstly, grain size reporting (Goldsmith, Koriat, & Weinberg-Eliezer, 2002) refers to the level of detail people report when recalling memories. Generally, people tend to balance the need for specificity with the need to be accurate; therefore people will regulate the specifics of their answer to limit the chances of being proven incorrect. Secondly, report option (Goldsmith, Koriat, & Weinberg-Eliezer, 2002) refers to the response criteria options given to witnesses to say they do not know the answer, or to withhold or to volunteer information (Goldsmith, Koriat, & Pansky, 2005; Goldsmith, Koriat, & Weinberg-Eliezer, 2002; Koriat & Goldsmith, 1994; Koriat & Goldsmith, 1996a & 1996b).

Raising the response criteria with situational demands, such as incentives requiring the participants to be 100% correct has been shown to increase accuracy at the expense of quantity (Goldsmith & Koriat, 1999). Raising the response criterion resulted in fewer volunteered answers, a higher percentage of which are correct (less incorrect are volunteered) but a lower number of which are correct (answers that are not certain are less likely to be volunteered). Therefore, it could be predicted that the contrary is true. Setting the situation demands such that the response criterion is
lowered, by giving participants the option that it is acceptable to volunteer information that they may not be completely confident about, or that they may not remember the complete picture of, should result in more volunteered answers, a lower percentage of which are correct, but a higher number of which are correct.

If free recall is defined as an open ended opportunity for the witness to tell their story in their own words without interruption, then report option is particularly interesting to this study, as the CI mnemonic Tell All could be viewed as a free recall attempt with a caveat on response criteria. The Tell All cue encourages the person to tell everything they can remember even if they are not completely certain, thus lowering the response criterion to include information that may not have been volunteered without this change in task demands.

Additionally, report option has relevance to confabulation, the phenomenon where people replace gaps in their memory with imaginary experiences, which they believe are true (Baxter, Boon, & Marley, 2006; Gudjonsson & Clare, 1995; Shapiro & Purdy, 2005). Theoretically, confabulation has been found to result from a deficit in memory verification, which leads to false recall of the memory trace (Anastasi, 2006; Berrios, 1998; Dab, Claes, Morais, & Shallice, 1999; Dalla Barba, Mantovan, Cappelletti, & Denes, 1998; Dalla Barba, Nedjam, & Dubois, 1999; Deluca, 2005). Confabulation has been described as ‘honest lying’, where people genuinely believe that something occurred which did not (Dalla Barba, 1993). Inferences can be made here with Tulving’s theory of synergistic ecphory, whereby there is an error in the information checking processes. If there is an error in this checking process then people tend to accept inaccurate or confabulated information as true. People who confabulate information may be experiencing a flaw in the conversion process, or a flaw in the monitoring mechanism.
From the literature, research demonstrates that any given memory can be accessed through a number of possible paths, by utilising strategies which stimulate related nodes and links, thereby activating the memory trace and bringing the memory into conscious awareness. As predecessors to these memory theory developments, Tulving (1974) had theoretically identified two memory principles which could act as strategies for activating a particular memory. These are “encoding specificity” and “varied retrieval”, which formed the basis for the Cognitive Interview (Fisher & Geiselman, 1992). These two principles will be discussed in the following section.

2.2.4 Encoding Specificity and Varied Retrieval

The encoding specificity principle states that what is stored in memory is determined by what is perceived and how it is encoded; and what is stored determines what retrieval cues are effective in providing access to what is stored in memory (Tulving & Thomson, 1973). The implication for retrieval of memory is that “the likelihood of retrieving a memory will be enhanced where the characteristics and features of the retrieval cue match the characteristics and features of the encoded input trace” (Boon & Noon, 1994, p. 60). The memory codes we construct of an event are a reflection of mental processes, which are our personal constructions of an event (McConkey & Sheehan, 1995). The memory codes are interpreted in keeping with the context in which they were originally observed or experienced (Buckhout, 1974). This original context takes into account the psychological and personal factors of the witness and environmental factors of the event. This is important for eyewitness recall, because if the witness has not encoded the information correctly, they will not be able to recall correct information (Nyberg, 2002).
Further research which has examined the effect of cues that help to trigger memory is illustrated in a study by Godden and Baddeley (1975) where scuba divers learned word lists either on land or under water. The scuba diver’s recall of the word lists was better when the condition at encoding matched the conditions at retrieval. Similarly, Russo, Ward, Geurts, and Scheres (1999) demonstrated that environmental context is important for the accurate access to memory stores. The context dependent results illustrate an actualization of the encoding specificity principle, namely, if the conditions at retrieval match the conditions experienced at encoding, recall will be enhanced. Indeed, through studies on mentally reinstating the context, it has been demonstrated that mentally returning to the context can be as beneficial to recall as physically returning to the context (Clifford & Gwyer, 1999; Gwyer, Emmett, & Clifford, 1999; Schacter, 1996; Williams & Hollan, 1981).

Tulving’s principle of varied retrieval is that any memory may be accessed by more than one retrieval pathway and if the memory is not accessed by one cue, it may be accessed with the aid of another cue (Tulving & Thomson, 1973). As discussed previously, the activation of one node may be linked to other nodes; however, recall depends on how the person originally paired the node concepts. This pairing of concepts may be very idiosyncratic and difficult to elicit unless the correct node is activated. Thus the aim is to attempt retrieval along as many different pathways as possible to recall the information. The specific operalisation of these two memory principles into an investigative interview protocol will be discussed in Chapter Four.

2.3 Three Stages of Memory: Encoding, Storage and Retrieval

There are three stages of memory: acquisition or encoding, retention or storage and retrieval (Raskin, 1989). Errors in memory can occur during any of the three
stages. Yarmey (1990) asserts that there are both “errors in omission” and “errors in commission”; errors in omission includes failure to pay attention to the stimulus, while errors in commission refers to interference caused by thoughts, emotions and external stimuli (Gudjonsson, 1996). These two error categories can be related to errors that will be discussed later in this chapter; estimator and situation variables, the former relating to the stimulus encoding and the latter referring to stimulus storage and retrieval (Py & Rainis, 2001).

2.3.1 Encoding

The encoding stage of memory involves establishing a memory trace (Stewart, 2002). As events are observed, information is stored about that event in memory. Events are encoded as mental representations of the event. Fisher and Geiselman (1992) assert that there are three main principles which determine how knowledge is coded. First, memory traces reflect the mental processes that were applied at the time the event was initially perceived. Second, knowledge is represented in terms of its features as components. Third, each event or unit of knowledge is represented in many different codes (Fisher & Geiselman).

Both perception and memory are commonly thought to be like a video recording, with witnesses able to accurately “replay” the images, hours, days or years later (Buckhout, 1974). It is generally accepted by the public that people can encode information clearly and accurately, however, perception is not immune to variables which can confound accurate memory. Perception, as described by Gregory (1980), is an active and constructive process. It is the product of the interaction between the stimuli and internal variables, such as schemas, prior knowledge, motivations and
emotions (Neisser, 1967; Tuckey & Brewer, 2003). These variables are prone to error, and therefore, perception may be biased and inaccurate (Ainsworth, 2002).

Perceptual illusions demonstrate, in several different ways, that what people think they see may not be what they are experiencing. For example, Gestalt perceptual illusions show us that people will try to fill in gaps in information. For example, if you give someone a drawing of a circle with a small section missing, they will still say that it is a circle, because they perceive the circle as complete - this perceptual illusion is called closure (Ainsworth, 2002). This particular perceptual flaw has implications for eyewitness testimony, for if the witness has missed some information, they may tend to try to fill in the missing details with what they think probably happened. When police receive the statement, it is difficult to recognise a ‘real’ part from a ‘filled-in’ part. Additionally, line and distance illusions, where for example, a line may seem shorter or longer depending on the distance it is away, displays a flaw in the perceptual system that has implications for eyewitness reporting of an accused’s height, or distance away from a particular landmark (Ainsworth, 2002). Therefore, perceptual illusions illustrate the tendency for participants to make sense of what they perceive, and this may not be accurate.

Witnesses may actually report what they did perceive; however that information may not be factually correct. In an experiment by Duncan (1976), two groups of Caucasian participants were questioned about an argument they had just seen. In one scenario, an African American man argues with, and pushes, a Caucasian man; in the other scenario, a Caucasian man argues with, and pushes, a Caucasian man. After the encoding, the participants were asked questions about what occurred in the event that they witnessed. Seventy percent of the participants categorized the African American man’s actions as “violent behaviour”, while only
13% categorized the Caucasian man’s behaviour as violent. This demonstration shows that although both groups saw a very similar video (different only due to the race of the actors), their hypotheses, schemas, expectations, stereotypes and perceptions created two very different versions of the events.

Selectivity, or attention, also influences perception and encoding, in that a witness will normally only be able to take in a limited amount of information during the event (Cook & Wilding, 2001). For example, according to Salience Theory, most people will look to the most vivid or salient information, disregarding any attention paid to more secondary information (Shaw & Skolnick, 1999). Attention selectivity can be illustrated by the phenomenon known as weapon focus, where a witness will spend a disproportionate amount of time focusing on a weapon, which decreases the amount of time available for attention to other stimuli (Cooper, Kennedy, & Herve, 2002; Kassin, Tubb, Hosch, & Memon, 2001; Mitchell, Livosky, & Mather, 1998; Pickel, French, & Betts, 2003). For example, Loftus, Loftus and Messo, (1987) found that people focused on a gun much more than on a checkbook in a customer and bank teller scenario.

In addition, from the viewpoint of traffic incidences or car crashes, the opportunity to give attention to, and perceive, an event is already compromised by the speed at which the crash occurs. The ability of witnesses to perceive and accurately encode the details of a traffic incident is a very difficult task due to the speed of the event (Olson & Sivak, 1986). For example, in a car crash, at 48 kilometres an hour, the airbag will deploy at 30 milliseconds from the start of the crash, the head will hit the steering wheel in 70 – 100 milliseconds from the start of the crash, the vehicle will become relatively stationary at 250 milliseconds and in one second the crash is over (Kerkhoff, Husher, Varat, Busenga, & Hamilton, 1993). With the reporting of details
surrounding a car crash, the events occurring directly before and directly after the crash are crucial to understanding the circumstances surrounding the event.

As stated, there are several variables which can inhibit accurate recall. Errors that occur during the acquisition or encoding stage are affected by both situational and estimator variables (Py & Rainis, 2001). These two variables are also referred to as stimulus and subject variables (Gudjonsson, 1996) and event and witness variables in eyewitness testimony literature (Loftus, 1979).

Situation variables include any environmental or personal factors which occur at the time of encoding of the incident. The manner in which a memory has been encoded may affect the retrieval process. For example, memories encoded during high levels of emotional arousal may be more difficult to retrieve initially (Gudjonsson, 1996; Loftus, 1993). Other variables include weapon focus, lighting and stress on the witness. These variables are not under the control of the forensic system. The forensic community does not have control over the factors that were present when the incident occurred, however these variables can impact on the opportunity to gain accurate information from witnesses.

2.3.2 Storage

The storage stage of memory occurs between encoding and retrieval. Storage of memory can be distorted in several ways. Distortions occurring in the storage stage of memory can be influenced by the retention interval, where the passing of time causes memory deficits (Nelson & Goodmon, 2003). This is largely thought to be due to normal forgetting (Hall, Loftus, & Tousignant, 1984; Yarmey, 1990). Additionally, our own personal schemas can cause distortions in the storage stage of memory. According to Schema Theory (Schank & Abelson, 1977), familiar events have a schema or script because of prior experience. For example, most people know
what is expected of them when they go out to a restaurant, based on preconceived schemas and scripts. If there is information missing from their memory about the event, they are likely to include information which they think would be true, whether it is accurate or not.

According to working memory theory, information that has been encoded should be stored in long term memory for long periods of time (Baddeley & Hitch, 1974). Therefore the problem becomes how to retrieve the information. Nelson and Goodmon (2003) assert that forgetting is caused by a loss in the strength of the retrieval cue, which results in a lack of access to the original memory. The memory trace can also become distorted, and postevent information can be introduced. The media, police interview techniques, talking to other witnesses, and other interference such as unconscious transference (Ellis, 1984; Loftus, 1993), can mislead eyewitnesses.

There are three main arguments about what happens to the original memory trace if distortions have occurred. Loftus (1993) states that the original memory is altered by the misleading information or distortions, while Bekerian and Bowers (1983) support a coexistence of memory, where the original memory and the postevent information coexist, but the introduction of the misleading information makes it more difficult to reach the original memory. McCloskey and Zaragoza (1985) maintain a ‘nonimpairment’ position, which states that the underlying original memory is intact, but the response from the witnesses is altered. Whichever of these theories is correct is debatable; however, it has been shown that once witnesses have altered their memories because of postevent information, it is very difficult to access the original memory again (Blank, 1998).
2.3.3 Retrieval

Errors that occur during the retrieval stage are contingent on the individual’s ability to accurately recall information from their memory stores. This can sometimes be facilitated by cues or mnemonics, which are used to aid the subject in recovering the memory (Loftus, 1993). Experimentally, it is thought that free recall, with no cues to aid retrieval, is more difficult for subjects than cued recall, where cues are used to stimulate retrieval (Ellis et al., 1985). It is at retrieval where principles such as encoding specificity and varied retrieval are utilised. Recognising that the memory trace is somewhat dependent on the encoding conditions and that the encoded trace may be accessible through variable pathways has encouraged a multi-modal approach to accessing memory.

While the legal system has no control over the situation in which the offence is observed, or in the characteristics of the witness, they do have some control over the retrieval of information. These variables are estimator variables in that they refer to the witness’s attempts at retrieval (Py & Rainis, 2001) and include: questioning, line-up procedures, and the use of leading questions (Wells & Malpass, 2000). Variables that are under the control of the legal system and have been shown through scientific studies to affect eyewitness accuracy, benefit from research that highlights new ways of helping eyewitnesses to retrieve accurate memories. The method of questioning should be thought of as helping the witness to accurately reconstruct past events. Ainsworth (2002) asserts that it should not be assumed that witnesses are capable of performing such complex feats, as correctly encoding, storing and retrieving information. As discussed earlier, current trends are toward setting new standards for police interviewing which fall in line with scientific research. This will be discussed in more detail in the following chapter.
An important aspect of eyewitness recall is the "misinformation effect" where people who are misled regarding events will integrate new, inaccurate postevent information into memory (Garry & Loftus, 1994). This misleading information can come from leading questions and negative or positive feedback (Gudjonsson, 1996; Loftus, 1993). Suggestive questioning, or the particular wording of questions aimed at eyewitnesses, has been shown to influence the accurate recall of the target memory (Wells, 1993). Misleading questions increased the likelihood that a witness would report the incorrect information by a factor of six (Wells, 1993). As argued previously, most memories are an amalgamation of original memories, and subsequent (misleading) information. “It would be unusual for any witness to be capable of producing a complete and objective account of an incident” (Ainsworth, 2002, p. 75).

The ability of researchers to make subjects believe that they had seen or heard something they had not, established that the accuracy of eyewitness performance can be compromised by misleading post-event information (Zaragoza & Lane, 1994). Loftus has conducted well-known studies to examine the effects of postevent information on witness recall (see Loftus & Palmer, 1974; Loftus, 1979; 1992). The experiments have demonstrated that the researcher could, for example, supplement memory by implanting a memory for an object when the object did not exist in the original stimulus.

Additionally, Loftus (1993) introduced new information during questioning, and was able to change a “stop” sign to a “give way” sign in some subject's memories. While there is a debate regarding whether post event information, in the form of leading questions or feedback, actually alters memory, or if the results are simply due to biased testing methods (Garry & Loftus, 1994; Zaragoza & McCloskey, 1989), the
results achieved from studies, with different methodologies and different populations, supports the misinformation effect hypothesis (Hall, Loftus, & Tousignant, 1984; Trouve & Lubkuman, 1992; Ward & Loftus, 1985; Wells, 1993; Zaragoza & Lane, 1994).

Distortions which occur during the retrieval stage can include errors due to suggestive questioning; the wording of questions is one example of where distortions may occur during the retrieval stage, and may lead to slightly but importantly different estimations (Loftus & Palmer, 1974). For example, Loftus and Palmer (1974) devised a study where participants viewed a car accident. They were later asked to estimate the speed at which the car was traveling. The key words were changed from how fast the car was traveling when it “hit”, “contacted”, “bumped” or “smashed” into the other car. The average for the group, who heard ‘contacted’, was an estimated 31mph, while the group that heard ‘smashed’ estimated 41 mph. While neither question was particularly ‘leading’, the results were still influenced by the wording of the questions. Following on from this, participants were asked if they saw broken glass; findings showed that only 14% of those told the cars ‘hit’ said yes, but 30% of those who were told the cars ‘smashed’ thought they saw broken glass (there was no broken glass). The witnesses’ expectations were altered when they envisioned the incident as two cars smashing and expected to see broken glass. Therefore it is important that interviewing procedures refrain from corrupting post-event information being introduced.

2.3.4 Confidence and Accuracy

Research has also demonstrated that witnesses can be erroneous in their perceptions of how accurate they were in their recall (Ebbesen, 2000; Yarmey, 1986;
Wells et al. (1998) reported that witnesses tend to overestimate their accuracy. It has been found that there is a low or non-significant correlation between confidence and accuracy, even though juries tend to believe a confident witness (Ebbesen, 2000). Deffenbacher (1980) states that the level of correlation between confidence and accuracy is lower when there are more difficult conditions at either encoding or retrieval. Kebbell and Giles (2000) found that participants were more confident in their answers to lawyers’ questions which were confusing when compared to simple questions. BarTal, Sarid, and Kishon-Rabin (2001) replicated Kebbell and Giles’ research (2000) and found that there was significantly more overconfidence in response to difficult items, a phenomenon called the Hard-Easy effect. Suantak, Bolger, and Ferrell (1996) also found a systematic increase in confidence as item difficulty increased. Cutler and Penrod’s (1989) study indicated that increased difficulty produced less accuracy but more overconfidence, a pattern also supported by Shaw and Zerr (2003) and Olsson (2000).

Yarmey (1986) examined participants’ subjective estimates of accuracy and completeness of recall, by asking participants to indicate on a 0% to 100% scale how accurate or complete they thought they were. Findings indicated that in a night viewing condition, which was considered a difficult condition at encoding due to the low lighting levels, participants estimated that their accuracy of free reports was 74% correct, which was a conservative estimate. Findings also demonstrated that participants indicated that they thought they were, on average, 65% complete, when in fact they had recalled, on average, only .06% of the information available. This demonstrates that under difficult encoding conditions, participants were overconfident in their estimations of completeness of their recall abilities.
2.4 Psychological Experiments with Witnesses

Many psychological experiments have focused on the ability of witnesses to an event to accurately recall what happened. For example, Munsterberg (1908, cited in Smith, 1981) devised an experiment where trained observers witness an event. In the analysis of the reports, they found that a “large amount of relevant information was omitted and a large amount of incorrect information was included” (Smith, 1981, p. 15).

Marshall (1980) conducted a study where 167 first year law, 102 police trainees, and 22 low income community members were shown a film and told to pretend it was real. Out of 115 possible correct items, the average number of items recalled by law students was 14, by police 10.3 and by the low income community group 5.3. These scores can be converted into percentage correct scores and result in 12%, 9% and 4% correct, respectively. These findings indicate that eyewitness recall is incomplete at best. Incorrect recall scores were as follows: law students 2.8, police trainees 2.5, and low income persons 1.6. These experiments demonstrate that eyewitness recall, even from witnesses who are trained to be aware, is incomplete and often incorrect.

Buckhout (1974) comments: “In private, most lawyers and judges agree that the recall of a crime by a witness is very bad, but they still believe people can successfully identify a suspect” (p. 30). The findings from these experiments illustrate the incompleteness and inaccuracy of information received from witnesses’ perception, memory and recall and therefore, of testimony. These problems compound when other impinging variables come into play.

A critique conducted by Kebbell and Wagstaff (1999) examined investigative interviewing and found that the way in which witnesses are interviewed determines
the amount and accuracy of the information obtained. They assert that more complete and accurate information can be achieved by employing competent interviewing techniques such as, free recall, rapport, open ended questions, avoiding suggestive questioning and patience on the part of the interviewer. They maintain that the National Crime Faculty in the UK recommends these skills. It was recommended by Kebbell and Wagstaff (1999) that members of the forensic community, including police trainers and police officers themselves, should be trained in appropriate interview techniques and that they should adopt these techniques when they are interviewing witnesses.

2.5 Chapter Summary

Basic human memory processes are encumbered with variables that do not facilitate a clear and accurate memory. During any of the three stages of memory, encoding, storage or retrieval, incorrect information can contaminate a memory trace making recall of accurate information difficult at best. As discussed, faulty perception can inhibit the accurate encoding of memory, and the storage of accurate memories can be affected by variables such as time delays. Correct information can be altered at the retrieval stage by a range of variables including suggestive questioning, valienced feedback and discussions with other witnesses (Yarmey & Morris, 1998). These variables, which negatively affect accurate recall, must be considered when discussing eyewitness retrieval.

However, advancements can be made which help to provide a framework for interviewing witnesses which does not unnecessarily increase inaccuracy. Memory principles such as encoding specificity and varied retrieval provide an understanding of how people retrieve memories. These two principles can be operationalised as
memory enhancing cues to provide law enforcement personnel with new skills which can help them to retrieve more complete and accurate statements from witnesses. The current research focused on the effects of interventions at retrieval, and how certain skills and cues utilised by interviewers can help witnesses to remember more. It is in this retrieval stage where changes to law enforcement protocol can help to alleviate the possibilities of recalling incorrect information. In particular, improvements to police interviewing procedures can help witnesses to recall information that is more accurate.
Chapter 3: Legal Perspectives on the Eyewitness

3.1 Importance of Investigative Interviewing to the Forensic Community

3.2 Training Officers in Investigative Interviewing

3.3 Road Incident Statistics

3.4 Chapter Summary
Despite an extremely large expenditure of time and money on training in basic investigative interviewing, witness interviewing remains the Achilles’ heel of police investigations (Ede & Shepherd, 1997, p. 79).

3.1 Importance of Investigative Interviewing to the Forensic Community

This chapter endeavours to illustrate the importance of investigative interviewing in the context of the forensic community to demonstrate the need for effective and efficient interview procedures for the interviewing of witnesses. Police officers indicate that eyewitnesses are the most important part of a police investigation (Geiselman & Fisher, 1989; Kebbell & Milne, 1998; Kebbell & Wagstaff, 1997; Milne & Shaw, 1999). Police surveyed also believed that witnesses usually provided the central leads in an investigation (Milne & Shaw, 1999). Other studies have shown that the key determinant of whether or not a case is solved is the accuracy of eyewitness accounts (Rand Corporation, 1975; Sanders, 1995).

In fact, it has been asserted that eyewitness testimony comes second only to a confession in its ability to influence a jury (Wakefield & Underwager, 1998). Trials introduce bodies of information for the jury and a credible and confident witness is able to influence a jury. The criminal justice system relies heavily on information provided by the eyewitness; however, the system may have unrealistic expectations about the witnesses’ ability to provide objective and accurate information (Ainsworth, 1998). Psychologists such as Cutler and Penrod (1995) have asserted “that courts should be made aware of the difficulties faced when trying to evaluate the likely accuracy of eyewitness testimony” (Ainsworth, 2002, p. 77). This again highlights that psychology researchers and the legal system have varying ideas about the veracity of eyewitness statements.
Juries tend to believe eyewitness statements. However, the error rate of eyewitness identification has been reasonably high, as shown through real-life court situations as well as research studies (see Innocence Project, 2003; Py & Rainis, 2001; Wagstaff, Macveigh, Boston, Brunas-Wagstaff & Cole, 2003; Wells & Malpass, 2000: Wells & Olson, 2003). As discussed earlier, current trends are toward setting new standards for police interviewing which “fall in line” with scientific research.

A study of officers’ perceptions in the United Kingdom has indicated that one main criticism police have of eyewitnesses, is that eyewitnesses rarely provide enough information (Kebbell & Milne, 1998). Additionally, police officers have indicated that they rarely have enough time to conduct quality eyewitness interviews (Kebbell & Milne, 1998). Ede and Shepherd (1997) state that many police officers think a good witness statement is one that is “chronological, plausible, non-contradictory, confirms other evidence and addresses the points that need to be proved in any offence” (p. 80). This statement is central to the law enforcement perspective of what needs to be elicited from eyewitnesses.

3.2 Training Officers in Investigative Interviewing

Ainsworth (2002) argues that policing is about understanding and dealing with people, and that most tasks expected of a police officer involve simple interactions with members of the public. Further, Ainsworth states that comparatively little training time is devoted to teaching police officers how to deal with these situations successfully. Wright and Holliday (2005) found that officers indicated that they were inadequately trained to deal with witness interviewing. Training is often not formal, but given by other officers who pass on information learned on the job. Research studies have shown that even when officers are instructed to follow a specific
program, they do not always follow the protocol set out in the training (Clarke & Milne, 2001).

Ede and Shepherd (1997) agree stating that the tradition of not formally training police officers in interviewing skills has caused a “widespread and fundamental deficit in interviewing skills among uniformed officers and specialist investigators” (p. 63). Further, they assert that police officers tend to view classroom learning as ‘unreal’ and learning ‘how to interview’ on the job as ‘real’ policing. The problems inherent in neglecting to suitably train police officers in interviewing skills has prompted Ede and Shepherd to declare that, “witness interviewing remains the Achilles’ heel of police investigations” (p. 79). Indeed, they identify “chronic investigative skills deficits” as one of the barriers to effective and ethical investigations (p. 62).

When police are trained in interviewing, it is usually concerned with interviewing suspects, and time is not spent on training to interview cooperative witnesses. Sanders (1995) reports that 98% of United States police officers received no training in witness interviewing. George and Clifford (1993) assert that although eyewitness information is extremely important, police detectives receive only minimal, and often no training in effective methods of interviewing cooperative witnesses. In the United Kingdom, George (1991) stated that there was substantial variation in the training between police forces; with six forces reporting no training and ten forces giving training of less than one day in length. In these situations, most of the trainers are police service members (Ainsworth, 2002).

The situation where police officers are not trained to conduct quality interviews has prompted Ede and Shepherd (1997) to comment on the implications of these circumstances. They go so far as to state that the courts cannot assume that the
police officer had the necessary skills to conduct an effective interview. Further, the
court has a right to know which officers were skilled in interviewing and which were
not. The ramification of substandard interviews places the burden of adequately
training officers back on the police departments. This implies that if the departments
do not train the officers adequately, in recognised protocols, then the courts may
assume that the officers are not trained sufficiently, therefore decreasing the validity
of any witness statements.

In the United Kingdom, suspect interviewing and witness interviewing are
subsumed under the title, ‘investigative interviewing’, highlighting that there is little
difference in training or enacting interviews with different populations (Milne & Bull,
interviewing in the United Kingdom, 58 interviews concerning petty crime and 17
interviews concerning serious crime (homicide) were evaluated.

Clarke and Milne (2001) reported that the standard of these interviews was
poor and contained little, or no, evidence of the recall techniques being used. In
particular, they asserted that the interviews conducted concerning petty crime were
really efforts in statement taking and not interviews at all. “The whole process seems
to have been dominated by a sense of haste rather than an (increasingly rare)
opportunity for the police to obtain information which may prove to be valuable in the
prosecution (or elimination from enquiry) of persons suspected of a crime” (Clarke &
Milne, 2001, p. 105). Therefore, it has been shown that even when police officers are
trained in interviewing, little may change in practice.

More stringent training and use of research knowledge can benefit the legal
system. Eyewitness Evidence: A guide to law enforcement (1999) is a guide which
was formulated and documented, due in a large part, to a high percentage of false
imprisonments based primarily on eyewitness accounts. Janet Reno, then the Attorney General of the United States Department of Justice, assembled the authors of the Guide, in an attempt to curb the amount of inaccurate testimonies recovered from witnesses. The Guide documents recommended changes to the way police deal with eyewitnesses including; line-ups, photo spreads, and interviews. While the Guide recommends these changes, no formal exclusion rules have been made by the judiciary system to compel investigators to adhere to the recommendations (Wells et al., 1998; Wells & Seelau, 1995). Nevertheless, the New Jersey police department has been one of the first United States police forces to attempt to implement the recommendations (Hansen, 2001; Koleta & Peterson, 2001).

Psychologists have conducted considerable research into eyewitness testimony and the accuracy of recall under a wide range of conditions (Loftus, 1979; Mandler, 1992; Revelle & Loftus, 1990). The Cognitive Interview (CI) introduces concepts from cognitive and social psychology and provides police officers with a range of skills and techniques that can help witnesses remember as much as they can (Fisher & Geiselman, 1992). Acceptance of the CI by police forces has been positive, given that police forces are normally not at ease with academics offering advice and training.

3.3 Road Incident Statistics

In relation to investigative interviewing, police need to interview witnesses to many different types of events. One area is interviewing witnesses to road incidents. The prevalence of road incidents including injury or death is very high, thus the importance of gaining accurate information from witnesses to these events is imperative. Since 1925, when record keeping commenced in Australia, over 166,000 people have died in fatal road incidents (Australian Transport Safety Bureau, 2005). In a benchmark of road safety, Australia’s road fatality rates in 2004 were below the
median rates for Organisation for Economic Cooperation and Development (OECD) countries. According to the Australian Transport Safety Bureau, in 2004, Australia had the 11th lowest rate of fatalities per 100,000 population. Australia’s highest number of deaths from road crashes occurred in 1970, when fatalities accounted for 30.4 deaths per 100,000 population. Australia has been successful in reducing that number; in 2005, the fatality rate had dropped to 8.0 deaths per 100,000 population. However, the picture is still bleak, in 2005, 787 drivers, 347 passengers, and 223 pedestrians were killed in road incidents (Australian Transport Safety Bureau, 2006).

Although, the loss of life is substantial, the financial costs are also significant. According to 1996 data, the estimated cost of road crashes to the community, in Australia, is 15 billion dollars per annum. Data collected from 1989 indicated that the cost to the community of each road fatality is $513,000 (QPS, 1991).

At a state level, in Queensland, in 2005, there were 328 fatalities, including 156 drivers, 65 passengers, 37 pedestrians. These figures made Queensland the third highest state for fatalities behind New South Wales and Victoria. In addition to fatalities, in Queensland, the casualty rate for non fatal injuries included 5722 people requiring hospitalisation, 7214 required medical treatment and 4612 received other injuries, for a total of 17,858 people having been injured or killed resultant from road incidents (Queensland Transport, 2005). Further, if property damage, which is additional to injury and death, is included in the statistics, there were 22,083 crashes reported in Queensland, in 2003.

Due to the prevalence of road crashes and the cost to the community in both life, injury and monetary terms, it was decided that the importance of witness testimony concerning these events should not be underestimated. Therefore, the stimulus utilised in this current research project depicts a serious road crash. The
intended outcome is to identify interview procedures which elicit the most accurate information from witnesses to road crashes.

3.4 Chapter Summary

Law enforcement personnel have high expectations of eyewitnesses, generally originating from the concept that witnesses are rarely wrong and provide quality leads for an investigation. As more psychological research is conducted to demonstrate that witnesses can be influenced by the techniques used by police officers, police departments are beginning to recognise the need for improved protocols for the way in which they interview witnesses. Some police departments are beginning to invest more time and funding on improving police skills generally; however, there does not seem to be a significant increase in the day-to-day usage of the skills that officers have been trained in. This apparent deficit in police interviewing skills has prompted psychologists to argue that the courts and juries should be made aware of the flaws inherent in both witness recall and police interviewing skills, both of which combine to create a situation where eyewitness retrieval is vulnerable to inaccuracies.

The importance of accurate eyewitness recall cannot be underestimated. The expectations of the court systems to receive information from witnesses that has not been compromised by poor interviewing skills places expectations on police training to adequately provide officers with the skills they need to perform interviewing tasks successfully. Additionally, the impact of road crashes on the community in terms of both life and financial loss has prompted the research to utilise road incidents as the stimulus material for the witnesses to recall.
**Chapter Four: The Cognitive Interview Procedure**

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1 The Cognitive Interview (CI)</td>
<td>45</td>
</tr>
<tr>
<td>4.2 The Enhanced CI</td>
<td>47</td>
</tr>
<tr>
<td>4.2.1 Communication Skills</td>
<td>47</td>
</tr>
<tr>
<td>4.2.2 Rapport</td>
<td>48</td>
</tr>
<tr>
<td>4.2.3 Transfer Control</td>
<td>49</td>
</tr>
<tr>
<td>4.2.4 Interruptions and Verbal and Non-Verbal Communication</td>
<td>50</td>
</tr>
<tr>
<td>4.3 Empirical Evidence of the Effectiveness of the CI</td>
<td>51</td>
</tr>
<tr>
<td>4.3.1 Training of the CI</td>
<td>51</td>
</tr>
<tr>
<td>4.3.2 Comparisons between the CI and Control Interview</td>
<td>54</td>
</tr>
<tr>
<td>4.3.3 Correct Information</td>
<td>55</td>
</tr>
<tr>
<td>4.3.4 Incorrect Information</td>
<td>56</td>
</tr>
<tr>
<td>4.3.5 Accuracy</td>
<td>57</td>
</tr>
<tr>
<td>4.3.6 Forensic Relevance</td>
<td>58</td>
</tr>
<tr>
<td>4.4 Individual Components of the CI</td>
<td>59</td>
</tr>
<tr>
<td>4.5 Brief Overview of the Unique Contributions of the Thesis</td>
<td>63</td>
</tr>
<tr>
<td>4.6 Chapter Summary</td>
<td>66</td>
</tr>
</tbody>
</table>
*The cognitive interview (CI) is one of the best examples of how psychology and policing can be brought together productively* (Ainsworth, 2002, p.80).

4.1 The Cognitive Interview (CI)

Research has shown that some memory tools are effective in increasing the accuracy of recall (Dasgupta, Juza, White, & Maloney, 1995; McConkey & Sheehan, 1995). For example, the forensic community utilized hypnosis as a memory-enhancing tool, until it was deemed inadmissible in court in the United States, due to both increases in inaccuracy of recall and concerns about suggestibility and false confidence (Bond & McConkey, 1995; Dywan, 1998; Scheflin & Frischholz, 1999). In an endeavour to create a memory enhancing tool that would be admissible in courts and to retain high accuracy, researchers have attempted to develop memory tools to facilitate the recall of eyewitness memory (Geiselman & Fisher, 1984; Gudjonsson, 1996). One such memory tool is the Cognitive Interview Procedure (CI). Geiselman and Fisher (1984) developed the CI to enhance the recall of eyewitnesses memory for events. The original CI is made up of four memory mnemonics, which aid the eyewitness in retrieving their memory. These original four memory mnemonics require the witness to: (a) report everything (Tell All: TA), (b) reinstate the context (Reinstate Context: RC), (c) recall the events in a different temporal order (Change Time: CT), and (d) change perspectives (Change Perspective: CP) (Fisher & Geiselman, 1992). The CI is founded on Tulving’s basic theoretical principles concerning the retrieval of information from memory; the four mnemonics are based on the encoding specificity principle (Flexser & Tulving, 1978; Tulving, 1974; 1991; Tulving & Thomson, 1973) and the principle of varied retrieval (Tulving, 1974; Tulving & Thomson, 1973).
The first two mnemonics, “Tell All” and “Context Reinstatement”, are based on the encoding specificity principle, which states that: “the likelihood of retrieving a given memory will be enhanced where the characteristics and features of the retrieval cue overlap with those of the encoded input trace” (Boon & Noon, 1994, p. 60). The first mnemonic, Tell All, is based on the first theoretical principle and requires the witnesses to report everything that they can remember about the event, even if they think it is not important. While this mnemonic aims to increase recall by increasing the potential to activate cues available from encoding, it also lowers the response criterion, thus encouraging the witness to volunteer more information, including information that they may not be sure of. The second mnemonic, Context Reinstatement, requires the witness to reinstate the context at the time of the incident. This includes mentally recreating their physiological state, as well as the environmental context that existed at the time of the incident.

The following two memory mnemonics, “Change Time Order” and “Change Perspective”, are based on the theoretical principle of varied retrieval which assumes that there are multiple retrieval pathways to a memory and what is not readily available with one pathway may be available with another (Memon, Holley, Milne, Koehnken, & Bull, 1994; Tulving & Thomson, 1973). The theoretical assertion of varied retrieval is that “any given memory can be accessed by more than one retrieval path and that if that memory is unrecovered with the aid of one retrieval cue then it might still be recovered by an alternative route with the aid of a different cue” (Boon & Noon, 1994, p.60). The third mnemonic, Change Time Order, states that subjects should attempt to recall events in a different order, such as recalling the event from the last thing that occurred back to the first thing that occurred (Boon & Noon, 1994; Tulving, 1974). The last memory mnemonic or retrieval opportunity, Change
Perspective, requires subjects to report the event from a different perspective, for example from the perspective of someone else at the scene or even from the viewpoint of the victim or perpetrator (Anderson & Pichert, 1978; Boon & Noon, 1994; Memon et al., 1994).

4.2 The Enhanced Cognitive Interview (ECI)

The original cognitive interview was refined by Fisher and Geiselman (1992), in order to expand upon the core memory mnemonics and to include social communication techniques (Memon, Wark, Bull, & Koehnken, 1997). Fisher and Geiselman (1992) designed the Enhanced Cognitive Interview (ECI) based on knowledge about good and poor interviewing skills. New principles of memory research and the social psychology of communication skills were added to maximise the interview as a social interaction. Hollingshead and Brandon (2003) assert that communication is a valuable tool for retrieving information from other people. The social communication techniques included in the ECI comprise rapport building, transferring control of the interview to the witness and verbal and non-verbal communication (Memon et al., 1997). Rapport building, transfer of control and verbal and non-verbal communication will be discussed below. Firstly, it is worthwhile to discuss classical communication theory and how interactions are influenced by the interviewer, the witness and the context.

4.2.1 Communication Skills

As a basic component of the ECI, the training of communication skills is an important and necessary part of providing adequate training to officers. An interview is an interaction between two people (Memon et al., 1997). At the simplest level, the communication models espoused by Johnson (1992) and Verderber and Verderber
(1998), demonstrate that there is a range of variables that interact when two people attempt to communicate. The essence of the models of interpersonal, interactive communication is that a sender and a receiver must both encode and decode messages. The sender must put their thoughts into words which can be sent to the receiver. The receiver must correctly decode the words and interpret their meaning before making or encoding a response and sending that response back to the original speaker. Many variables may impinge on the receiver being able to accurately decode the message. With reference to investigative interviewing, the sender (police officer) must encode their message (questions and prompts) and send it to the receiver (witness) who then must correctly decode the message, structure a reply (answer) and send the feedback message back to the original sender.

4.2.2 Rapport

The ECI has a much greater emphasis on communication skills, such as greeting the witness and rapport building. Rapport has been ranked a number one priority by police officers, who see it to be more effective and use it more often than other techniques (Milne & Bull, 2000). The greeting and rapport phase includes personalising the interview, for example, in introductions by using the witness’s name and shaking hands. Rapport also consists of communicating some empathy (“I know this is a difficult task”) (Fisher & Geiselman, 1992). Telling the witness that you, as the interviewer, do not know what happened helps to maintain rapport, as well as transferring control to the witness. Fisher and Geiselman (1992) assert that rapport is enhanced when the interviewer is seated facing the eyewitness. This positioning is aided when the room set-up is beneficial to clear and equal communication between the two parties. However, Milne and Bull (2000) assert that sitting side to side indicates cooperation, while a 120 degree angle is optimum for communication.
Collins, Lincoln, and Frank (2002) conducted a study that examined the effect of rapport on eyewitness recall. They created three interviewer-attitude conditions: “rapport”, "neutral", and "abrupt". The results demonstrated that participants in the rapport interview recalled more correct information and the same amount of incorrect information as participants in the other two conditions. Participants in the rapport condition reported that the interviewer’s friendliness made them “try harder” (p. 76). These results led the authors to conclude that the rapport aspect of interviewing is extremely important and should be included in training of all interviewers. Millwee et al. (2001) also state that a proper attitude and asking open-ended questions can lead to increases in information. The proper attitude consists of being sensitive toward the witness and treating them with respect.

4.2.3 Transfer Control

According to the ECI, transferring control is one of the communication skills which is accomplished by explicitly telling the witness that the interviewer does not know what happened in the incident and that the witness has to concentrate and “do the work” (Fisher & Geiselman, 1992). Rapport, combined with transfer of control is thought to increase the flow of information (Fisher & Geiselman, 1992; Memon, 1996).

Transfer of control of the interview is performed throughout the interview; however, the main time for transferring control is in the rapport building stage. The interviewer can transfer control by asking open ended questions, allowing the witness to have free recall without interruptions, timing questions, using appropriately probing questions, admitting that the interviewer does not know what has happened and generally allowing the witness to answer in their own time and at their own pace.
Placing power with the witness makes the witness more likely to be an active participant in the interaction. The witness can then give a more uncontaminated version of events and not be influenced so much by the police officers questioning. Although it may seem that the interviewer is relinquishing control of the interview, the interviewer still retains control over the interview (Fisher & Geiselman, 1992). The interviewer’s responsibility then, is to make the witness believe, or feel, as if they have control (Fisher & Geiselman, 1992).

4.2.4 Interruptions and Verbal and Non-verbal Communication

In terms of interrupting the witness, it is asserted that the interviewer should not interrupt the witness too much (Fisher, Geiselman, Raymond & Jurkevich, 1987). The witness has to be left to tell their story without constant interruptions that stop the witness’s flow of thought. Interviewers should not interrupt the witness during a response, as interrupting too early may lose quality information. In a study conducted by Fisher et al., (1987), interruptions differentiated between effective and ineffective interviewers. Detective’s interviews were examined. The detectives requested a free narrative of events, and then interrupted the witness after an average of only 7.5 seconds. As most information is usually elicited in the free narrative phase; interruptions curtail the witnesses’ memory search and make them focus on the question asked (Fisher et al., 1987). All of the reviewed interviews had interruptions, thereby limiting the amount of information retrieved. In addition, questioning style impacts on the quality of information received from witnesses. Open-ended questions elicit a more narrative response where interviewers can gain important information, while closed-ended questions elicit short answers where the witness may leave out important information (Millwee et al., 2001).
The interviewer must explain what they hope to achieve from the interview, as well as set the ground rules for the interview process. For example, they should explain that the witness will have to concentrate, and explain that the interviewer does not know what happened and it is up to the witness to make the interviewer understand. Additionally, ground rules usually apply to statements which the witness should be made aware of, such as explaining to the witness that they can say ‘I don’t know’ and telling the witness that they may take a break if needed.

Some aspects of non-verbal communication which aid rapport and the interview process have already been referred to, and include seating position, eye contact and shaking hands. Fisher and Geiselman (1992) espouse other non-verbal communication techniques that could encourage recall in the eyewitness. They state that in circumstances where the incident is difficult to explain in words, such as airline incidents or road crashes, it may be useful to allow the witness to respond non-verbally, for example, by using sketches to draw intersections, model cars to show placement and to show the flow of movement that occurred. They also state that the witness should be allowed to act out an event, if it is difficult to describe in words.

4.3 Empirical Evidence of the Effectiveness of the CI

The Cognitive Interview procedure has been utilized in many studies since its development in 1989 (Geiselman & Fisher, 1989). The CI has been researched in the United States, Germany, United Kingdom, Spain, and Australia (Davis et al., 2005; Memon et al., 1994), and has been implemented in police training programs in the United Kingdom, USA, Germany and Australia (Milne & Shaw, 1999).
4.3.1 Training of the CI

The training of interviewers to use the Cognitive Interview varies greatly. Some research studies utilise undergraduates as interviewers (Koehnken, Schimossek, Aschermann & Hofer, 1995; Memon, Wark & Holley, et al., 1996; Memon, Holley, Wark, et al., 1996) while others have used police officers as interviewers (Memon, Holley, Milne, Koehnken, & Bull, 1994). Of two studies that did not detect a significant difference between a control interview and the CI, one used undergraduates (Memon, Holley, Wark, et al., 1996) and one used police officers as interviewers (Memon, et al., 1994), although in these cases the undergraduates serving as interviewers were trained for 2 hours, while the officers were trained for 4 hours. Research studies where interviewers were trained for 8 or more hours generally gained a significant difference between recall obtained from the control groups and recall obtained in the CI group (Memon, Wark, Holley, et al., 1997; Campos & Alonso-Quecuty, 1998; Milne, Bull, Koenhen, & Memon, 1995). However, some studies have indicated that only three (Milne & Bull, 2002) or four hours of training (Fisher, Geiselman, & Amador, 1989; Gwyer & Clifford, 1997; Koehnken, Schimossek, Aschermann, & Hofer, 1995) or simply instructing the interviewers in what the four mnemonics were and why they were used (Chapman & Perry, 1995; Geiselman, Fisher, Cohen, Holland, & Surtes, 1986) also resulted in significant differences.

While most research uses multiple interviewers to interview the different groups tested to avoid interviewer bias (Gwyer & Clifford, 1997; Memon, Wark, Holley et al., 1996), Davis et al., (2004) and Holliday and Albon (2004) used only one interviewer to interview all groups, thus increasing the consistency of interviewer style but possibly increasing the risk of interviewer bias.
Fisher (1995) identifies costs associated with the CI, including the time it takes to administer and the complexity in successfully training the CI. In terms of successfully training the CI, Fisher focuses on the skilled aspects of the task and recommends role play practices and feedback in the training. Fisher also recognises that the flexibility of the interview procedure can cause difficulty in coding the data. In terms of flexibility, requesting that interviewers adhere to a script can attempt to avoid pitfalls such as experienced by Memon, Wark, Holley, et al (1996), where interviewers were trained for 8 hours but different interviewers did not use all the trained mnemonics; specifically, 3 out of 4 interviewers did not use Reinstate Context when they were meant to.

The Cognitive Interview has been used with many populations including children (Holliday & Albon, 2004; Holliday, 2003; Larsson & Granhag, 2005; Memon, Holley, Wark, Bull, & Koehnken, 1996), adolescents (Memon, Wark, Holley, Bull, & Koehnken, 1997), adults (Koehnken et al., 1995; Memon et al., 1994), the elderly (Dornburg & McDaniel, 2006; McMahon, 2000) and the disabled (Isaacs, 2005). The Cognitive Interview procedure has also been used to examine different stimuli including witnesses to violent simulated crime (Memon et al., 1994), video enactment of crime (Memon et al., 1997) or traffic accidents (Chapman & Perry, 1995) and even to examine children’s memory for a magic show (Memon et al., 1996). Following the application of the CI to these stimulus events, the CI has become widely accepted as an interview technique which can increase the accuracy of witness recall.

The enhanced version of the Cognitive Interview, which combines the mnemonic cues as well as communication skills is the version recommended for use by professional interviewers (Fisher & Geiselman, 1992). The CI has been subsumed
into the ECI in most current research and applications, with “CI” often used to
describe the interview procedure which includes both mnemonic cues and improved
communicative skills. Thus the CI and ECI are often used interchangeably in
literature to represent the enhanced interview procedure.

4.3.2 Comparisons between the CI and Control Interview Conditions

Previous research has measured the effect of the CI against the effect of a
control condition, typically either the standard interview procedure, or the structured
interview procedure, by examining correctly recalled details, incorrect details (errors)
confabulated details, and accuracy. The standard interview procedure is traditionally
used by investigative interviewers in which they simply ask the witness to “tell me
what happened”. In the structured interview, interviewers are trained for the same
amount of time as the CI interviewers in communication and interview skills, without
training in the memory mnemonics (Koehnken, Milne, Memon, & Bull, 1999). Either
of these two procedures are commonly used as the control interview group to compare
to the CI group. It should be noted that some studies utilising the structured control
group have not found significant differences between the control and the CI group,
possibly indicating that the communication and interview training has improved
interviewer skill in the control groups.

The use of the CI has been shown to increase accuracy over the use of a
control interview in many studies (Chapman & Perry, 1995; Koehnken et al., 1995;
Memon et al., 1997). Geiselman, Fisher, MacKinnon, and Holland (1985) conducted
a study of the CI procedure in which law enforcement personnel acted as interviewers
and college students acted as witnesses. The CI resulted in 35% more correct facts
than the control condition, and the CI produced no significant increase in incorrect answers. The CI has also been used with children with success, where Geiselman and Padilla (1988) found an increase of 21% in correct recall with the use of the CI over the control with no increases in incorrect recall. Additionally, in a field study of actual witnesses to crime and victims of crime, results show that detectives trained in the CI elicited 63% more information than untrained detectives (Fisher, Geiselman, & Amador, 1989).

The enhanced cognitive interview has been shown to elicit even more correct information than the original CI (Fisher, et al., 1987). The ECI has been presented as “a reliable repertoire of techniques to maximise the recall of a witness” (Memon et al., 1997, p. 642).

4.3.3 Correct Information

The initial testing of the ECI was conducted by Fisher et al. (1987) and the ECI produced 45% more correct information, compared to the CI with no difference in incorrect or confabulated details. In turn, the researchers stated that the ECI produced 75% more correct information compared to a comparison interview (based on Geiselman et al., 1985). Fisher, Geiselman, and Amador (1989) examined the ECI with real witnesses of crime. Overall, 47% more information was obtained from the ECI group compared to interviewers without training. The trained and untrained groups differed by an average of 63%, with the ECI trained group obtaining significantly more information than the untrained group.
4.3.4 Incorrect Information

Some studies have found small increases in incorrect recall with the use of the CI over the control condition (Campos & Alonso-Quecuty, 1998; Hernandez-Fernaud & Alonso-Quecuty, 1997; Mello & Fisher, 1996). However, researchers argued that these inconsistencies were due to methodological differences (Kebbell, Milne, & Wagstaff, 1999). For example, Mello and Fisher (1996) used aged adults as subjects which may have contributed to the high amount of errors, while Hernandez-Fernaud and Alonso-Quecuty (1997) introduced false information to their subjects, thus introducing the confounding variable of post-event misinformation. Campos and Alonso-Quecuty (1998) only found an increase in incorrect recall with person details and argued that the increases in the incorrect person details occurred because of the complexity of the video stimulus. From a theoretical and practical perspective, it is important to determine if the recall of incorrect information can be reduced.

Furthermore, many of these studies on the CI did not identify or examine confabulation, (volunteering memories of events that were not present in real life) as a dependent variable (Memon et al., 1994; Memon et al., 1996). Studies, that have identified confabulation as a dependent variable, have found an increase in confabulation with the use of the CI over the use of the control procedure (Gwyer, Clifford, & Dritschel, 1997; Koehnken & Brockmann, 1988; Koehnken, Schimossek, Aschermann & Hofer, 1995). Memon et al. (1997) also found an increase in confabulation when using the CI. The reported increases in confabulation when using the CI are of particular interest to forensic communities (Koehnken et al., 1995; Campos & Alonso-Quecuty, 1998), as avoiding errors and confabulated details is essential for police and other investigators to proceed with their investigations, without the hindrance of incorrect information.
In a meta-analysis of 42 studies on the effectiveness of the CI by Koehnken et al. (1999), it was found that in the majority of studies, the Cognitive Interview elicited more correct information compared to the control interview condition. The mean effect size for correct information was $d = 0.93$, with a 95% confidence interval indicating a strong effect of the cognitive interview over the control interview procedure for correct information. However, this analysis also found a small positive mean effect size for incorrect information of $d = 0.24$, which indicates that more incorrect information is recalled with the CI than the control condition. Interestingly, in this meta-analysis, errors and confabulatory information were collapsed into one ‘incorrect’ category, which may explain the positive effect size for incorrect information (Koehnken et al., 1999). It has been demonstrated that research results concerning incorrect information have been inconsistent, with some researchers criticizing the different methodologies across studies. These differential factors include; length of time training interviewers, type of interviewers and interviewees, stimulus event and the coding and scoring of recall reports (Koehnken et al., 1999).

4.3.5 Accuracy

Research on the recall obtained with the CI has also been evaluated in terms of accuracy (e.g., the total amount of correct recalled divided by the total amount recalled). Most studies indicated approximately 85% accuracy for the CI and 82% accuracy for the control group, thus demonstrating that as the amount of information increases with the CI the amount of incorrect information was not overly inflated (Geiselman et al., 1985; Koehnken et al., 1999; Milne & Bull, 2000).

When examining the recall scores according to percentage correct (e.g., total amount recalled divided by total possible items), in line with Marshall (1980), Lipton
Evaluation of Interview Procedures

(1977) identified that participants actually recalled only about 20% of the facts available however, they were 91% accurate. Memon et al. (1997) found results indicating that participants in a Cognitive Interview condition recalled 15.8% correct information out of the total possible recalled, and the structured control condition achieved 12.7% correct. This result illustrates that while witnesses may be relatively accurate, they do not recall a substantial amount of all the information presented to them.

4.3.6 Forensic Relevance

Geiselman, Fisher, MacKinnon, and Holland (1985) conducted research into the forensic relevance of information recalled by eyewitnesses, by classifying that information as to how useful or crucial it would be to a real police investigation. The researchers identified 20 critical facts from the incidents. They found significant differences between the groups on correct information: the CI produced more recall for the critical details than the control condition. However, the experimenters arbitrarily decided what was crucial and it was the experimenters themselves who had coded the information as important, or not important, and it was not clear how they decided what would be useful in a police investigation. This coding may be different from what the police themselves would see as crucial (Kebbell & Wagstaff, 1997).

Newlands, George, Towell, Kemp, and Clifford (1999) examined the quality of the descriptive information elicited in George’s (1991) study where real police officers submitted tapes of real interviews pre- and post- training. The original study (George, 1991) identified significantly more information elicited with the CI than with a control group (no training), a Conversation Management group and a Conversation Management + CI group. The Newlands’ study required police officers
to rate, on a 7 point Likert scale, the transcripts of the original tapes for practical use to an investigation and additionally, to rank the quality of the interviews from best to worst. It should be noted that as the tapes were from field investigations, the actual accuracy of the information obtained was not known. Results indicated that there was no significant difference between interview type on the quality of the descriptions for practical use to an investigation. In the rankings of the interviews, the CI group was significantly ranked as having the poorest quality of the four groups. Multiple regressions also indicated that interview type was not a predictor of quality of interview. However, it was noted that this may be due to the interviewers themselves, as there was no significant difference pre- or post-training, despite the fact that George (1991) did find significant differences in the number of details elicited with the CI.

4.4 Individual Components of the CI

In a study that examined the four memory mnemonics individually, Boon and Noon (1994) found that none of the first three mnemonics - Reinstate Context, Be Complete, and Change Time Order - increased inaccuracy; however, the Change Perspective mnemonic did not facilitate the recall of accurate information, and had the highest level of inaccuracy (41%). More specifically, the change perspective mnemonic had the lowest level of accuracy for correct information and had the highest level of confabulation (Boon & Noon, 1994). Additionally, researchers (Bekerian & Dennett, 1993; Boon & Noon, 1994; Fisher & Geiselman, 1992; Kebbell & Wagstaff, 1997) have recognized the problems inherent in the change perspective mnemonic, as the information comes from the witnesses’ imagination rather than from memory. For instance, in a courtroom situation, a witness’ statement could be
regarded as hearsay, and therefore “thrown out of” court. “In view of the practical and legal difficulties associated with the change perspective mnemonic in the field, these findings would seem to call into question its functional utility as a component part of the CI” (Boon & Noon, 1994, p. 68).

Additional studies which combined CI mnemonics or evaluated the effectiveness of individual mnemonics identified similar results. Milne and Bull (1998) found that a combination of the Tell All and Reinstate Context mnemonics elicited more correct recall than any of the following groups: Tell All only, Change Perspective only, Change Time only, or the control group. In a study conducted by Bekerian and Dennett (1993), results indicated that more correct recall was elicited with a Tell All and Reinstate Context combination of techniques. Research on individual mnemonics by Boon and Noon (1994) tested the Tell All cue in four groups against a Free Recall phase in one group and t-tests indicated that the Tell All cue obtained significantly higher accuracy scores than the Free Recall group.

In recent studies of the effectiveness of the CI, the change perspective mnemonic was rated as the least useful and the least used, as it tended to confuse the witness (Kebbell et al., 1999). Two other studies revealed no positive influence of the change perspective mnemonic (Boon & Noon, 1994; Mello & Fisher, 1996). George (1991) asserts that “it is not an easy concept to ask someone to put themselves in someone else’s shoes to review an event asking them to say what they think they would have seen, and remain confident that there will be no confabulation” (George, 1991, p. 117). Additionally, Ainsworth (2002) stated that the varied retrieval component of the CI was “played down” in the Revised Version of the Cognitive Interview procedure. It is of interest that although practitioners of the CI have reduced the contribution of the Change Perspective mnemonic, recent publications
still define the CI in terms of the four mnemonics and communication skills (see Canter & Alison, 1999; Davis, McMahon, & Greenwood, 2005; Dornburg, 2005; Ginet & Py, 2001; Holliday & Albon, 2004; Larsson & Granhag, 2005; Memon & Bull, 1999; Milne & Bull, 1999; 2002; Peace & Porter, 2004; Wright & Merrill, 2001).

The change perspective mnemonic was developed, in addition to the varied retrieval theory, in response to a study by Anderson and Pichert (1978) which found that participants recalled significantly more information following a shift in perspective from a home buyer to a home burglar when recalling features of a particular house. However, the operationalisation of the varied retrieval theory to include a mental imagination of a scene, as is usually required by the change perspective mnemonic (“tell me what you might have seen about the incident if you were in a different physical location”), may have a fundamentally different theoretical implication than changing the participants’ mental categorization of details previously known, as demonstrated by the Anderson and Pichert study. The study by Anderson and Pichert seems to align itself more to the varied retrieval of different categorical links than to the varied retrieval of mentally changing the context. Interestingly, the participants in the Anderson and Pichert study were asked how they were able to remember items in the second perspective when they were not able to remember them in the first perspective. Participants stated that the memory was ‘jogged’ or ‘popped’ into their minds (p. 10). This almost automatic highlighting of information when the correct pathway is available, is indicative of the varied retrieval and automatic spreading activation theories where once the correct pathway is triggered, memory is more easily accessed.
An issue highlighted by spatial reasoning studies showed that participants who change orientation found it more difficult to accurately identify spatial objects. When participants imagined a new position or a change in orientation, as would be necessary to complete the ‘imagine you were somewhere else at the scene’ change perspective task, performance was affected (Wang & Simons, 1999). Wang and Simons (1999) demonstrated that participants, who were instructed to imagine a new position or a change in orientation, were much less accurate and much slower in their ability to identify an object, after mentally rotating themselves to the new perspective.

Another major problem that has been cited with the CI is that it takes too much time to administer a “proper CI” (Kebbell et al., 1999). In a study examining police officers’ perceptions, Wright and Holliday (2005) found that officers stated that they had insufficient time to devote to witness interviewing. Geiselman et al. (1985) found significant increases in the amount of time it took to conduct a CI compared to a hypnotic procedure or to a control group interview. Combined with taking the statement, police feel that they do not have enough time to effectively interview witnesses, and it is asserted that this is another area of the CI which requires improvement. Croft (1995) concurs, asserting that the CI is time consuming. The United Kingdom police, while probably the most trained in the CI, do not use it routinely. There is a perception that it is more time consuming than a traditional interview and when dealing with day-to-day crime, the extra time and effort is not worthwhile (Kebbell et al., 1999). The CI is used much more with serious crime (Croft, 1995). Additionally, McMillan (1997, cited in Milne & Bull, 2000) found that officers who were trained in the CI, but did not utilise the skills, either thought the CI was time consuming or they were confused by the technique. George’s (1991) study revealed that police were reluctant to use the Change Time or Change Perspective
techniques for similar reasons. Kebbell et al. (1999) have concluded that a shortened version of the CI may be more beneficial to routine interviews. Indeed, Davis, McMahon and Greenwood (2005) have demonstrated significant increases in recall with a shortened interview, however their research included only 45 participants and the same interviewer interviewed all witnesses. Considering officers, trained in both the CI and the ECI, do not tend to use the protocols to their full potential, there may be an element of officers prematurely disregarding the benefits of the CI because of the perceived detriments.

Taking the time constraints, confusion and the increase in confabulation into account, there is room for refinement of the CI, so that it will take less time to conduct, will be less confusing to the witness, will increase accuracy without increasing errors or confabulation, and will have no inherent problems for police within the court system. This current research aims to determine which of the tested interview protocols best satisfies each of the above conditions and therefore represents the most effective and efficient interview procedure. The following section will present a brief overview of the contribution to research and practice that are particularly unique to this thesis.

4.7 Brief Overview of the Unique Contributions in the Thesis

Following the presentation of the literature review, the main unique contributions to the field of research are now introduced. The research program includes populations and methodological approaches which answer limitations in previous research. Firstly, the inclusion of an exploration of the witnesses’ perspectives about the interview process has not been conducted previously. Previous research has inferred the witnesses’ perceptions from statements made by police
officers (Kebbell et al., 1999). Secondly, the investigation of the Queensland Police Service officers’ interview protocol provides a unique look at training and implementation practices in Queensland.

In addition to the inclusion of specific populations of interest, the research identified areas of study that were novel contributions to the field. The Change Perspective mnemonic included in the CI has been shown to be ineffective at increasing accuracy (Boon & Noon, 1994), and has been shown to confuse the witness (Kebbell, Milne, & Wagstaff, 1999) and also has potential problems within the court system, in particular, the ruling that excludes hearsay as evidence (Berekian & Dennett, 1993; Kebbell & Wagstaff, 1997). Although, it should be noted that the Change Perspective mnemonic has been condensed in publications such as Fisher and Geiselman’s (1992) book, its impact is still relevant as one of the ‘four original mnemonics’ which make up the Cognitive Interview. Recent publications continue to encourage the use of the Change Perspective mnemonic through its inclusion as a fundamental part of the CI (Dornburg, 2005; Ginet & Py, 2001; Holliday & Albon, 2004; Larsson & Granhag, 2005; Milne & Bull, 1999; 2002; Peace & Porter, 2004; Wright & Merrill, 2001). Multiple approaches were used to identify the effectiveness of this mnemonic. These approaches included an experimental study, an exploration of the witnesses’ perspectives and a qualitative analysis of the police officers’ views. Conclusions will be drawn about the Change Perspective mnemonic by drawing together data obtained from the three studies.

It has also been argued that an interview procedure may increase information retrieval, but it would be beneficial to identify whether there is an increase in forensically relevant information that is useful to an investigation (Kebbell & Wagstaff, 1996). Geiselman et al. (1985) identified important details; however, it was
not clear how the researchers determined what was important. Newlands et al. (1999) rated transcribed descriptions for quality, and found no differences between interview types, however accuracy was not known. Adopting another approach to examine the importance of details elicited, to a police investigation, is to have police officers rate details that are important and evaluate only these important details recalled from witnesses. The following study does this. Although the information gained is from witnesses of a laboratory study, the main benefit is that the accuracy of the witness reports is known. Thus we can examine the recall and accuracy between groups on information rated by police officers to be important to a police investigation. Officers in the field will be asked to determine what details are important to a police investigation and these ratings will be used to investigate whether increases in total details recalled are reflections of increases in important information.

Limited research has been conducted to examine the effectiveness of the CI on eyewitness reports of road accidents. An exception is an experiment by Chapman and Perry (1995), where witnesses viewed a video of a real road accident and were interviewed in either a control group or a CI group. Findings indicated that the CI elicited significantly more correct information than the control interview procedure without significant increases in incorrect information (Chapman & Perry, 1995). However, that study only identified nine details contained in the video, thus invoking criticism that the findings were limited to undemanding stimuli. The current research intended to utilise a more complex road incident stimulus in order to avoid criticism that the encoded event was too simplistic.

Most research in the effectiveness of the CI has focussed on comparing the CI to a control group (see Chapman & Perry, 1995; Geiselman, Fisher, Cohen, Holland, & Surtes, 1986; Koehnken et al., 1995; McCauley & Fisher, 1995; Memon et al.,
In other research, the CI mnemonics have been examined in different combinations. For example, Milne and Bull (2002) used a combination of Tell All and Reinstate Context, however they did not compare this group utilising all four mnemonics. The combination of CI mnemonics utilised in the study will be delineated, based on a theoretical and experimental basis. The four groups consist of a) a Full Cognitive Interview group (FCI) in which participants receive the TA + RC + CT + CP mnemonics and then a questioning phase, b) a Truncated Cognitive Interview (TCI) consisting of the mnemonics TA + RC and then a questioning phase, c) a Modified Cognitive Interview (MCI) where participants receive a Free Recall phase (FR) followed by the CT + CP mnemonics and then a questioning phase, d) a Structured Interview (SI) in which participants receive a FR phase and then a questioning phase.

This study aims to produce an evaluation of the Cognitive Interview to add to the contributions of previous research. A three way approach will be used to identify the effectiveness of the interview procedures. Findings from each of these investigations will be reported in the following chapters.

4.7 Chapter Summary

The Enhanced Cognitive Interview has both been shown to be an important tool in helping police officers gain as much correct information from eyewitnesses as possible, without an increase in incorrect information. However, there are some hindrances to its success, in that police officers are not trained in these techniques, and officers who are trained in these techniques still do not use them optimally. The variables, which are of most interest to this study, are the memory enhancing mnemonics and the communication skills, which, theoretically, if taught to police
officers should significantly increase correct information and significantly reduce incorrect information received from witnesses. As stated previously, officers report that the CI/ECI takes too long to administer and officers either find some of the mnemonics unproductive or do not use the mnemonics at all.

These issues are important to identify because they directly influence the research objectives of the current research. The obvious laboratory / experimental benefits of the CI have been somewhat disregarded in the field due to problems that the trained officers perceive in conducting the procedure. Therefore, it is relevant that experimental researchers attempt to provide field officers with a productive and effective interview procedure that does not include the same sorts of obstacles that have been identified to be inherent in the CI.

The contributions of the thesis that are particularly unique were highlighted and research issues that will be examined in the three studies were discussed. Findings from all three studies will be reported and used to satisfy the overall objective of identifying an effective and efficient interview procedure.
Chapter Five: Methodological Rationale

5.1 Introduction to Methodology
5.2 Experimental Psychology and Applied Psychology
5.3 Action Research
5.4 Research Methodology
  5.4.1 Study One: Experimental Recall Task
  5.4.2 Study Two: Exploration of the Witnesses’ Perspective
  5.4.3 Study Three: Queensland Police Service
5.5 Chapter Summary
5.1 Introduction to Methodology

This research has been designed to investigate some of the issues concerning investigative interviewing, using methodology from both experimental psychology and applied psychology. The research questions address the controversies in the experimental research and advance research in the applied setting.

5.2 Experimental Psychology and Applied Psychology

As stated, this research employs both an applied and an experimental approach to answering the research questions. As Bacon stated in 1620, “science is only relevant if it aims at societal progress, practical application, and human control over nature” (cited in Drenth, 1996, p. 1). Recent debate within psychology has pointed toward the importance of combining experimental and applied research for the good of the overall psychological community. This is particularly relevant in terms of the development of methodology and techniques which can be useful to the community, rather than just the expansion of, and focus on, purely experimental research. For example, in social psychology, debate has centred on how to reformulate basic and applied research so that social psychology can begin to work more in the applied setting (Altman, 1988). Therefore, as Drenth (1996) argues, the increase of the utility and applications of scientific research can create a “fruitful fertilisation of applied psychology by experimental and theoretical views and achievements” (p. 4).

Drenth (1996) asserts that “the present relationship between basic [experimental] and applied psychology is one of mutual influence or even symbiosis, rather than of separate and independent developments” (p. 4); however, Fishman (1999) and Stricker (1997) argue that there is a substantial distance between the worlds of experimental research and of practice. Many researchers recently have been bridging the distance between experimental and applied research by combining the
two methodologies to answer their research questions in many areas of psychology including: the areas of child development (Schwebel, Plumert & Pick, 2000), investigations of post-operative interventions (Krumwiede, 2002), and to investigate the effects of mental workload while driving (Recarte & Nunes, 2003).

Peterson and Trierweiler (1999) discuss the importance of the integration of theory, research and application, as visualized in the scientist-practitioner model, to adequately answer psychological issues. In attempting to combine theory, research and application, the scientist-practitioner model encourages the researcher to utilise experimental findings for the benefit of practical applications.

In addition to both an experimental and applied approach, this current research utilised instrumental relevance, which is defined in terms of the usefulness of the outcomes. Instrumental relevance infers that, at the conclusion of the research, the experimental findings will help shape practical and useful tools for the practitioner/police officer to employ (Drenth, 1996).

In discussing the advantages of combining experimental and applied research to achieve overall sound examination of an issue, Grey and Densten (1998) assert that both methods are equally important. The idea of how an intervention worked in the ‘real world’ is as important as whether that intervention produced the expected experimental change in the laboratory (p. 420). They go on to state that quantitative (usually experimental) and qualitative research (mostly applied) can be viewed as two different ways of investigating the same research problem.

“In 1900, Dewey called for psychology to develop a "linking science" between theory and practical work” (cited in Barone, Maddux, & Snyder, 1997, p. 5). Indeed, linking experimental design and findings, with applications that will be useful to the professionals who use those applications, benefits the entire community. In this case,
linking the experimental results of the impact of interview procedure on witness recall, with the perceptions of the police officers who utilise interviews, has broad implications. As Boyer (1990) stated, "it is through ‘connectedness’ that research ultimately is made authentic" (p. 19).

Ultimately, the application of the interviewing procedures to applied settings is important to this research. The experimental section of this research was initially important in identifying whether the results obtained from previous research with the CI corresponded to the results obtained from this sample of interviewers and witnesses. Additionally, the applied part of this research identified that officers perceptions and attitudes toward interviewing were crucial in identifying interview protocol which could be effective in future training.

5.3 Action Research

Action research, introduced by Lewin (1946), aims to bridge the gap between scientific research and practical decision-making, by promoting research that is based in action or policy. While action research is normally associated with clinical practices, the basic tenets apply to any research which fits the criteria. Specifically, experimental research, geared toward practical change, enlists the aid of the ‘expert opinion’ of the same people who will be part of the change process (Reason & Bradbury, 2001).

The type of action research most closely represented by this study is feedback research where “persons, groups, or organizations are studied more closely by [presenting] them with the actual research and involving them in the interpretation process” (Drenth, 1996, p. 13). In this case, the experimental findings were aligned
with police officers’ practices to bring into line the experimental advances in interviewing with the policies and habits of police officers.

5.4 Research Methodology

This research utilized several different methodologies in order to answer the research questions. Both quantitative and qualitative data analyses were used in order to create a more thorough picture of the most efficient and effective ways of interviewing witnesses. Briefly, Study One utilised an experimental design with four different groups, including a control group. In Study Two, a feedback questionnaire was administered to the witnesses to establish the witnesses’ perceptions of the interview protocols. Study Three employed a triangulation approach to determine what interviewing techniques are currently used by the Queensland Police Service Accident Investigation Squad (QPS AIS). The triangulation approach included secondary data in the form of the QPS training manuals, a questionnaire administered to the officers, a focus group with officers as participants, and a case study of a real witness interview. Please see Figure 5.1 for a pictorial representation of the overall research design.
**Figure 5.1.** Flowchart of the Methodological Design of the Three Studies.
5.4.1 Study One: Experimental Recall Task

The research in Study One quantitatively investigates the usefulness and appropriateness of the CI as an interview technique. It is important to mention here that the main experimental stage of the research used four groups. The first group consisted of a “Full” CI (FCI) which contained all four mnemonics, Tell All, Reinstate Context, Change Time and Change Perspective. The second group consisted of a truncated CI (TCI) which applied mnemonics Tell All and Reinstate Context. The third group was a modified CI (MCI) and included mnemonics Change Time and Change Perspective following a free recall task, and the final group was the control group, which applied a structured interview (SI) approach. However, several essential stages of the research had to be conducted before the experimental stage could proceed. The first stage concerned developing a training manual for investigative interviewing of cooperative witnesses. The second stage involved attracting and training volunteers in the training program, who would serve as the interviewers in the interview process. The third stage focused on recruiting participants to be witnesses, exposing them to the traffic incident video and subsequently interviewing them according to eyewitness protocol contained in each of the four groups. The development of the training material and the training of the interviewers are outlined in Sections 6.3.3 and 6.3.4. This study utilized a quantitative, experimental methodology in order to test the hypothesis that the use of the Cognitive Interview would result in obtaining more information from the witnesses than the Structured Interview control group.
The Research Questions for Study One were:

1. Will significant differences be found for recall across the four experimental groups?
2. Which group will produce the most correct information?
3. Which group will produce the most amount of incorrect information?
4. Which group will produce the most accurate information?
5. When only examining important details, will significant differences between groups be found?

5.4.2 Study Two: Exploration of the Witnesses’ Perspectives

Study Two concerned the witnesses’ perceptions about the interview procedure. This was conducted using a questionnaire that asked the witnesses questions about their perceptions of the interview process. This included questions that tapped the witnesses’ perceptions of the quality of the interview and interviewer’s skills, and any mnemonics that they found particularly useful or hindering. The questionnaire results were analyzed quantitatively.

Additionally, in the questionnaire, the witnesses were encouraged to make written comments in response to questions. These written responses were imported into QSR NVivo, (QSR International, 2000) a qualitative data analysis program that allows for coding and analysis of qualitative data. This is a common method for coding responses to open ended questionnaire items and in-depth interviews (Neuendorf, 2002). The first step includes a qualitative review of the messages and the developing of an emerging coding scheme based on what is represented in the message pool (Neuendorf, 2002).

The qualitative data gained from the questionnaire was analyzed according to content analysis which quantifies qualitative data. Content analysis is a process of
coding words, or ideas, which are then objectively and systematically counted to produce a quantitative description of the meaning in the text (Blaikie, 2000; Neuman, 1997). Content analysis involves frequency, or the counting of the themes or words expressed. Content analysis is defined as “the systematic, objective, quantitative analysis of message characteristics” (Neuendorf, 2002, p. 1), and has as its outcome, a numerically based summary of the message set (Neuendorf).

The Research Questions for Study Two were:

1. Would the witnesses report increased confusion or helpfulness with certain mnemonics?
2. What themes will emerge from the written comments concerning the perceived benefits and/or detriments of the various procedures within the interview?
3. What were the witnesses’ perceptions of the interview process?
4. What were the witnesses’ perceptions of the effectiveness of the interviewer?
5. What were the witnesses’ perceptions about the specific mnemonics they used; were some more helpful or more confusing than others?
6. How much correct information did the witnesses think they gave in response to the interviewer?

The findings, obtained from the questionnaire in Study Two, will be discussed in Chapter Seven.
5.4.3 Study Three: Queensland Police Service Protocols

Study Three utilised an applied triangulation approach (Denzin & Lincoln, 1994) to ascertain what the Queensland Accident Investigation Squad officers actually do when they interview cooperative witnesses. The triangulation approach was used to identify multiple indicators to increase the validity and reliability of the overall findings (Blaikie, 2000; Denzin, 1978; Neuman, 1997). Triangulation of methods “strengthens the researchers claims for the validity of the conclusions drawn where mutual confirmation of results can be demonstrated” (Gray & Densten, 1998, p. 420). This study utilised between-method triangulation “which combines dissimilar methods to measure the same concept” (Blaikie, 2000, p. 263), that ‘same concept’ being the training and implementation of training of the QPS officers. Included in the triangulation are secondary data analysis, a questionnaire, focus group interviews and a field interview case study (Stewart & Shamdasani, 1990).

Firstly, QPS training manuals were researched and analysed as secondary data sources, or archival data, to determine the content of information currently used to train investigators in interviewing techniques. Archival data is often employed as part of a multi-method approach (Shaughnessy, Zechmeister & Zechmeister, 2000). In this case, it was used to determine how the QPS training manuals would have influenced the outcome of the interviewer training of the police officers. The secondary data were analysed according to grounded theory where the content and not the frequency of the text, is important (Strauss & Corbin, 1998). The coding of the training manuals was developed based on a ‘best practice’ approach, utilising the recommendations from the CI as the starting point for comparison. This includes the mnemonics and communication skills used in the questioning of witnesses. Neuendorf (2002) states that the rules of science deem that each researcher is to make
decisions as to “the scope and complexity of the study” (p. 2). Therefore, the data were coded into broad categories, which would provide a point of comparison between accepted recommendations from the CI and policy and behaviour in the QPS AIS.

The second phase involved distributing a questionnaire to the officers to determine details such as workload and what the officers thought about the reliability and usefulness of witnesses and interviewing. The responses from the questionnaire were used to inform the third stage of Study Three.

The third stage of Study Three included ascertaining from the QPS AIS officers interviewing techniques they currently use. This was achieved by using both focus groups and a case study. A focus group was used to gain a detailed qualitative description on the areas of interest. As defined by Krueger (1988), the focus group is a “carefully planned discussion designed to obtain perceptions on a defined area of interest” (p. 18). The topics covered in the focus group originated from a series of questions designed to guide the conversation in the group discussion (Shaughnessy et al., 2000).

A case study was also utilised in the triangulation approach. The case study can be defined as “an umbrella term for a family of research methods having in common the decision to focus on inquiry around an instance” (Blaikie, 2000, p. 215). In this sense, this single-case design employed an extensive description and analysis of a single interaction between two individuals. The individuals were observed in order to record their actions, surroundings and speech. The individuals specifically, were one QPS AIS officer and one witness, taking part in an authentic witness interview.
The research questions specific to Study Three were:

1. What are the QPS officers trained to do when interviewing witnesses?

2. What are the QPS AIS officers’ perceptions of witness accuracy and the importance of eyewitness reports?

3. What are the QPS AIS officers’ perceptions of certain interviewing skills recommended by the CI?

4. What do the QPS AIS actually do when interviewing witnesses?

5.5 Chapter Summary

This chapter has addressed the methodological rationale contained in this research project. The implementation of both an experimental and applied framework enabled greater breadth for the evaluation of an effective and efficient interview procedure. The development of the training program, training of interviewers and development of the coding and scoring systems for Study One, were discussed in detail to illustrate the preliminary design which needed to be completed before the experimental task could commence. The methodological considerations for Study Two and Study Three were also described. Results from the studies are now presented in Chapters Six, Seven and Eight.
Chapter Six: Experimental Recall Task

6.1 Introduction

6.2 Statement of Hypothesis

6.3 Method

6.3.1 Method for Participants As Witnesses

6.3.1.1 Participants

6.3.1.2 Materials

6.3.1.3 Procedure

6.3.2 Method for Participants As Interviewers

6.3.2.1 Participants

6.3.2.2 Materials

6.3.2.3 Procedure

6.3.3 Coding of Content and Scoring Recall

6.3.3.1 Coding of Video of Traffic Incident

6.3.3.2 Scoring of Recall

6.4 Design

6.5 Results

6.5.1 Data Screening

6.5.2 Interrater Reliability

6.5.3 Descriptive Data

6.5.4 Preliminary Analysis

6.5.5 Duration of Interview

6.5.6 Recall

6.5.7 Accuracy
6.5.8 Percentages Correct and Incorrect of Recalled Information

6.5.9 Confabulation

6.6 Section Discussion

6.6.1 Duration of Interview

6.6.2 Correct Recall

6.6.3 Incorrect Recall

6.6.4 Accuracy

6.6.5 Percentage Correct

6.6.6 Free Recall and Tell All Phases

6.6.7 Confabulation

6.7 Section Summary

6.8 Phase Two: Details Crucial to Police Investigation

6.8.1 Aims

6.8.2 Research Questions

6.9 Method

6.9.1 Participants

6.9.2 Materials and Procedure

6.10 Results

6.11 Discussion
6.1 Introduction

In previous chapters, variables such as the length of time it takes to conduct an interview and the effects of different interview procedures on eyewitness recall and accuracy were discussed. It was demonstrated that the CI has been shown to increase accuracy in many populations. In addition, the basic protocols for conducting a CI and a structured police interview were also discussed. One purpose of this research was to evaluate the effectiveness of the CI including all four mnemonics versus variants of the CI, which following on from the theoretical perspectives of encoding specificity and varied retrieval, each comprises two main mnemonics. It was decided to trial the alternative versions of the interview protocols because of the information provided previously concerning issues where the CI could be improved.

These issues included: the limited time frame available to interview, confusion for the witness, increases of confabulation and inaccuracy and the inadmissibility of the cue and the resultant recall of information in the courtroom found with some of the mnemonics. The Truncated CI includes TA and RC, due to previous research demonstrating the effectiveness of the TA and RC mnemonics (Bekerian & Dennett, 1993; Milne & Bull, 1998), the lack of criticisms concerning confusion for witnesses or officers and the reported acceptance of and usage of these two mnemonics over the CT or CP mnemonics. In addition, it is assumed that deleting two mnemonics will significantly shorten the interview time. This group will be compared to a Full CI group utilising all four mnemonics, to determine if there are any additional benefits to recall of including the two mnemonics, CT and CP. In addition, because the combination of CT and CP only (Modified CI) has not been studied previously, this group was included to identify whether there are benefits to using these mnemonics. Although it was thought that this combination of mnemonics would not be generally
utilised practically, from a theoretical viewpoint, it was worthwhile investigating whether the mnemonics derived from the varied retrieval principle would elicit similar amounts of recall to the mnemonics derived from the encoding specificity principle. Boon and Noon (1994) argued that although individually, the CP mnemonic did not enhance recall, there may be interactive effects and that benefits may emerge when the CP is used in conjunction with other mnemonics. Thus in this study, it was used in conjunction with the 3 other mnemonics in the Full CI group and with its theoretical counterpart, CT, in the Modified CI group. The experimental design also allowed for the examination of the effects on lowering the response criterion as the Tell All cue was present in the Free Recall phase of two of the four groups. Please see Figure 6.1 for a pictorial representation of Study One. Specifically, this chapter describes the experimental stage of this research, which was crucial in answering the core Research Questions, as indicated previously:

1. Will an increase in recall with the use of CI mnemonics occur in the current population of participants?
2. Which sets of mnemonics will produce the most accurate information?

6.2 Statement of Hypotheses

It was envisioned that at the conclusion of this research, the researcher would be able to propose a refined version of the CI which would take less time to administer and train, cause less confusion, increase accuracy without increasing confabulation and could be used with confidence that any statements gained from witnesses would be admissible in court. Taking these factors into consideration, this research aimed to confirm previous research that for traffic incidences, the use of the
CI would increase the amount of correct information recalled over the control condition.

Therefore the hypotheses identified were:

- In accordance with the literature that states that police officers think that the CI takes too long to administer (Keblbell et al., 1999), it was hypothesized that the FCI group would take longer to conduct compared to the SI group. Considering that the influence of the number of mnemonics required for each group is the fundamental cause of the increase of time, it was further hypothesized that the alternative groups that contained two mnemonics each would take a length of time to administer that is between the FCI group (which used four mnemonics) and the SI group (which used no mnemonics) (H1).

- Based on the wealth of information gained from previous studies which demonstrated that the use of the CI increases the amount of information recalled compared to the SI group (eg., Chapman & Perry, 1995; Koehnken et al., 1995; Geiselman, et al., 1986; Memon et al., 1997; McCauley & Fisher, 1995), it was also hypothesised that the FCI group would produce more correct information than the SI group. Furthermore, with reference to the literature which had found that TA and RC were the mnemonics which aid recall most substantially (Boon & Noon, 1994; Mello & Fisher, 1996), and that CP produced the least amount of accuracy (Boon & Noon, 1994), it was predicted that the truncated group which includes TA and RC would have recall scores not significantly different from the FCI group (H2), while the recall scores for the MCI group, including CT and CP would not significantly differ from the SI group.
• Additionally, it was predicted that the FCI would produce more incorrect information than the SI group, based on information provided by previous studies and illustrated by the meta-analysis conducted by Koehnken et al. (1999) which demonstrated an increase in incorrect information with the use of the CI. Because of the inclusion of the CP mnemonic, which had been shown to produce the most amount of inaccuracy (Boon & Noon, 1994), it was further hypothesized that the MCI group which includes the CP mnemonic would also have an increase in incorrect information compared to the truncated group which does not contain the CP mnemonic (H$_3$).

• Accuracy scores for the groups would correspond to previous literature on the accuracy of the CI. Specifically, that the FCI would produce greater accuracy than the SI group for the material remembered, keeping in mind that accuracy was the amount of correct information recalled divided by the sum of the correct, incorrect and confabulated details (H$_4$).

• Previous research had demonstrated that compared to the total amount of information available, most people do not remember a substantial amount of information (Marshall, 1980); however it had been shown that the CI does increase percentage correct scores. In line with this research, it was predicted that the percentage correct scores would be: (a) higher with the FCI than the SI group; and (b) consistent with previous research which demonstrates that people do not remember most of the information that is available to them (H$_5$, H$_6$).
• Based on research conducted on lowering the response criterion and the report option hypothesis, it was hypothesized that the TA phase would result in a greater number of details reported in total, a greater number of correct details reported and a lower accuracy rate than the FR phase (H7).

• According to research which had shown that there could be an increase in confabulation with the use of the CI (Memon et al., 1997), it was predicted that the FCI group would have more confabulatory information recalled than the control group. Further, since the CP mnemonic had been shown to increase confabulation (Boon & Noon, 1994), it was predicted that the MCI group which includes the CP mnemonic would also have increases in confabulated material reported when compared to both the SI group and the TCI group which did not contain CP (H8).
Figure 6.1. Flowchart of the Design of Study One.

6.3 Method

The methodology for this study was somewhat complex as two distinctly different groups of participants were required. Participants were recruited to act as either witnesses or interviewers, with each group subject to different recruitment criteria, materials and procedures. As such this method section is segmented by “participant as witness” and “participant as interviewer” for clarity.

6.3.1 Method for Participants as Witnesses

6.3.1.1 Participants

Ninety-four University students from the Queensland University of Technology in Australia completed the study for course credit. Participants were
recruited through sign up sheets posted on the research participation notice board. The participants’ ages ranged from 18 to 55 and the sample consisted of 78 females and 16 males.

6.3.1.2 Materials

Consent Form. The participants were supplied with a consent form on University letterhead to sign, which contained a brief explanation of the experiment, permission to audiotape and contact details of the researcher and the relevant ethics committee members (See Appendix A).

Videotape of Traffic Incident. The participants were asked to view a videotape of a non fatal real life traffic incident. Due to ethical constraints, a non fatal traffic incident was most appropriate. The cars travelled on the same side of the road as the participants would have experienced in Australia, because the tape was from the United Kingdom (steering wheel on right hand side). The video chosen was quite fast and complex, in order to include a substantial number of details the witnesses had the opportunity to observe. It included a series of two separate ‘accidents’ on the inbound lanes of a 6 lane freeway (3 lanes in each direction). The tape was kindly provided by the Transport Research Laboratory (TRL) in the United Kingdom.

Cognitive Interview Protocol. The Cognitive Interview Protocol utilised was designed from specific recommended procedures outlined in Fisher and Geiselman (1992) and Milne and Bull (2000). Although a departure from the commonly used protocol for the CI, the Tell All phase was separated from the Reinstate Context phase in order to test the influence of the Tell All cue in comparison with the Free Recall phase in which no limitation is placed on report
option. Some research has separated out TA and RC, but has not made comparisons between TA and a FR phase. Fisher and Geiselman (1992) began with mention of the global context about the situation, then supplied the TA cue prior to a free narrative and then provided the specific RC cue. In addition, the separation of TA and RC has been done previously when Holliday and Albon (2004) exposed children to the RC cue first and then presented them with the TA cue.

The combination of CI mnemonics utilised in the study will be delineated, based on a theoretical and experimental basis (See Figure 6.2 for a pictorial representation of the four groups). The four groups consist of a) a Full Cognitive Interview group (FCI) in which participants receive the TA + RC + CT + CP mnemonics and then a questioning phase, b) a Truncated Cognitive Interview (TCI) consisting of the mnemonics TA + RC and then a questioning phase, c) a Modified Cognitive Interview (MCI) where participants receive a Free Recall phase (FR) followed by the CT + CP mnemonics and then a questioning phase, d) a Structured Interview (SI) in which participants receive a FR phase and then a questioning phase.
Figure 6.2. Flowchart of the experimental groups and which mnemonics were included in each.

6.3.1.3 Procedure

The participants arrived at the specified room and were greeted by the researcher. They were asked to come in and sit in front of the television. Participants sat at approximately three meters distance from the television screen. Participants were inducted into the procedure individually. The researcher provided the witnesses with consent forms to read and sign. Following this, the witnesses listened to a one minute scripted speech by the researcher, describing what they were going to do next and clarifying what was expected of them (See Appendix B to see the script for the researcher). The main points of this speech involved telling the witnesses that they were about to view a complex and short video and that they were to pay attention.
Witnesses were told by the researcher, that following their viewing of the video, they would be asked to go into a different room where a trained interviewer would interview them in an eyewitness style.

Following the viewing of the video, witnesses were randomly assigned by the researcher to the different conditions, based on the day they attended and alternating between interviewers. Interviewers were waiting to interview the witnesses in the four different interview styles. Witnesses changed rooms because according to context dependent theory, recall may have been enhanced if the witnesses remained in the same room. Allowing these witnesses to ‘remain at the scene’ may have been an advantage. It was important that any positive value of context effects be solely attributable to the reinstate context mnemonic, where used, and not to being interviewed in the same room in which the participant witnessed the stimulus.

Once witnesses had entered the designated interview room they were welcomed by the interviewer who introduced themselves and asked permission to audio-tape the interview. Witnesses were then interviewed according to the condition into which they had been randomly allocated. At the completion of the interview, witnesses were thanked and escorted from the interview room. The audio tapes were transcribed verbatim and the resultant details were coded and scored.

6.3.2 Method: Participants as Interviewers

6.3.2.1 Participants

Interviewers included eight volunteers who were either final year Undergraduate Psychology students, or Psychology students completing post-graduate study. Conditionally registered Psychologists with the Queensland Board of Psychologists were able to claim professional development hours and supervision
hours for their participation in the project because of the credentials and support of the principal supervisor. Unfortunately following the training, two interviewers could not continue with their commitment to conduct the interviews, therefore there was a final group of six interviewers, five female and one male. The interviewers’ ages ranged from 22 – 40 years.

6.3.2.2 Materials

Confidentiality Agreement. All interviewers were asked to sign a confidentiality agreement that restrained them from discussing their training or specific interview instruction (i.e., which mnemonics they were administering) with other interviewers. The confidentiality agreement was used to aid experimental control for interviewer bias. (Please see Appendix C).

Interview Protocol Script. The interviewers were supplied with a script to follow to ensure that they adhered to the designated interview protocol. According to the interview protocol that each interviewer was allocated, scripts which contained the prompts and mnemonics that they were to administer. As discussed, these scripts were a) a Full Cognitive Interview group (FCI) in which participants receive the TA + RC + CT + CP mnemonics and then a questioning phase, b) a Truncated Cognitive Interview (TCI) consisting of the mnemonics TA + RC and then a questioning phase, c) a Modified Cognitive Interview (MCI) where participants receive a Free Recall phase (FR) followed by the CT + CP mnemonics and then a questioning phase, d) a Structured Interview (SI) in which participants receive a FR phase and then a questioning phase. This current research is more in line with Gwyer and Clifford (1997) who used a standard procedure script, but deviates from Milne and Bull (2002)
who only required interviewers to read out the mnemonics verbatim. Scripts for each mnemonic were based on Milne and Bull (1999).

**Training Material For Interviewers.** Participants who acted as interviewers underwent a formal training programme. Material developed for this programme covered topics which had relevance to investigative interviewing, and eyewitness issues. A powerpoint presentation designed by the researcher was presented on memory theory and how people retrieve information from their memories. Background material on memory theory was considered important for the interviewers to have a broad grasp of the issues concerning memory retrieval. Not only was the purpose of the training program to train the interviewers in the CI skills, but also to give the interviewers the opportunity to broaden their general knowledge about how people encode, store and retrieve information.

Written material, similar to lecture notes was also incorporated into the training procedure. This material on interviewing and communication skills, was consistent with skills recommended by the Enhanced Cognitive Interview, and included open-ended questions, probing questions, rapport, and non-verbal communication and letting the witness respond without interruption. Probing questions refers to questions which directly relate to information given by the witnesses in a previous phase of the interview (Fisher & Geiselman, 1992). Interviewers were also trained in the CI mnemonics which were relevant to their experimental group.

**Video Clip for Role Playing.** Role playing the interview techniques was an integral part of the training. Interviewers were exposed to a video clip of a car chase
and crash from a popular movie. As the design of the experiment required that the interviewers never see the actual car crash footage viewed by the participants, this clip was deemed a suitable replacement for training purposes.

6.3.2.3 Procedure

The interviewers were recruited through email advertising within the University, asking for volunteers to participate in a project where they would gain practical experience in investigative interviewing. Over 24 volunteers responded to the advertisement. Respondents were short-listed according to: (a) availability, (b) workload, (c) grade point average; and, (d) interest in gaining practical experience. Volunteers who were short-listed were invited to attend a training session in the Cognitive Interview.

Interviewer Training. Figure 6.3 shows a pictorial representation of the procedure followed in the interviewer training program. The interviewers were trained for 8 hours over several sessions, including role play and feedback, in line with previous research which indicated that 8 hours was suitable for training of the CI and that 8 hours of training produced significant differences. The first session of training was devoted to lecture style material on memory theory, eyewitness memory recall, and also the implications for the forensic community of eyewitness inaccuracies. Following the first session, it was expected that the interviewers would have acquired a broad understanding of issues that were important to how people encode, store and retrieve information and the barriers inherent in each of these stages to recalling memories accurately.
The second session focussed on general communication skills, including rapport building, verbal and non-verbal communication and appropriate questioning. Further, as closure is an important part of an investigative interview (Westcott, 2000; Westcott & Jones, 1997), interviewers were expected to debrief the participants, at the conclusion of the formal part of the interview.

Figure 6.3. Representation of the Development of the Training Program.

The third session provided information concerning the perceived benefits of interviewing procedures. (Please see Figure 6.4 for a representation of the training of the Cognitive Interview). Until this stage, all information given to the interviewers was identical. After this section of the training, the interviewers had to be separated and trained in the mnemonics specific to their experimental group. When the interviewers were not being trained in specific CI mnemonics, they were occupied with another task, such as role-playing the skills that they had already been trained in, whether that was specific mnemonics or general interviewing skills. Role play for the type of interviewing the interviewers were conducting was facilitated by showing a
video clip of a car chase and crash from a popular movie to one of the people in the role-play situation and having the second person interview that witness, in the same manner as they would be interviewing the witnesses in the experiment. Role plays were observed by a research assistant and feedback was provided to the participants.

Specifically, the groups attended information sessions on the CI mnemonics TA and RC, and/or CI mnemonics CT and CP, whichever were applicable to their experimental group. It was important to control for the interviewers being aware of the nature of the different experimental groups, because the research could have been confounded by interviewers knowing what was expected from the witnesses in their group.

Interviewers did not have prior experience with or knowledge of the Cognitive Interview. Interviewers may have been aware that there were separate groups; however, they were not made aware of the particular research questions or hypotheses. Additionally, due to the signed confidentiality forms, interviewers were not allowed to discuss their training or specific instructions with interviewers from other experimental groups. In order to avoid labelling groups, and referring to them according to the experimental design, (i.e., the ‘Full CI’ group or the ‘control’ group) such that the interviewer could gain an idea as to their experimental condition, each group was given their paperwork on different coloured paper and this colour became their group colour (i.e., the ‘SI’ group, was referred to as the ‘Orange Group’, etc). From this stage on, for the purpose of the interviewers and witnesses, the groups were referred to by colour, thus suppressing the true experimental design and research questions from all participants. This process was critical to the overall design of the study in which interviewers were trained in appropriate procedures, with appropriate
controls in place to enable the experimental design to be free of confounding variables including interviewer bias and inadequate training.

Figure 6.4. Representation of the Training Program Undertaken by the Interviewers in the Four Experimental Groups.

Note: TA=Tell All; RC=Reinstate Context; CT=Change Time; CP=Change Perspective; RP=Role Play; PW=PaperWork.

Interview Procedure. Interviewers waited in their interviewing room while witnesses viewed the video footage and were escorted to the interviewer’s room. All
interviewers were instructed to begin the interview with rapport building, including the introduction of themselves and shaking hands with the participant, in a friendly but serious tone. The interviewers were required to mention the audio taping equipment, and were also required to tell the participants that they had not viewed the video and therefore they did not know what had happened (indeed, the interviewers never saw the video footage) before beginning the formal part of the investigative interview. Typically, as part of the rapport building phase of the interview, interviewers asked the witnesses simple questions to aid rapport such as, “how are you today?” or “what course are you doing?”. Interviewers were permitted to alter the script slightly to suit the participant, provided that the key points of: (a) introducing themselves, (b) shaking hands, (c) stating that they had not seen the video, and (d) mentioning the audio taping equipment were discussed. After reviewing the current literature on interviewing skills and communication techniques (Fisher & Geiselman, 1992; Home Office and Department of Health, 1992; U.S. Department of Justice, 1999), these key points were deemed essential parts of the rapport building phase of an investigative interview for this research.

The order of the interview was, in general, the same for all groups: (a) they were to begin the interview with rapport building techniques; (b) they were to use the script as a guide to begin the interview prompts; and then (c) the interviewers were expected to go through the prompts and mnemonics noting down all of the information the participants had given them. Examination of the transcripts indicated that the interviewers did subscribe to this protocol. In addition, the transcripts showed that each interviewer introduced each mnemonic in the correct order, as per their structure. Following the completion of the structured part of the interview, the
interviewers were welcome to ask the participant probing questions, based on the information that they had been previously given by the witnesses.

The formal part of the investigative interview required different protocol scripts for each different group. The recall sheet contained the script that the interviewers were to follow (See Appendix D). It then provided room for the interviewers to write the responses.

In addition to the training of the interviewers, before data from the experimental stage could be analysed, the content contained in the video stimulus had to be coded and a scoring system devised which would enable the accurate scoring of witnesses’ recall. The preliminary undertaking of the piloting of the video for coding and the scoring system is described in the following sections.

6.3.3 Coding of Content and Scoring of Recall

6.3.3.1 Coding of Video of Traffic Incident.

Prior to the analysis of the witness recall, the details contained in the stimulus video needed to be identified. In order to increase the validity of the coding and to reduce the implications of researcher bias, a pilot group was recruited to identify the stimulus details.

A pilot group of four people was required to review the stimulus video systematically to identify all of the traffic related incidences that occurred in the video. The group consisted of University staff who had completed undergraduate degrees. Two people were employed in the Centre for Accident Research and Road Safety-Queensland and were deemed to have a substantial understanding of road rules, lane markings, and who generally had previous experience with road incidents. The participants in the pilot group were asked to name the lanes in which the incident
had occurred. They were asked to write down all of the details contained in the video clip with particular attention being paid to cars’ actions, cars’ positions, cars’ lanes, cars’ colour and make, sequence of events, timing of events, causation, people and environmental details. They were told that it would be necessary to rewind the tape as many times as necessary to record all of the details. See Appendix E for the instructions given to the four reviewers.

Following the review of the pilot group’s recorded details, the details were consolidated into a master list of all possible incidences contained in the video. If any details were unclear, the pilot person was asked to clarify. If any details were contradicted by another person’s report, then the two people were asked to review the detail together to come to an agreement. Re-watching the video and objectively viewing the facts of the traffic incident solved any further discrepancies. There were a total of 104 items on the master list. See Appendix F for the Master List of details contained in the video.

6.3.3.2 Scoring of Recall

The scoring protocol was developed prior to the experimental stage being conducted. There are many different ways to organize the scoring of the recall text uttered by the witnesses. According to previous research on the Cognitive Interview mnemonics, scoring of the recall from the witnesses would be scored according to correct, incorrect, and confabulated details. This is in accordance with mnemonic research conducted by Hernandez-Cernaud and Alonso-Quecuty (1997) and Memon, et al. (1994) who scored correct, incorrect and confabulated information.

Recall from the witnesses was compared to the Master List correct details contained in the video as identified by the coding pilot group. As stated, recall was scored according to correct, incorrect, and confabulated details. Correct details were
deemed to be those details, which accurately reflected the true content of the video. Freedom was given to the witnesses to recall in their own words the incidents in the video; therefore, they did not need to respond in exactly the same words as the master list stated, but they needed to have correctly identified the object and action/incident. Incorrect details are details that have some relation to the video, but are incorrectly recalled. For example, stating that the weather was clear when it was obviously cloudy (as obtained from the Master List), was incorrect. Confabulated details are those details which did not appear in the video at all. For example, stating that there were several pedestrians would be deemed confabulation, since there were no pedestrians.

Recall was also scored after each mnemonic was presented, and after probing questioning. For this reason, the interviewers had to adhere to the strict script for each mnemonic and not engage in probing questions until after the completion of the mnemonic section. Crucial to the accurate scoring of the recall transcripts was the adherence to the notion that the utterances would only be scored once; therefore, only new information was scored in each subsequent stage (Memon et al, 1997; Milne et al, 1995). In keeping with previous CI research, as each section contained different recall techniques and recall was only scored once, the data was not scored as repeated measures ANOVA (Memon, et al, 1997). See Section 6.6.2 for details of interrater reliability for the scoring of the transcripts.

Following the development of the training procedures and the training of those procedures to interviewers, a large part of the preliminary work for Study One was completed. In addition, prior to any analysis for Study One, the coding of the video details and the scoring procedures were developed. The fulfillment of these preparatory tasks permitted the experimental stage of this study to commence.
6.4 Design

The design of this research project was an experimental design encompassing four groups, including a control group. The dependent variables were the amount of correct recall, the amount of incorrect recall and the amount of confabulation. The independent variable was the group with four levels. Each group received similar instructions concerning the purpose and structure of the project. All witnesses received the same introduction, instructions and video viewing. Following the instructions and video play, participants were randomly assigned to one of four experimental interview groups, alternating between interviewers. ANOVAs were performed to determine any differences between the groups on recall.

The participants, who were recruited to perform as witnesses in the interview situation, were expected to complete several tasks. A summary is provided below to describe the expectations and task demands that were required of the witnesses.

6.5 Results

Most of the analyses for this research were conducted using the Statistical Package for Social Sciences (SPSS version 10.0). The recommendations provided by Tabachnick and Fidell (1996) were followed with respect to homogeneity of variance, missing values, outliers and skewness and kurtosis.

6.5.1 Data Screening

Prior to conducting the analysis, the data were screened using SPSS. All variables were screened for missing data and incorrect data entry, and checked for the
assumptions of normality and homogeneity of variance. Any variables were considered to exhibit significant skewness and/or kurtosis if the standardised scores associated with these statistics were outside the range of +/- 3.29 (i.e., p < .001, see Tabachnick & Fidell, 1996).

The ‘time in minutes’ score exhibited significant violation of variance (z = 5.43, p < .001). This variable was subsequently subjected to a logarithmic transformation (Log 10), which successfully reduced the variance to within acceptable limits. However, as the pattern of the to-be-reported results did not vary as a result of the transformation, this variable was retained in its original format in order to ease interpretability (Tabachnick & Fidell, 1996).

Additionally, ‘time in minutes’ had a significant normality problem with both skewness and kurtosis in the MCI group. This problem was resolved by deleting an outlier. One case was identified as a univariate outlier due to its extreme z score (z = 4.04, p < .01). Examination of the histogram associated with this variable suggested that this case was not connected to the distribution and therefore the case was deleted. This case was subsequently deleted from the relevant analysis, leaving 23 cases.

‘Change time’ correct scores also exhibited a violation of variance as demonstrated with Levene’s test of homogeneity, F = 5.447, p = .024. After Log 10 transformation of the variable, the variance was reduced to acceptable limits, F = .356, p = .555. The results pattern remained the same and therefore the untransformed data is reported.

6.5.2 Interrater Reliability

In order to ensure reliability in the scoring of the participants’ recall transcripts, an interrater reliability paradigm was used (Fleiss, 1971). Two
independent coders scored the transcripts for correct and incorrect information. Twelve transcripts were scored by both coders and compared for reliability. The correlations for the two coders’ scores were: for total correct, $r = .922, p = .000$, and for total incorrect, $r = .846, p = .001$. These scores are consistent with prior research on the Cognitive Interview (Memon et al., 1996; Memon et al., 1997) and therefore deemed acceptable. Interrater reliability was not calculated for confabulations because of the limited number of data in this category. In terms of interviewer validity, of the two groups where more than one interviewer remained, there were no significant differences between interviewers, $F (1,23) = .849, p = .367$ and $F (1,23) = .207, p = .653$.

6.5.3 Descriptive Data

The demographics of the participants indicated that there were 15 part time students, 77 full time students and two students who classified themselves as “other”. In relation to education level completed, 2% had finished high school at year 11 or earlier, 66% had completed Grade 12, 19% had completed a TAFE course, and 11% had completed a University degree. Fifty nine percent of participants were employed in part-time or casual employment, while 33% were not employed and 9% were employed full-time. All participants were undergraduate students at QUT and were from four different faculties (75% Health, 19% Arts, 3% Business, and 1% Information Technology).

The participants’ age and gender are shown in Table 6.1. Additionally, the gender by experimental group is displayed in Table 6.2.
Table 6.1

**Age Groups and Gender**

<table>
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<th>Age Group</th>
<th>18 – 24</th>
<th>25 – 34</th>
<th>35 – 44</th>
<th>45 – 54</th>
<th>N</th>
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<tbody>
<tr>
<td>under 18</td>
<td>1</td>
<td>9</td>
<td>5</td>
<td>1</td>
<td>16</td>
</tr>
<tr>
<td>18 – 24</td>
<td>13</td>
<td>36</td>
<td>19</td>
<td>9</td>
<td>78</td>
</tr>
<tr>
<td>25 – 34</td>
<td>14</td>
<td>45</td>
<td>24</td>
<td>10</td>
<td>94</td>
</tr>
<tr>
<td>35 – 44</td>
<td>4</td>
<td>5</td>
<td>5</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>45 – 54</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>24</td>
<td>24</td>
<td>24</td>
<td>22</td>
<td></td>
</tr>
</tbody>
</table>

Table 6.2

**Experimental Groups and Gender**

<table>
<thead>
<tr>
<th>Group</th>
<th>TCI</th>
<th>MCI</th>
<th>FCI</th>
<th>SI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>4</td>
<td>5</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Female</td>
<td>20</td>
<td>19</td>
<td>19</td>
<td>20</td>
</tr>
<tr>
<td>Total</td>
<td>24</td>
<td>24</td>
<td>24</td>
<td>22</td>
</tr>
</tbody>
</table>

*Note: TCI = TA+RC; MCI = FR+CT+CP; FCI = TA+RC+CT+CP; SI = Structured Interview.*

6.5.4 Preliminary Analysis

In order to verify that any significant differences found were due to the interview protocols in the experimental groups, it was important to establish that there were no significant differences on the accuracy scores due to demographic variables (i.e., age, gender, student enrolment, education level, employment, English as a second language {ESL} or Faculty). ANOVAs were conducted on all the demographic variables, and collapsed across group by correct and incorrect information. Findings indicated that there were no significant differences across demographic variables on correct and incorrect information with one exception. Age
showed a significant difference on incorrect information $F(4, 93) = 2.683, p = .036$, $\eta^2 = .108$, power = .725. The significance of age was determined to be due to one participant in the eldest age group who scored a high amount of incorrect information. After removing this participant from the analysis there was no significant difference between age groups on incorrect information $F(3, 92) = .765, p = .517$, $\eta^2 = .025$, power = .208. This demonstrates that any differences in recall, including age, were not due to overriding patterns from the demographic data.

6.5.5 Duration of the Interview (in minutes)

The first analysis conducted was in relation to the length of time it took to conduct each interview protocol by interview group. This stage addresses the literature which identifies “time” (the length of time spent in the interview), as a problem as deemed by police officers trained in the CI (Kebbell & Milne, 1998).

This analysis addresses the hypothesis that predicted that the FCI group would take the longest time to conduct, the SI interview would take the shortest to conduct and the TCI group and the MCI group would not be significantly different from each other, due to the number of mnemonic cues that each group utilized. Please see Figure 6.5 for the mean time each group took to conduct.

The length of time (in minutes) that each interview took to conduct was recorded for each participant. These durations were analysed using a one-way ANOVA to examine differences between the four groups on the length of time it took to complete the interview. There were five participants with missing values for the duration variable. The missing values were missing due to interviewer error and were deleted from the analysis. Therefore, 89 participants’ duration scores were analysed. There was a significant difference between the groups, $F(3,88) = 24.162, p = .000$. A Tukey HSD post-hoc analysis identified that the FCI group took the longest amount
of time ($M = 13.39$, $SD = 3.76$), while the SI interview took the shortest amount of

time on average, ($M = 7.18$, $SD = 2.10$). The MCI group also took a short amount of
time ($M = 6.62$, $SD = 2.56$), while the TCI group took the second longest amount of
time ($M = 10.20$, $SD = 3.48$). Following the initial analysis, Tukey HSD post hoc
analyses were conducted and revealed significant differences in the duration of time
spent in the interview between all groups, except between the MCI group and the SI
interview group, $p = .926$. See Table 6.3 for Minimum and Maximum times per
group; and Table 6.4 for Post Hoc differences.

![Figure 6.5](image)

**Figure 6.5.** Mean time in minutes each interview took to conduct (±SE) for TCI ($n = 20$), MCI ($n = 24$), FCI ($n = 23$), SI ($n = 22$).

*Note: TCI = TA+RC; MCI = FR+CT+CP; FCI = TA+RC+CT+CP; SI = Structured Interview.*
Table 6.3

Means, Standard Deviations and Minimum and Maximum Time (in minutes) to Conduct the Interview

<table>
<thead>
<tr>
<th>Group</th>
<th>n</th>
<th>Mean</th>
<th>SD</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>TCI</td>
<td>20</td>
<td>10.20</td>
<td>3.48</td>
<td>5.00</td>
<td>15.00</td>
</tr>
<tr>
<td>MCI</td>
<td>24</td>
<td>6.62</td>
<td>2.56</td>
<td>4.00</td>
<td>17.00</td>
</tr>
<tr>
<td>FCI</td>
<td>23</td>
<td>13.39</td>
<td>3.76</td>
<td>8.00</td>
<td>21.00</td>
</tr>
<tr>
<td>SI</td>
<td>22</td>
<td>7.18</td>
<td>2.10</td>
<td>4.00</td>
<td>11.00</td>
</tr>
</tbody>
</table>

Note: TCI = TA+RC; MCI = FR+CT+CP; FCI = TA+RC+CT+CP; SI = Structured Interview.

Table 6.4

Post Hoc Differences in Time between Groups

<table>
<thead>
<tr>
<th>Groups</th>
<th>TCI</th>
<th>MCI</th>
<th>FCI</th>
<th>SI</th>
</tr>
</thead>
<tbody>
<tr>
<td>TCI</td>
<td></td>
<td>.001*</td>
<td>.005*</td>
<td>.010*</td>
</tr>
<tr>
<td>MCI</td>
<td>.001*</td>
<td></td>
<td>.000*</td>
<td>.926</td>
</tr>
<tr>
<td>FCI</td>
<td>.005*</td>
<td>.000*</td>
<td></td>
<td>.000*</td>
</tr>
<tr>
<td>SI</td>
<td>.010*</td>
<td>.926</td>
<td>.000*</td>
<td></td>
</tr>
</tbody>
</table>

Note: *p<.01;

Note: TCI = TA+RC; MCI = FR+CT+CP; FCI = TA+RC+CT+CP; SI = Structured Interview.

6.6 Recall

Several recall measures are reported throughout the Results Section. Firstly, the absolute numbers of correct and incorrect details recalled for each group are reported. Then the means and standard deviations for correct and incorrect details are reported for each group. The results from the ANOVAs conducted on the recall by groups are then reported. See Table 6.5 for the total recalled in each group. Figure 6.6 illustrates the total recalled by group.
Table 6.5

Total Number of Correct and Incorrect Details by Group

<table>
<thead>
<tr>
<th></th>
<th>TCI</th>
<th>MCI</th>
<th>FCI</th>
<th>SI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Correct</td>
<td>331</td>
<td>222</td>
<td>329</td>
<td>228</td>
</tr>
<tr>
<td>Incorrect</td>
<td>59</td>
<td>73</td>
<td>71</td>
<td>60</td>
</tr>
</tbody>
</table>

Note: TCI = TA+RC; MCI = FR+CT+CP; FCI = TA+RC+CT+CP; SI = Structured Interview.

Figure 6.6. Correct and Incorrect Total Number Recalled by Interview Protocol Group.

The means demonstrated that the TCI group had the highest mean for correct information and the lowest mean for incorrect information. The means and standard deviations are presented in Table 6.6 for the correct and incorrect scores for each group.

ANOVA was conducted on the correct recall scores between groups and a significant difference between groups on correct information was found, $F(3,93) =$
7.627, \( p = .000 \), \( \eta^2 = .203 \), power = .985. A Tukey’s HSD post hoc analysis was conducted and identified the significant differences to be between the TCI group and the MCI group, and between the TCI group and the SI group, with no significant difference being found between the TCI group and the FCI group. Please see Table 6.7 for the post-hoc test.

Table 6.6

*The Means and Standard Deviations for Correct and Incorrect Recall by Group*

<table>
<thead>
<tr>
<th></th>
<th>TCI</th>
<th>MCI</th>
<th>FCI</th>
<th>SI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Correct</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( M )</td>
<td>13.79</td>
<td>9.25</td>
<td>13.70</td>
<td>9.50</td>
</tr>
<tr>
<td>( SD )</td>
<td>4.42</td>
<td>3.66</td>
<td>4.64</td>
<td>4.43</td>
</tr>
<tr>
<td>Incorrect</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( M )</td>
<td>2.46</td>
<td>3.04</td>
<td>3.13</td>
<td>2.50</td>
</tr>
<tr>
<td>( SD )</td>
<td>1.82</td>
<td>2.39</td>
<td>1.85</td>
<td>1.50</td>
</tr>
</tbody>
</table>

*Note:* TCI = TA+RC; MCI = FR+CT+CP; FCI = TA+RC+CT+CP; SI = Structured Interview.

Table 6.7

*Post hoc Differences Between Groups on Correct Information*

<table>
<thead>
<tr>
<th>Groups</th>
<th>TCI</th>
<th>MCI</th>
<th>FCI</th>
<th>SI</th>
</tr>
</thead>
<tbody>
<tr>
<td>TCI</td>
<td>.001*</td>
<td>1.00</td>
<td>.028**</td>
<td></td>
</tr>
<tr>
<td>MCI</td>
<td>.001*</td>
<td>.002*</td>
<td>.794</td>
<td></td>
</tr>
<tr>
<td>FCI</td>
<td>1.00</td>
<td>.002*</td>
<td>.034**</td>
<td></td>
</tr>
<tr>
<td>SI</td>
<td>.028**</td>
<td>.794</td>
<td>.034**</td>
<td></td>
</tr>
</tbody>
</table>

*Note:* *\( p < .01 \); **\( p < .05 \), Note: TCI = TA+RC; MCI = FR+CT+CP; FCI = TA+RC+CT+CP; SI = Structured Interview.
ANOVAs were conducted between groups on incorrect information and no significant differences were identified, $F(3, 93) = .621, p = .603$, $\eta^2 = .020$, power = .172. Please see Table 6.6 for the means and standard deviations for incorrect information.

6.5.7 Accuracy

To be consistent with current CI research, the numbers of correct, incorrect and confabulated details are expressed as an accuracy measure (See Table 6.8). This proportion is calculated by dividing the number of each type of detail (i.e. correct or incorrect) by the total number of details reported (i.e., correct plus incorrect plus confabulated). This measure is usually referred to as accuracy, and sometimes as reliability (Memon, Wark, Bull, & Koehnken, 1997). As expected, the ANOVA conducted on accuracy scores was significant by group, $F(3,93) = 7.627, p = .000$, $\eta^2 = .203$, power = .985.

Table 6.8

<table>
<thead>
<tr>
<th></th>
<th>TCI</th>
<th>MCI</th>
<th>FCI</th>
<th>SI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall accuracy</td>
<td>84.65</td>
<td>75.25</td>
<td>81.44</td>
<td>79.17</td>
</tr>
<tr>
<td>Overall inaccuracy</td>
<td>15.09</td>
<td>24.75</td>
<td>18.56</td>
<td>20.83</td>
</tr>
</tbody>
</table>

Note: TCI = TA+RC; MCI = FR+CT+CP; FCI = TA+RC+CT+CP; SI = Structured Interview.

6.5.8 Percentage Correct and Incorrect of Recalled Information

Results will now be discussed as a proportion of the amount of correct information recalled by the total amount of information available to be recalled (from
the Master List, see Appendix F). This is referred to as the percentage correct in the results and refers to the amount of information the witness provides out of all the possible details shown to the participant. This analysis is only possible with laboratory conditions where the experimenter knows the entire list of details provided, something not possible in ‘real world’ studies (See Table 6.9). This score was calculated by dividing the total number of correct details provided by the participants by the number of all the possible answers as gained from the master list (Memon, Wark, Holley, Bull & Koehnken, 1996).

Table 6.9

<table>
<thead>
<tr>
<th></th>
<th>TCI</th>
<th>MCI</th>
<th>FCI</th>
<th>SI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Correct</td>
<td>13.26%</td>
<td>8.89%</td>
<td>13.18%</td>
<td>9.13%</td>
</tr>
<tr>
<td>Percentage</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incorrect</td>
<td>1.75%</td>
<td>2.29%</td>
<td>1.78%</td>
<td>1.45%</td>
</tr>
</tbody>
</table>

Note: TCI = TA+RC; MCI = FR+CT+CP; FCI = TA+RC+CT+CP; SI = Structured Interview.

Total correct, incorrect, and accuracy rates were determined for the Free Recall and Tell All phases of the interview (See Table 6.10). Significant differences were identified between the Free Recall phase and the Tell All cue on correct information, \( t(1, 93) = 8.815, p = .004 \). There was also a significant difference between Free Recall and the Tell All cue on accuracy, \( t(1, 92) = 8.448, p = .005 \). There were no significant differences between groups on incorrect information, \( t(1, 92) = 2.616, p = 1.09, \text{n.s.} \).
Table 6.10

Means, Total Correct, Incorrect, Total Volunteered And Accuracy For Collapsed Groups Receiving Free Recall And Tell All.

<table>
<thead>
<tr>
<th></th>
<th>Free Recall</th>
<th>Tell All Cue</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>( n = 46 )</td>
<td>( n = 48 )</td>
</tr>
<tr>
<td>Mean correct</td>
<td>7.00 (3.23)</td>
<td>9.33 (4.28)</td>
</tr>
<tr>
<td>Total correct</td>
<td>322</td>
<td>448</td>
</tr>
<tr>
<td>Total incorrect</td>
<td>78</td>
<td>63</td>
</tr>
<tr>
<td>Total answers volunteered</td>
<td>400</td>
<td>511</td>
</tr>
<tr>
<td>Accuracy</td>
<td>80.5</td>
<td>87.6</td>
</tr>
</tbody>
</table>

*Note: Standard deviations in brackets*

Table 6.11

Totals, Means and Standard Deviations for Total Correct by Interview Phase and Group

<table>
<thead>
<tr>
<th></th>
<th>TCI (( n = 24 ))</th>
<th>MCI (( n = 24 ))</th>
<th>FCI (( n = 24 ))</th>
<th>SI (( n = 22 ))</th>
</tr>
</thead>
<tbody>
<tr>
<td>Free Recall</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Correct</td>
<td>164</td>
<td>158</td>
<td></td>
<td></td>
</tr>
<tr>
<td>( M )</td>
<td>6.83</td>
<td>7.18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>( SD )</td>
<td>3.37</td>
<td>3.14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tell All</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Correct</td>
<td>232</td>
<td>216</td>
<td></td>
<td></td>
</tr>
<tr>
<td>( M )</td>
<td>9.67</td>
<td>9.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>( SD )</td>
<td>4.35</td>
<td>4.29</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note: TCI = TA+RC; MCI = FR+CT+CP; FCI = TA+RC+CT+CP; SI = Structured Interview.*
Table 6.12

*The Totals, Means and Standard Deviations for Total Incorrect by Interview Phase.*

<table>
<thead>
<tr>
<th></th>
<th>TCI ((n = 24))</th>
<th>MCI ((n = 24))</th>
<th>FCI ((n = 24))</th>
<th>SI ((n = 22))</th>
</tr>
</thead>
<tbody>
<tr>
<td>Free Recall</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incorrect</td>
<td>40</td>
<td>38</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(M)</td>
<td>1.67</td>
<td>1.73</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(SD)</td>
<td>1.34</td>
<td>1.39</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tell All</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incorrect</td>
<td>31</td>
<td>32</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(M)</td>
<td>1.29</td>
<td>1.33</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(SD)</td>
<td>1.23</td>
<td>1.13</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note: TCI = TA+RC; MCI = FR+CT+CP; FCI = TA+RC+CT+CP; SI = Structured Interview.*

6.5.9 Confabulation

The recall scores were also scored for confabulation. Findings indicated that there was an extremely low rate of confabulations stated by the witnesses. Results from the scoring of confabulation identified only two participants who engaged in confabulation during the interview. The first participant was in the TCI group, who stated that there were definitely trees in the grassy barrier which separated the lanes. The participant stated this information in the Free Questioning phase of the interview. In fact, there were no trees in the grassy barrier. The second participant was in the FCI group, this person stated that they were sure there was a ‘*guy on a motorbike cos I remember a guy with a helmet on*’ in the Change Time phase of the interview. However, there was neither motorcycle nor man with a helmet on, in the video. The limited responses obtained which could be coded as confabulation resulted in no further analysis being conducted on the data.
6.6 Section Discussion

The study presented in this chapter endeavoured to answer several research questions concerning the possible increases in information elicited from witnesses and to determine if previous findings would be replicated in this sample of participants. In addition, the impetus for the study was to establish which interview protocols were the most effective. Following the discussion of the findings in the preliminary data, support for specific hypothesis made about the variables of interest will be discussed in detail below.

6.6.1 Duration of the Interview

The results from the FCI group supported the hypothesis (H1) that that group would take the longest to conduct. Additionally, the first hypothesis, that the SI group would take the shortest time to conduct, was supported. While the FCI took significantly longer to conduct than the TCI group, the truncated group took an average of 3 minutes longer than the SI group and 3 minutes less than the FCI. The MCI group took the shortest amount of time to conduct. The Change Time and Change Perspective mnemonics on their own may be more difficult to “get into” for the participants and therefore may limit the development of flow of information. This could indicate that in relation to the SI interview, probing questions may be more beneficial than the change time and change perspective on their own. All groups commenced with a free recall section, where the participants were asked to tell what happened, in their own words, without interruption, whether that be with the Tell All instruction or a ‘what happened’ instruction, allowing the participant to recall from a logical, chronological, self-perspective as espoused by Ede and Shepherd (1997) as
the optimal statement orientation. While the Change Time and Change Perspective mnemonics may shift logical, chronological perspective, they may also disrupt the focus and attention of the witness, creating disrupted retrieval attempts and therefore limited recall.

6.6.2 Correct Recall

Hypothesis two stated that the FCI group would produce an increase in the amount of correct information elicited from the witnesses. Additionally, it was predicted that the TCI group would produce similar recall scores to the FCI. This hypothesis was supported, in that the significant effects for correct information recalled across groups is consistent with other research which has demonstrated a significant increase of information recalled with the use of the Cognitive Interview. Furthermore, the results also supported the hypothesis that the TCI group, including the TA and RC cues, would recall significantly more information than the MCI group or the SI group, supporting the positive effects for the TA and RC combination found in previous research (Bekerian & Dennett, 1993; Milne & Bull, 1998). The TCI group was not significantly different from the FCI group, as confirmed by the mean scores which showed a small increase in correct scores with the truncated group over the FCI group. This suggests that the truncated version of the CI which has already been shown to take less time to conduct, may result in correct recall which is marginally better than the FCI. Additionally, the MCI group was not significantly different from the SI group, and in fact had the lowest mean for correct scores of the four groups, implying that the use of these two mnemonics does not facilitate recall any more than the structured interview used as the control condition which did not introduce any CI mnemonics.
6.6.3 Incorrect Recall

It was predicted (H3) that the witnesses’ recall for incorrect information would be significantly different across the groups, with the FCI group and the MCI group recalling more incorrect information than the other two groups. In this instance, the hypothesis was not supported, as the results for incorrect information by group were not significant indicating that there were no significant differences across groups for incorrect information. However, when examining the trends in the data, the TCI group had the least amount of incorrect information and the FCI had the highest amount of incorrect information. However, noting the small effect size, a more powerful study would have to be undertaken to expand on these trends.

6.6.4 Accuracy

Accuracy scores were hypothesised (H4) to be aligned with accuracy scores from previous research. The scores for accuracy are in line with previous research which established approximately 85% and 82% accuracy with the CI and the control groups respectively (Geiselman et al., 1985; Koehnken et al., 1999; Milne & Bull, 2000). The TCI group and the FCI group found accuracy scores of 84% and 81% respectively, indicating a similar pattern of correct and incorrect information recalled.

However, the MCI group and the SI group had scores of 75% and 79% respectively. These low accuracy scores signify a decrease of correct information. Both the MCI group and the SI group did not achieve the number of details recalled nor the number of correct details recalled when compared with the TCI or FCI groups.
6.6.5 Percentage Correct

As predicted (H5, H6), the percentage correct scores fall in line with previous research which demonstrates that of all the information available to the participants to recall, they actually recall a very small percentage of the information available (Memon et al., 1997; Marshall, 1980). The TCI group had the highest percentage correct with 13.26% indicating that of all the information contained in the video, participants only recalled a maximum of roughly 13%. This has implications for the legal system, in that witnesses may only recall a small amount of the total details. When looking to memory theory for explanations, the attention paid to the stimulus, the ability of short term memory to hold many details before transfer to long term memory, the salience of the details and the ability to perceive and understand the rapid flow of events are all implicated in the witnesses’ inability to recall many of the original details. As stated, although the video presented was approximately thirty seconds in length, the average car crash is over in one second. The ability to perceive, and attend to the wealth of information that occurs in a car crash may impede the ability of witnesses to produce accurate recall. Further, because most adults may feel familiar with cars, roads, lanes and other stimuli relevant to road incidents, they may be more inclined to infer what happened. For example, because of the final position of the cars on the road, witnesses may infer what occurred, rather than have truly ‘witnessed’ the experience, leading to increases in inaccuracy of recall.

6.6.6 Free Recall and Tell All phases

It was established that the Tell All mnemonic gained significantly more correct information ($M = 9.33$) than the other comparable group Free Recall ($M = 7.00$). As hypothesised (H7), lowering the response criterion such that witnesses were
encouraged to volunteer answers even if they were not completely certain of the completeness or accuracy, resulted in an increase in the total number of answers volunteered and an increase in the number of correct answers provided. However, the accuracy rate did not decrease for the group with the lowered response criterion (FR = 80.5 and TA = 87.6). This indicates that not only was there a significant increase in correct information; there was not a significant increase in incorrect information gained with this instruction. This finding does not support Koriat and Goldsmith (1996a) who predicted a decrease in accuracy with a lowered response criterion.

As these two cues were the first cues used for their respective groups, it was hypothesised that lowering the response criterion would have an effect on the answers that the participants volunteered. As both cues encourage a stream of information from the witness without interruption, and due to the fact that each of these cues were the first opportunity for the witnesses to tell what happened, a similar mean score could have been expected. However, in line with previous research which has found that explicitly telling participants to “tell all” produces more information than simply asking “what happened” in the free recall stage, it was found that the Tell All mnemonic resulted in a higher mean score for correct information than the Free Recall stage.

The mean scores for incorrect information with the Tell All cue also produced less incorrect information ($M = 1.31$) than the Free Recall “what happened” stage ($M = 1.70$), however this was not significant. These differences in correct and incorrect scores, both supporting the Tell All cue, have implications for the police service. This cue has not been shown to cause confusion for either the witness or the officer, and taking into account its positive outcomes on accuracy at retrieval, this mnemonic should become a standard part of any witness interview.
6.6.7 Confabulation

The hypothesis (H8) that there would be greater amounts of confabulation in the Change Perspective group was not supported. In fact, there was surprisingly little confabulation at all for any of the 94 participants. With only three occurrences ($n = 2$) of confabulation, these findings are contradictory to other research which found increases in confabulation with the use of the CI (Koehnken & Brockman, 1988; Memon et al., 1997). While the FCI did produce two instances of confabulation (as scored ‘motorcycle’ and ‘guy with helmet on’) demonstrating an increase in confabulation with the FCI, the numbers are so low as to prevent meaningful statistical analysis. Perhaps, because the video stimulus duration was brief, the participants did not have the opportunity to add many additional confabulated details. Another explanation may be that because there were very few people (either pedestrians or drivers or passengers) and therefore no conversation, communication or interaction between persons, the participants did not have much person or verbal information with which to misinterpret or confabulate. For example, research conducted by Memon et al. (1997) demonstrated that there was a higher mean score for confabulation in the ‘person’ category ($M = 2.54, SD = 2.65$) than in either the ‘action’ ($M = 0.81, SD = 1.40$), ‘location’ ($M = 0.68, SD = 1.78$) or ‘object’ ($M = 0.27, SD = 0.63$) categories. In fact, the mean scores for confabulation with the use of the CI for ‘object’ details produced very little confabulation. Conceivably, witnesses are more at risk of confabulating information regarding person and action details, as opposed to location or object details.
6.7 Section Summary

This study examined experimentally, the witness recall of a video of a road incident to ascertain which of four interview protocols would elicit the most correct information and the least incorrect information from the witnesses. The hypotheses, taken together, examined both the time taken to conduct the interviews and the amount of information retrieved and the accuracy of that information. It was predicted that, at the conclusion of the study, a truncated version of the CI could be proposed that was shorter to conduct without any decreases in correct information or increases in incorrect information. The results support the notion that the TCI protocol is an efficient, effective and indeed parsimonious solution for interviewing witnesses to road incidents. This protocol has been shown to be uncomplicated while still eliciting, in fact, more correct information and less incorrect information than the FCI. The implications of these findings are important in our understanding that there can be a significant increase in recall, with the use of a simple and effective interview protocol. Officers, who feel they can comprehend the mnemonics and administer them without an increase in confusion, may be more willing to utilise the straightforward version, as they may perceive the entire protocol to be too difficult to administer due to the inclusion of more demanding and less effective cues.

In addition, previous research has demonstrated that both researchers and officers do not regard the Change Perspective mnemonic to be of much value, especially in less complex and serious crimes. However, little empirical research had been conducted which identified the lack of effectiveness of the Change Perspective technique, thus researchers and officers in the field may have continued to include this mnemonic in the training protocol, seemingly unaware of the possibility that the
Change Perspective mnemonic, in this context, may not be a valid operationalisation of the varied retrieval theory.

The following section examines the categorisation of the details contained in the video as important or not important. The QPS officers were invited to undertake this categorisation.
6.8 Study One: Phase Two: The Identification of Details Important to the Police Investigation

This stage of the research endeavoured to examine what police officers in the field thought were important details contained in the road incident stimulus video. As identified in past research, not all details are considered to be of equal importance. Roberts and Higham (2002) identify details as central or peripheral to the crime scene, while other research (Memon et al., 1997) identifies person, action and object details as being categories of interest.

As discussed previously, the CI takes a significant amount of time to conduct properly and police officers do not have enough time to interview each witness in depth, as time is at a premium. Therefore, police in the field do not need to waste time and resources gathering irrelevant information (Kebbell & Wagstaff, 1996). Kebbell and Wagstaff (1996) assert that if an interview procedure is going to have practical benefits, it should be assessed with respect to its intended purpose. Further, Wagstaff asserts that:

An interview technique may appear to enhance eyewitness memory if one considers only the amount of information per se obtained in isolation from other factors; however, it may be that these enhancements are limited to the recall of superfluous detail that is of no use in a police investigation. (Wagstaff, 1993, cited in Kebbell & Wagstaff, 1997, p. 599).

One previous study had examined the recall of important details across experimental groups using the CI: however, that study did not use police officers to make the determination of importance (Geiselman et al., 1985). Newlands et al. (1999) asked officers to rate transcripts for quality, but did not calculate the accuracy of recall of important information.
6.8.1 Aims

In light of these concerns about the type of information being recalled, this research proposes to identify the important, and not important, details contained in the stimulus video. Further, those details which are identified as important will be used to reanalyse the witnesses’ original recall. The witnesses recall will be analysed to determine if there are any significant differences in recall across the experimental groups with regard to important information.

6.8.2 Research Questions

There is a lack of research on identifying critical details that police officers would need to investigate a crime. From discussions with the QPS, it was thought that officers would identify those details which imply causality and culpability for a criminal charge. No specific hypotheses are made about the outcomes and the issues remain as Research Questions:

1. Which details will the police officers deem to be very important to a police investigation?

2. Will significant differences be found in recall across the experimental groups with regard to very important information?

6.9 Method

6.9.1 Participants

Twelve experienced Brisbane based, Queensland Police Service Accident Investigation Squad (QPS AIS) Officers evaluated the 104 details obtained from the road incident video stimulus as to whether they were of crucial importance or not important in a survey of the relative importance of the details. These twelve officers
represent approximately one-third of the available officers in Queensland and 57% of the officers in the Brisbane Metropolitan Region. Queensland Accident Investigation Squad officers who routinely attend road incidents are utilised in this study as experts to make this determination.

6.9.2 Materials and Procedure

Officers were provided with a copy of the stimulus road incident video. Additionally, they were provided with the list of 104 details deemed from the pilot study to be the content of the video. The officers viewed the video of the road incident and were allowed to rewind and re-view the video as many times as necessary. They were asked to code each detail according to its importance on a 5 point Likert scale, 1 being not important and 5 being crucial (see Appendix G). They were also able to make written comments in relation to what they saw as the key details.

6.10 Results

In order to ascertain whether there was agreement among the officers who ranked the importance of the details, an Interclass Correlation Coefficient was utilised. The ICC equalled .7921 which was deemed acceptable. On examining the data for the coders it was noted that one officer had over-inflated mean scores when compared to the other coders. An ICC was conducted with that officer removed from the analysis, however, the ICC improved only slightly (ICC = .8126), therefore that officer’s rankings were included in the analysis. Mean scores were produced from the officers’ rankings, and those mean scores were then used to determine: (a) very important details \( M \geq 3.75 \), (b) moderately important details \( M > 2.00 < 3.75 \), and
(c) not important details ($M \leq 2.00$). See Table 6.13, for a list of very important details, Table 6.14, for moderately important details and Table 6.15, for not important details. The anchor points on the Likert scale were used to determine the investigated levels of importance such that very important details were deemed to be any details which obtained a mean score of equal to or greater than 3.75. This cut-off was used to ensure that the very important list included all those details that most officers reported to be very important.

The very important details list contains 54 details or 51% of the original list. The very important list of details reflects items which include the cars that made impact in the crashes and also cars which caused some of the incidents. It is interesting to note that weather details, the set up of the lanes on the highway, and driving conditions were deemed very important or crucial.

Table 6.13

**Very Important Details as Obtained by Police Officers’ Rankings with Mean Scores**

*Obtained from a Scale of 1 to 5.*

<table>
<thead>
<tr>
<th>Details</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accident 1 in IM</td>
<td>4.08</td>
</tr>
<tr>
<td>Accident 2 in II</td>
<td>4.25</td>
</tr>
<tr>
<td>Significant changing of lanes</td>
<td>4.08</td>
</tr>
<tr>
<td>Significant skidding &amp; braking</td>
<td>4.75</td>
</tr>
<tr>
<td>A large white truck (3.5t?)</td>
<td>4.83</td>
</tr>
<tr>
<td>In the IM lane</td>
<td>4.33</td>
</tr>
<tr>
<td>Skews off/goes to change lanes</td>
<td>4.67</td>
</tr>
<tr>
<td>Into the IO lane</td>
<td>4.25</td>
</tr>
<tr>
<td>Clips/swipes/slams into</td>
<td>4.42</td>
</tr>
<tr>
<td>The back of the red station wagon</td>
<td>4.58</td>
</tr>
<tr>
<td>(The red wagon) cannons into/is sent into/hits</td>
<td>4.50</td>
</tr>
<tr>
<td>The rear of the back of the small red car (sedan)</td>
<td>4.50</td>
</tr>
<tr>
<td>In front of it/ in the same lane</td>
<td>4.42</td>
</tr>
<tr>
<td>(small sedan red car) cannons into/pushes</td>
<td>4.58</td>
</tr>
<tr>
<td>The silver/grey car/station wagon: Volvo</td>
<td>4.42</td>
</tr>
<tr>
<td>In front of it</td>
<td>4.33</td>
</tr>
<tr>
<td>Original white truck going to IO</td>
<td>4.00</td>
</tr>
<tr>
<td>In the II lane</td>
<td>4.17</td>
</tr>
<tr>
<td>Simultaneously with accident one</td>
<td>4.67</td>
</tr>
<tr>
<td>A black car/sedan</td>
<td>4.17</td>
</tr>
<tr>
<td>Brakes suddenly/does not move on</td>
<td>4.08</td>
</tr>
</tbody>
</table>
### Details

<table>
<thead>
<tr>
<th>Details</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is rear ended by/hit by</td>
<td>4.50</td>
</tr>
<tr>
<td>A white sedan</td>
<td>4.58</td>
</tr>
<tr>
<td>Which is rear ended by</td>
<td>4.50</td>
</tr>
<tr>
<td>A dark maroon / red car</td>
<td>4.58</td>
</tr>
<tr>
<td>Cars are crunched up badly</td>
<td>4.00</td>
</tr>
<tr>
<td>A black car</td>
<td>4.00</td>
</tr>
<tr>
<td>Cars spin out into IM lane</td>
<td>4.17</td>
</tr>
<tr>
<td>Blocking the IM lane</td>
<td>4.00</td>
</tr>
<tr>
<td>A Blue/black car</td>
<td>4.33</td>
</tr>
<tr>
<td>In IM</td>
<td>4.17</td>
</tr>
<tr>
<td>Hits the accident</td>
<td>4.50</td>
</tr>
<tr>
<td>Hits the accident</td>
<td>4.00</td>
</tr>
<tr>
<td>White car behind(IM)</td>
<td>4.50</td>
</tr>
<tr>
<td>Hits the accident</td>
<td>4.58</td>
</tr>
<tr>
<td>The red car crunches up</td>
<td>3.83</td>
</tr>
<tr>
<td>A black car</td>
<td>3.75</td>
</tr>
<tr>
<td>The original station wagon</td>
<td>3.83</td>
</tr>
<tr>
<td>Hits/runs into</td>
<td>3.83</td>
</tr>
<tr>
<td>The back of the maroon / red car</td>
<td>3.83</td>
</tr>
<tr>
<td>Black car behind (IM)</td>
<td>3.75</td>
</tr>
<tr>
<td>All three vehicles stay in IM lane</td>
<td>3.75</td>
</tr>
<tr>
<td>Forces a B-double loaded (large truck) with cars</td>
<td>3.75</td>
</tr>
<tr>
<td>Freeway</td>
<td>3.75</td>
</tr>
<tr>
<td>Wet road / Slippery</td>
<td>4.17</td>
</tr>
<tr>
<td>Congested/ Busy</td>
<td>4.08</td>
</tr>
<tr>
<td>Water spray</td>
<td>4.00</td>
</tr>
<tr>
<td>Medium visibility</td>
<td>4.08</td>
</tr>
<tr>
<td>Obstructed</td>
<td>4.17</td>
</tr>
<tr>
<td>Speeding</td>
<td>4.17</td>
</tr>
<tr>
<td>Four cars in first accident (3 + truck)</td>
<td>4.33</td>
</tr>
<tr>
<td>9 cars in second accident</td>
<td>4.50</td>
</tr>
<tr>
<td>19 – 23 all together in scene</td>
<td>4.00</td>
</tr>
</tbody>
</table>

As seen in Table 6.14, the details that were identified to be moderately important consisted of 26 details (24 %) of the details from the original list.

Moderately important details, as decided by the expert panel, were identified to be details of cars and actions which predominately performed an action to avoid the crashes but also to some extent, stayed within the immediate crash scene.

Additionally, some less important details of lane construction and weather are included here.
Table 6.14

*Moderately Important Details as Obtained from Police Officers’ Rankings with Mean Scores Obtained from a Scale of 1 to 5.*

<table>
<thead>
<tr>
<th>Details</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Road set-up (lanes)</td>
<td>3.67</td>
</tr>
<tr>
<td>2 separate accidents/crashes</td>
<td>3.58</td>
</tr>
<tr>
<td>Spinning cars/glass in Accident 2</td>
<td>3.42</td>
</tr>
<tr>
<td>(these cars) are nudged/hit by</td>
<td>3.42</td>
</tr>
<tr>
<td>Which rear ends</td>
<td>3.58</td>
</tr>
<tr>
<td>Truck</td>
<td>3.33</td>
</tr>
<tr>
<td>In IO lane</td>
<td>3.25</td>
</tr>
<tr>
<td>Merges</td>
<td>3.25</td>
</tr>
<tr>
<td>To IS lane</td>
<td>3.17</td>
</tr>
<tr>
<td>Silver sedan</td>
<td>2.67</td>
</tr>
<tr>
<td>Goes from IM to IS</td>
<td>3.33</td>
</tr>
<tr>
<td>Off the road</td>
<td>3.58</td>
</tr>
<tr>
<td>And onto IS</td>
<td>3.42</td>
</tr>
<tr>
<td>Another large truck</td>
<td>2.67</td>
</tr>
<tr>
<td>Following (the B-double loaded with cars)</td>
<td>2.67</td>
</tr>
<tr>
<td>Also veers off</td>
<td>2.83</td>
</tr>
<tr>
<td>To the IS</td>
<td>2.75</td>
</tr>
<tr>
<td>There is glass spraying/debris</td>
<td>3.00</td>
</tr>
<tr>
<td>Explosion of glass shattering/bits of vehicle fly into air/debris</td>
<td>3.50</td>
</tr>
<tr>
<td>Windshield wipers going on some cars</td>
<td>3.67</td>
</tr>
<tr>
<td>Foggy</td>
<td>3.25</td>
</tr>
<tr>
<td>Slow moving</td>
<td>3.42</td>
</tr>
<tr>
<td>6 lanes (3 each way)</td>
<td>3.17</td>
</tr>
<tr>
<td>Grassy barrier</td>
<td>3.00</td>
</tr>
<tr>
<td>Metal fencing</td>
<td>2.92</td>
</tr>
<tr>
<td>Barrier</td>
<td>3.00</td>
</tr>
</tbody>
</table>

As seen in Table 6.15, the details which were deemed not important totalled 17 and represented 16% of the details from the original list. These details included information about cars and their actions that did not have any direct impact with the crashes. These cars completely avoided the incidents and remained undamaged. These cars also, to some extent, performed actions which helped them to get out of the way of other cars.
Table 6.15

Not Important Details as Obtained from Police Officers’ Rankings with Mean Scores Obtained from a Scale of 1 to 5.

<table>
<thead>
<tr>
<th>Details</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Country scene (B-double loaded) eventually goes around back to the IO</td>
<td>1.67</td>
</tr>
<tr>
<td>Silver sedan goes from</td>
<td>1.83</td>
</tr>
<tr>
<td>II to IM to IO (undamaged)</td>
<td>1.67</td>
</tr>
<tr>
<td>Blue/black ute/4WD/car</td>
<td>2.08</td>
</tr>
<tr>
<td>Speeds</td>
<td>1.92</td>
</tr>
<tr>
<td>From II to IM to IS (undamaged)</td>
<td>1.67</td>
</tr>
<tr>
<td>Behind the (yellow mini)</td>
<td>1.83</td>
</tr>
<tr>
<td>Yellow mini</td>
<td>1.92</td>
</tr>
<tr>
<td>Stops dead</td>
<td>1.83</td>
</tr>
<tr>
<td>In IO</td>
<td>1.67</td>
</tr>
<tr>
<td>(mini) moves to IS</td>
<td>2.00</td>
</tr>
<tr>
<td>Driver</td>
<td>1.58</td>
</tr>
<tr>
<td>Steps out of</td>
<td>1.42</td>
</tr>
<tr>
<td>Small red car</td>
<td>2.00</td>
</tr>
<tr>
<td>Afternoon</td>
<td>2.00</td>
</tr>
<tr>
<td>Mid morning</td>
<td>2.00</td>
</tr>
</tbody>
</table>

Following the identification of very important details, participants’ recall scores from Study One Phase One were recoded to include only very important details. ANOVAs were then conducted on the very important details in order to examine whether the pattern of results remained the same for the groups on overall recall and recall of important details. The findings are outlined below.

When examining the results for very important information ($\leq 3.75$), the results were significant $F(3,93) = 4.465, p = .006, \eta^2 = .130, \text{ power} = .866$. See Figure 6.7. A Tukey’s post-hoc was utilised to determine where the differences lie between groups on important information. Please see Table 6.16 for post-hoc tests.
Note  TCI = TA+RC; MCI = FR+CT+CP; FCI = TA+RC+CT+CP; SI = Structured Interview.

Figure 6.7. Graph Illustrating Patterns of Recall of All Details and Crucial Details Across Groups.

Table 6.16
Post hoc Differences Between Groups on Important Information

<table>
<thead>
<tr>
<th>Groups</th>
<th>TA and RC</th>
<th>CT and CP</th>
<th>Full CI</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>TA and RC</td>
<td>0.019*</td>
<td>0.998</td>
<td>0.112</td>
<td></td>
</tr>
<tr>
<td>CT and CP</td>
<td>0.019*</td>
<td>0.032*</td>
<td>0.917</td>
<td></td>
</tr>
<tr>
<td>Full CI</td>
<td>0.998</td>
<td>0.032*</td>
<td>0.165</td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td>0.112</td>
<td>0.917</td>
<td>0.165</td>
<td></td>
</tr>
</tbody>
</table>

Note: *p<.05, TA and RC = Tell All and Reinstate Context; CT and CP = Change Time and Change Perspective; Full CI = CI; Control = Structured Interview.
6.11 Section Discussion

The results indicate that the officers thought that a large percentage of the information was very important (51%), while only 16% of the details were determined to be not important. These results indicate the perceptions by the officers that information leading up to and following the initial crashes was very important. Weather details and the congestion of the roadway were also considered important. Details which were considered unimportant included the cars and their actions which did not come into direct contact with the crashes and at some level made movements which helped them to successfully manoeuvre out of the way of the crashes. Some time details also were deemed unimportant.

After examining previous research in which Geiselman et al. (1985) coded items as critical on their own and identified 20 critical details and information in police manuals and personal communication concerning identifying the facts to prove an offence, it seemed unexpected that the officers would deem so many details to be very important. However, when examining the other information such as statements made during the focus groups (See Section 8.11), the officers sought to create an understanding of the entire event circumstances.

When only details of equal to or greater than a mean of 3.75 were used to determine significance between the recall between groups on very important information, there was a significance difference between the groups ($p = .006$). These results support findings by Geiselman et al. (1985) who found a significant difference on correct information between the CI group and a standard interview group, using 20 critical facts generated by the experimenters. However, this finding does not support research by Newlands et al. (1999) which found that there was no significant difference between interview type on the quality of the descriptions for
practical use to an investigation. In the Newlands et al. study, the original recall data heavily favoured the CI, however, in the quality of the reports between officers trained in the CI and those not trained, there were no significant differences.

When examining the trends, the TCI group and the FCI group retained the highest amount of correct information recalled while the MCI group and the SI group produced less amounts of correct information.

The following chapter examines the witnesses’ perceptions of the interview process and discusses the perceived benefits and detriments of the particular mnemonics.
Chapter Seven: Exploration of Witnesses’ Perceptions

7.1 Witness Perceptions of the Interview Process

7.1.1 Aim

7.1.2 Hypotheses

7.2 Method

7.2.1 Participants

7.2.2 Materials

7.2.3 Procedure

7.2.4 Analysis

7.3 Quantitative Results

7.3.1 Part A: Rapport and Interview Process

7.3.2 Part B: Individual Mnemonics

7.3.3 Perceived Accuracy and Completeness

7.4 Qualitative Results

7.4.1 Coding

7.4.2 Results

7.4.2.1 Rapport

7.4.2.2 Probing Questions

7.4.2.3 Mnemonics

7.4.3.4 Suggestions

7.5 Discussion

7.5.1 Length of Interview

7.5.2 Perceptions of Interview Procedure

7.5.3 Information Triggered

7.5.4 Confusion Items
7.5.5 Perceptions of Accuracy and Completeness 157
7.5.6 Rapport 158
7.5.7 Probing Questions 158
7.5.8 Mnemonics 159
7.5.9 Suggestions 159
7.6 Limitations 160
7.7 Chapter Summary 160
7.1 Witnesses’ Perceptions of the Interview Procedure

Due to the importance of trying to gather as much information as possible about the participants’ reflections on the interview, the participants were given a questionnaire immediately following their interview. In an attempt to gain additional information relating to how the participants felt about the interviewers’ skills and the individual mnemonics used, the participants were able to make written comments in response to a number of questions on the questionnaire.

The purpose of designing the questionnaire, which included questions that tapped the eyewitnesses’ views on the interview process, was to identify whether all interviewers followed the same procedures regarding rapport building, pacing the interview and the clarity of the interviewer’s instructions. In addition, the questions for the eyewitnesses were designed to tap the overall skills and mannerisms of the interviewer from the witnesses’ point of view.

7.1.1 Aim

The aim of this stage of the research was to identify what the participants found positive or helpful and what parts of the interview the participants found negative or unhelpful.

7.1.2 Statement of Hypotheses

- Because of the level of training and feedback sessions provided to the interviewers, it was predicted that the training procedures would produce a standard of interviewing that was consistent between groups as deemed by the witnesses’ perceptions. Therefore, the witnesses would not identify a
significant difference between the interviewers on questionnaire items such as rapport and general pace of the interview (H₁).

- In light of research which has found that the Change Time and more significantly, the Change Perspective mnemonics would induce confusion for the witnesses (George, 1991; Kebbell et al., 1999), it was hypothesized that the groups which included these mnemonics (MCI and FCI) would cause the witnesses to report more confusion (H₂) and less helpfulness (H₃).

- In keeping with confidence and accuracy research, it was predicted that witnesses’ perceptions of their recall would differ significantly from their actual recall. Specifically, witnesses would overestimate their correct recall and underestimate their incorrect recall in line with research which stated that people normally think that they are more accurate than they really are (H₄).

- Given the limited previous research which asked the witnesses for their perceptions of the interview procedure, no predictions were made about the types of themes that would emerge from the written responses the witnesses made. The written responses made by the witnesses to the questions and the resultant themes remained research questions.
7.2 Method

7.2.1 Participants

The 94 participants who completed the experimental recall task were asked to complete a follow-up questionnaire, at the completion of their experimental task. They were QUT undergraduate students receiving course credit for their participation. As stated previously, the participants included 16 males and 78 females, with an age range of 17 to 54.

7.2.2 Materials

Participants completed a “Witnesses Perceptions of the Interview” questionnaire. The questionnaire combined both closed (quantitative) and open (qualitative) questions. In Part A the quantitative questionnaire investigated rapport and the interview process. This section specifically asked about the general pace of
the interview (including length and smoothness of exchange, 2 questions), the rapport between the interviewer and witness (including making the witness feel relaxed and skills of the interviewer, 9 questions), and clarity of the interviewer’s instructions and questions and probing (12 questions). An additional two questions tapped the concept of information being ‘triggered’ or ‘popping’ into mind. Participant demographics were also determined in this section of the questionnaire.

In Part B of the quantitative questionnaire, participants were asked to comment on each of the individual mnemonics of the Cognitive Interview utilised by the interviewer. Part B of the questionnaire was designed slightly different for each group, depending on which mnemonics they received in that the witnesses were asked only questions which directly related to the mnemonics they were presented with during the interview (See Appendix H). This section of the questionnaire asked the witnesses to rate on a 5 point Likert scale which of the mnemonics were helpful to their recall and which mnemonics produced confusion, with a score of 1 being the negative end of the scale (very unhelpful, very confusing and very difficult), and a score of 5 at the positive end of the scale (very helpful, very easy and very clear). This section also examined any discrepancies between the witnesses’ perceptions of how much information they thought they recalled correctly and how much information they actually did recall correctly. The questionnaire asked witnesses to review, on a percentage scale, from 0% to 100%, what percentage of the information they told the interviewer was correct and also, what percentage of the information they told the interviewer was incorrect.

A final, qualitative, part of the questionnaire invited participants to add additional written comments in relation to particular questions. Participants had 8 opportunities to make a written comment on the interviewer style. The witnesses were
asked to make a written comment if they had answered in a certain way to a question. For example, in response to the question, “Were you impressed by any particular skills of the interviewer?” If the participant answered “yes”, they were invited to make a written comment (See Appendix H for an example of the questionnaire). In the questionnaire some questions were posed positively, “*What skills did the interviewer have that you found helpful?*” and some were presented negatively, “*What did the interviewer say that made you feel pressured to give an answer that you were unsure of?*”

7.2.3 Procedure

Following the interview, witnesses were asked to complete a questionnaire concerning the interview process. Witnesses did not complete the questionnaire in front of the person who interviewed them. The witnesses either changed rooms, or the interviewer left the room, while the witness completed the questionnaire. This design was adhered to so that the witnesses did not feel pressured to give certain answers, as they may have with their interviewer in the room observing them. No identifying names or student numbers appeared on any paperwork or questionnaires. Students were kept informed at all times and there was no attempt to mislead participants about what was going to happen.

7.2.4 Analysis

The quantitative data was analyzed using the Statistical Package for Social Sciences (SPSS version 10.0). Quantitative data results are discussed in section 7.3. The qualitative data was typed into Microsoft Word and imported into GSR NVivo, (Qualitative Solutions and Research Pty Ltd, 2000), a qualitative data research and
analysis software package, for coding and analysis. Qualitative results are discussed in section 7.4.

7.3 Quantitative Results

7.3.1 Part A: Rapport and the Interview Process

ANOVA were conducted with the four different groups on the responses to the questions in the questionnaire. There were no differences between the groups in Part A of the questionnaire for all questions, except one. This question was Question 2 Part A (In terms of getting information from witnesses about road accidents, would you say the interview length was...) $F(1, 92) = 3.841, p = .01$. After performing Tukey HSD adjustment, it was indicated that the differences were between the FCI and the SI groups. The structured interview group indicated that the interview was short ($M = 2.5, SD = .5976$) and the FCI group signified that the interview length was average ($M = 3.0, SD = .5108$). Further, no significance differences were evident between the four groups on any questions except the aforementioned question.

In addition, there were no significant differences between the groups on two questions which tapped the concept of information being ‘triggered’ or ‘popping’ into mind ($F(3,93) = 2.514, p = .063$ and $F(3,89) = 1.365, p = .259$, respectively).

7.3.2 Part B: Individual Mnemonics

Table 7.1 shows the percentage scores, means and standard deviations for the Likert scale questions, relating to whether the witnesses found the particular cue to be helpful or unhelpful when attempting to recall information. Table 7.2 demonstrates the percentages, means and standard deviations obtained when asking the witness if they found the task of using the cue to be difficult or easy. Table 7.3 indicates the percentages, means and standard deviations of the perceived clarity of the cue. Anova
results indicated that there were no significant differences between groups on the witnesses’ perceptions of the individual mnemonics. These 5-point Likert scale questions referred particularly to whether the witnesses found the mnemonic cues to be helpful or confusing.

Table 7.1

Percentages, Means And Standard Deviations Of The Helpfulness Of The Cues

<table>
<thead>
<tr>
<th></th>
<th>Very Unhelpful</th>
<th>Unhelpful</th>
<th>Neutral</th>
<th>Helpful</th>
<th>Very Helpful</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tell All</td>
<td>0.0</td>
<td>7.0</td>
<td>16.0</td>
<td>66.0</td>
<td>11.0</td>
<td>3.81</td>
<td>.72</td>
</tr>
<tr>
<td>Reinstate</td>
<td>0.0</td>
<td>11.0</td>
<td>16.0</td>
<td>55.0</td>
<td>18.0</td>
<td>3.79</td>
<td>.87</td>
</tr>
<tr>
<td>Context Change</td>
<td>0.0</td>
<td>20.0</td>
<td>22.0</td>
<td>50.0</td>
<td>9.0</td>
<td>3.47</td>
<td>.91</td>
</tr>
<tr>
<td>Change Time</td>
<td>4.0</td>
<td>24.0</td>
<td>20.0</td>
<td>48.0</td>
<td>4.0</td>
<td>3.23</td>
<td>1.01</td>
</tr>
</tbody>
</table>

Table 7.2

Percentages, Means And Standard Deviations Of The Difficulty Of Using The Cues

<table>
<thead>
<tr>
<th></th>
<th>Very Difficult</th>
<th>Difficult</th>
<th>Neutral</th>
<th>Easy</th>
<th>Very Easy</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tell All</td>
<td>0.0</td>
<td>48.0</td>
<td>11.0</td>
<td>37.0</td>
<td>2.0</td>
<td>2.95</td>
<td>.98</td>
</tr>
<tr>
<td>Reinstate</td>
<td>0.0</td>
<td>16.0</td>
<td>14.0</td>
<td>66.0</td>
<td>5.0</td>
<td>3.59</td>
<td>.81</td>
</tr>
<tr>
<td>Context Change</td>
<td>2.0</td>
<td>39.0</td>
<td>9.0</td>
<td>46.0</td>
<td>4.0</td>
<td>3.10</td>
<td>1.05</td>
</tr>
<tr>
<td>Change Time</td>
<td>7.0</td>
<td>44.0</td>
<td>11.0</td>
<td>39.0</td>
<td>0.0</td>
<td>2.82</td>
<td>1.03</td>
</tr>
</tbody>
</table>
Table 7.3
Percentages, Means And Standard Deviations Of The Perceived Clarity Of The Cues

<table>
<thead>
<tr>
<th></th>
<th>Very Confusing</th>
<th>Confusing</th>
<th>Neutral</th>
<th>Clear</th>
<th>Very Clear</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tell All</td>
<td>0.0</td>
<td>21.0</td>
<td>34.0</td>
<td>36.0</td>
<td>9.0</td>
<td>3.34</td>
<td>.91</td>
</tr>
<tr>
<td>Reinstate</td>
<td>0.0</td>
<td>11.0</td>
<td>30.0</td>
<td>55.0</td>
<td>5.0</td>
<td>3.52</td>
<td>.76</td>
</tr>
<tr>
<td>Context Change</td>
<td>0.0</td>
<td>22.0</td>
<td>24.0</td>
<td>52.0</td>
<td>2.0</td>
<td>3.34</td>
<td>.84</td>
</tr>
<tr>
<td>Time Change</td>
<td>2.0</td>
<td>26.0</td>
<td>17.0</td>
<td>54.0</td>
<td>0.0</td>
<td>3.23</td>
<td>.92</td>
</tr>
</tbody>
</table>

7.3.3 Perceived Accuracy and Perceived Completeness

The questionnaire also examined any discrepancies between the witnesses’ perceptions of how much information they thought they recalled correctly and how much information they actually did recall correctly. The percentages that they thought they had answered correctly or incorrectly and their actual percentage correct and incorrect were compared using a paired samples t-test. Analysing these scores from the questionnaire with the witnesses actual recall scores, gained from the scoring of the transcripts, resulted in the following data. When the groups were collapsed to include all participants, the mean percentage score for perceived accuracy was 67.13, \(SD = 19.52\) while the mean for the actual accuracy correct achieved was 80.59, \(SD = 12.64\) indicating that participants significantly underestimated their correct scores \(t(86) = 6.071, p = .000\). In addition, the mean score for perceived inaccuracy was 26.32, \(SD = 18.43\) and the mean for the actual inaccuracy was 19.41, \(SD = 12.64\) indicating that participants significantly overestimated their inaccuracy \(t(87) = -3.226, p = .002\).
Correlations were conducted on perceived accuracy and actual accuracy, and were significantly correlated, $r = .23, p = .033$, indicating that people who thought they were more accurate, were actually more accurate.

Additionally, participants were asked to indicate on a 0% to 100% scale how much information from all of the available details in the video they thought they had told the interviewer, for a percentage correct or completeness score. Participants from each group were again collapsed into one group. Participants' perceptions of their completeness of recall resulted in a mean percentage of 54.71 ($SD = 20.73$), while their actual completeness score mean (gained by dividing how many details the witnesses told the interviewer by the total number of details available, across all of the groups) was 11.16 ($SD = 4.21$). This indicates that the witnesses recalled on average, only 11% of the total information available to them. The difference between these means (54.7% perceived and 11.1% actual completeness) was significant, $t(87) = -20.03, p = .000$. Correlations were also performed on perceived completeness scores and actual completeness scores with a significant correlation of $r = .22, p = .039$, indicating that the participants who thought they were more complete were more complete.

A confidence-accuracy calibration was considered for this data, where the probability of being correct is plotted against the accuracy of the identification response, however, it was identified that the sample size was insufficient in number to adequately perform the calibration, as research has demonstrated that in excess of 200 data points per calibration function are required for a calibration (Brewer, Keast & Rishworth, 2002; Juslin, Olsson & Winman, 1996; Olsson, 2000). Brewer and Wells (2003) utilised 1200 participants; while Brewer, Keast and Rishworth (2002) included 944 participants and confidence categories needed to be collapsed for stable
calibration curves. Weber and Brewer (2003) however, included only 48 participants; however, their design enabled the analysis of 1200 data points.

7.4 Qualitative Results

7.4.1 Coding

To explore the qualitative data in the questionnaire, a content analysis approach was utilized (Neuendorf, 2002) which examined both the content of the text and the frequency of the content being stated by the participant. It was important to ascertain not only what the people thought of the protocols, but also what number of people indicated that particular way. Coding was deemed to be the statement written in response to a particular question. The different experimental groups were collapsed into one set of 94 participants, with an equal opportunity to comment on any, or all, of the written response questions. The coding was conducted to give equal weighting to comments from any of the questions. Coders cannot remove the context in which the response occurs, as keeping the context around the questions regarding the interview, as having positive or negative implications, retains the efficacy of the text intact (Neuman, 1997). This directional coding of text, as having a positive or negative direction of the message, is accepted in the coding of text in content analysis (Neuman, 1997). Therefore, the only use of the question itself was to determine whether the comment was positive or negative in nature, if there was a doubt about the direction based on the comment only. For example, if the comment was “asking the question twice”, the question which preceded it was used to determine if this was a negative or positive comment. If the question which preceded it was: “What did the interviewer say that made you feel pressured?”, the answer: “asking the question twice” was deemed to be a negative comment.
Interrater reliability was considered during this coding process. Two research assistants coded the data for content. If there was discrepancy between coding, the researchers conferred and a consensus was reached for all comments.

7.4.2 Results

On examination of the questions that asked for a possible written response, it was noted that 92% of participants had made a written comment to at least one question (87 participants, out of a possible 94, made a comment). These qualitative responses were taken from the questionnaire where participants had 8 opportunities to make a written comment on the interviewer style. For five of these questions, 100% of those invited to make comments did so. For the remaining three questions, the response rate was 80%, 87% and 92%.

To compile the comments into major themes, they were categorized in NVivo, as belonging to one of four categories. Ninety-three percent of all comments were applicable to one of these four categories (187 applicable comments, out of the 201 comments received). The comments that did not fit one of the four categories, tended to be very ambiguous. Comments such as: “In the middle” in response to the question “At what point in the interview were you confused”, is one example. It was unclear what part of the interview the participant was referring to and therefore these comments were left out of the analysis.

The four categories that were discussed by the participants were: (a) Rapport, (b) Probing Questions, (c) Mnemonics and (d) Suggestions. The types of statements which were included in the analysis within the four specific categories, were again defined more narrowly, through more specific subcategories, if that was deemed necessary for the clear description of the statements made by participants. The
statements are now presented by category and subcategory. Examples are given of each type of statement and a short discussion is presented at the end of each section.

7.4.2.1 Rapport

There were 40 comments, pertaining to rapport between the interviewer and the participant. Of these, 39 comments were positive and one comment was negative. The negative comment was, “the interviewer could have gone a bit slower, I felt a bit rushed to give an answer.” Please see Figure 7.2 for an illustration of the category and subcategories. Table 7.4 indicates the comments received by group.

![Figure 7.2. Representation Of Instances Of Comments Which Reflected Rapport Building.](image-url)
Table 7.4

Number Of Qualitative Responses Per Category, Per Group For Rapport

<table>
<thead>
<tr>
<th></th>
<th>Positive</th>
<th>Negative</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Objective</td>
<td>Relaxed</td>
</tr>
<tr>
<td>TCI</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>MCI</td>
<td>0</td>
<td>8</td>
</tr>
<tr>
<td>FCI</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>SI</td>
<td>0</td>
<td>7</td>
</tr>
<tr>
<td>Total</td>
<td>2</td>
<td>32</td>
</tr>
</tbody>
</table>

Note: TCI = TA+RC; MCI = FR+CT+CP; FCI = TA+RC+CT+CP; SI = Structured Interview.

The 39 positive comments were subdivided further, to include subcategories of relaxed and comfortable, objective, and explained interview procedure well. The relaxed and comfortable subcategories included comments, which reflected that the participants felt relaxed, or were made to feel relaxed by the mannerisms and conversation of the interviewer. There were 32 comments in this category. Some examples were, “made me feel comfortable”, “establishing a relaxed environment”, “had a relaxed approach that made me feel comfortable and let me go at my own pace” and “very good at making you feel comfortable and not too pushy or demanding”.

The second subcategory of ‘explained interview procedure well’, contains comments which explicitly stated that the participants felt that the interviewer explained the procedure well. There were five comments in this subcategory, which includes, “explained the structure of the interview”, and “he was attending and explained things well, which was required”. The third subcategory of ‘objective’
related to the interviewer demonstrating objectiveness, only two comments referred to this and included, “he seemed rather objective which was good”.

Overall, the comments demonstrated that the participants were impressed by the rapport skills of the interviewers and the ease with which the interviewers made the participants feel comfortable.

7.4.2.2 Probing Questions

There were 74 comments that were applicable to the Probing Questions category. This category was further broken down into Positive and Negative comments. There were 42 comments in the Positive category and 32 comments that were included in the Negative category. Please see Figure 7.3 for a pictorial representation of the category and subcategories. Table 7.5 shows the number of comments received in each category by group.

Figure 7.3. Representation Of Instances Of Comments Which Reflected Questioning.
Table 7.5

Number Of Qualitative Statements Received For Probing Questions Category, By Group

<table>
<thead>
<tr>
<th>Positive</th>
<th>Negative</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>General</td>
</tr>
<tr>
<td>TCI</td>
<td>2</td>
</tr>
<tr>
<td>MCI</td>
<td>6</td>
</tr>
<tr>
<td>FCI</td>
<td>3</td>
</tr>
<tr>
<td>SI</td>
<td>6</td>
</tr>
<tr>
<td>Total</td>
<td>17</td>
</tr>
</tbody>
</table>

Note: TCI = TA+RC; MCI = FR+CT+CP; FCI = TA+RC+CT+CP; SI = Structured Interview.

The Positive category was further divided into two subcategories: a) comments of a general nature, which refer to the basic questioning or questioning style, and b) comments referring to specific probing statements made by the interviewer. There were 17 comments in the basic questioning style subcategory and 25 comments in the specific probing questions subcategory. Statements in the general questioning style category included “she asked the questions once, clearly and succinctly”, “probed things I had said without putting words in my mouth” and “asked for more information about my specific recall of a specific component of the video”. Statements of specific probing questions included, “Can you remember what the small truck did after it swerved?”, “Asked about the road/weather conditions.”, “Ask specifically about an area or lane.”

The Probing Questions subcategory of Negative comments was further divided into three subcategories. The first subcategory includes looks or gestures. There were four passages. Examples from this subcategory were, “it wasn’t what she said, it was
more a look or a gesture” and “she waited after I had finished and did not say anything as if she wanted more information.”

The second category was being questioned. This category included comments of a negative nature about the process of being questioned and contained 13 statements. Most of these statements were made in response to questions in the questionnaire that had a negative slant such as, “What did the interviewer say to make you feel pressured…{to give an answer you were unsure of}”. Examples of these comments include: “with each new question I felt a bit more pressure”, “the question itself, I felt like I had to answer it” and “just probing for information in general, I wanted to give as much information as possible, but I couldn’t remember any more”.

Lastly, Probing Questions, in the Negative category was further divided to include the subcategory of repeated questions. This category had 15 statements. This category included mostly participants’ views about being frustrated at the repetitiveness of some questions. Some examples were, “the second time I was asked to describe the accident”, “simply ‘can you remember anything else’ asked numerous times” and “just asked twice in a row for more information”.

In summary, there were more positive comments than negative comments made about the probing question phase of the interview. The majority of positive comments reflected circumstances where the participants were asked questions that helped them to remember more. The majority of negative comments reflected the participants’ frustrations at being asked questions repetitively. A large number of those who made comments in the negative category also showed some tendencies to be annoyed simply by being asked questions even when they were not repetitive in nature.
7.4.2.3 Mnemonics

This category contains any comments that specifically mentioned the mnemonics utilized in the interview procedure and resulted in 43 comments. There were four mnemonics that were mentioned. These subcategories were: tell all, reinstate context, change time and change perspective. See Figure 7.4 for a pictorial representation. Table 7.6 indicates the number of qualitative statements supplied by participants per category.

![Figure 7.4. Representation Of Instances Of Comments Which Reflected The Mnemonics.](image)

The Tell All mnemonic subcategory, contained four passages of a positive nature, and these included, “even the smallest details are relevant” and “any details that may not seem important”. These comments distinguished when Tell All aided the participants to remember more.

Reinstate Context was another category which received comments only in a positive direction. There were nine passages and examples were, “shutting my eyes and creating a clear visual picture in my mind enabled me to recall in more detail”; “she asked me to close my eyes and think hard” and “explaining how to visualise the accident and therefore helping me to remember what I saw”.

Table 7.6

Number Of Qualitative Responses For Mnemonic Category By Group

<table>
<thead>
<tr>
<th></th>
<th>Tell All</th>
<th>Reinstate</th>
<th>Change Time</th>
<th>Change Perspective</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Positive</td>
<td>Positive</td>
<td>Positive</td>
<td>Negative</td>
</tr>
<tr>
<td>TCI</td>
<td>2</td>
<td>3</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td></td>
<td>n/a</td>
<td>n/a</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>6</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>SI</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>SI</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>SI</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Total</td>
<td>4</td>
<td>9</td>
<td>6</td>
<td>5</td>
</tr>
</tbody>
</table>

Note: TCI = TA+RC; MCI = FR+CT+CP; FCI = TA+RC+CT+CP; SI = Structured Interview.

The change time mnemonic contained 11 passages. These were broken down into two subcategories of positive comments and negative comments. Positive comments contained six statements and examples of these were, “the backwards thing”, “go through the accident in reverse, remember the last thing that happened” and “remembering the incident backwards”. These comments were in relation to questions, which demonstrated that the participants felt that the change time mnemonic helped them. Some negative comments (n = 5) included “when asked to recall the incident backwards, I didn’t find this helpful to remember” and “when I was asked to remember everything backwards”. These comments were responses to questions that asked the participants what they did not find helpful.

The change perspective mnemonic attained 19 passages. Three of these were positively coded and 16 were negatively coded. Examples of the positive statements included, “they asked me to look at the accident from another perspective”, and “he made me see it from another perspective and that made the incident clearer”. Again, these comments were in relation to positively worded questions.
The negative statements included, “I wasn’t sure about the angle question, it had to be re-explained”, “when asked for someone in a different vantage point, but it was cleared up” and “when he asked me to view the accident from another perspective. I don’t know that I could talk about anything ‘cause you weren’t in that perspective”. These comments were in response to negatively worded questions.

In short, the mnemonics that received comments were mostly positive in nature, suggesting that the mnemonics helped the participants to remember more. The change time mnemonic was almost even in its spread of positive and negative comments, indicating that for some participants going through the incident backwards was beneficial, while for others it was confusing and detrimental. The change perspective mnemonic received many more negative comments than positive comments.

7.4.3.4 Suggestions

The written section also included a question that asked participants for their suggestions on what the interviewers could have done to obtain more information from them. There were 22 comments about this question. These comments were divided into three subcategories of Prompts and Probes, Diagram and Relaxation. Please see Figure 7.5. Table 7.7 shows the number of qualitative statements obtained for each of the suggestions categories by group.
Figure 7.5. Representation Of Instances Of Comments Which Reflected Suggestions From The Witnesses On Improving The Interview.

Table 7.7

Number Of Suggestion Category Statements Obtained By Group

<table>
<thead>
<tr>
<th>Category</th>
<th>Prompts and Probes</th>
<th>Diagram</th>
<th>Relaxation</th>
</tr>
</thead>
<tbody>
<tr>
<td>TCI</td>
<td>3</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>MCI</td>
<td>7</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>FCI</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>SI</td>
<td>4</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>15</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

Note: TCI = TA+RC; MCI = FR+CT+CP; FCI = TA+RC+CT+CP; SI = Structured Interview.

Prompts and Probes contained 15 comments that discuss the participant’s need for more questions that were directly related to information he/she had already given, for example, “Asking more specific questions about points raised”, “mentioned specifics for example, what did you see the red car do? Was it raining?” and “after each point of information, ask for specifics or at the end of list given, then query for more information on every item”.
The diagram subcategory contained two comments. They were: “gotten me to draw a diagram” and “we could have drawn the scene and worked through what happened that way”. The relaxation subcategory contained two comments which were: “some process of breathing/relaxation when asked to shut my eyes”, and “used other approaches to questioning for example, the persons state at that time like happy or anxious”.

With regard to the suggestions made by the witnesses, it is clear that most participants, who commented, would have liked more specific probing questions, based on information they had previously given.

7.5 Discussion

7.5.1 Length of Interview

There was a significant difference found between participants in the control interview (SI) group, who indicated that they thought that the interview was short and the Full CI group, who indicated that they thought the interview length was of average length. It is not unexpected that the group which was the control group and therefore contained no mnemonic cues would deem the interview to be short. The control interview (SI) simply asked the witnesses to “tell me what happened” and at the conclusion of the interview invited probing questions from the interviewer. The fact that participants in the FCI group thought that the interview was of average length and not long or too long, indicates that the length of the interview, while actually taking the longest to conduct ($M = 13.39$ minutes) did not significantly deter or negatively impact on the witnesses’ perceptions of length of time.
7.5.2 Perceptions of the Interview Procedure

The participants in the groups were asked to comment on the elements of the interview, including rapport, clarity, and the general pace of the interview. There were no significant differences between the groups on these questions, supporting Hypothesis 1. It is worth reiterating here that the witnesses did not complete the questionnaires in the company of their interviewer. This implies that participants from each of the groups were equally satisfied with interview procedures such as the pace of the interview and the interviewers’ skills, including rapport building and the clarity of the interviewers’ instructions and probing questions.

7.5.3 Information Triggered

In response to the Change Perspective cue, the Anderson and Pichert (1978) study found that participants stated that when they changed the demand characteristic from burglar to buyer, the information ‘popped’ into the participants’ minds. This aligns itself to varied retrieval theory and the activation of pathways, where once the alternate pathway was activated, and the information was highlighted, ready for recall. However, in this study, there were no significant differences for participants in the different groups to state that the memory was ‘triggered’, ‘popped’ or created a ‘yes I know’ effect, with the use of the Change Perspective mnemonic.

7.5.4 Confusion Items

It is interesting to note that when the witnesses were given the opportunity to comment on any particularly helpful or confusing mnemonics, there were no significant differences, not supporting Hypothesis 2 and 3. It was expected that there would be more confusion with the change perspective mnemonic considering research which has shown that this mnemonic is the most problematic when causing confusion.
for the witness (Kebbell et al., 1999). Indeed, the confusion to the witnesses caused by certain mnemonics has been one of the main reasons cited for police officers who are trained in the CI to not use the procedure to its full potential (Boon & Noon, 1994; George, 1991; George & Clifford, 1995; Mello & Fisher, 1996). However, while this group of participants who were exposed to the change perspective mnemonic ($n = 48$), had a lower mean score indicating more confusion, this was not statistically significant. Please see the qualitative results (Section, 7.4.2.3) which indicate a somewhat higher level of confusion when the participants were asked open ended questions for a further discussion.

7.5.5 Perceptions of Accuracy and Completeness

It is interesting to note that with this population of students, the participants significantly overestimated how ‘incorrect’ they were and significantly underestimated how ‘correct’ they were. This pattern of results does not support Hypothesis 4, as previous research points toward people being overconfident in their recall, therefore overestimating how correct they thought they were (Ebbesen, 2000; Wells et al., 1998). Even in the case of this potentially difficult task with a complex stimulus, participants felt a lack of confidence in their recall, thus over inflating their incorrect recall and understating their correct recall. The video stimulus was quite difficult and it would be interesting to see a more basic stimulus and examine the witnesses’ perceived accuracy with that stimulus. However, in line with previous research on difficult stimulus (Yarmey, 1986), participants significantly overestimated the completeness of their recall.

In addition, the scores for perceived accuracy and actual accuracy were also significantly correlated, indicating that people who were more accurate thought that they were more accurate, even though their estimations were significantly different
than their actual accuracy. In keeping with Brewer, Keast and Rishworth (2002), who indicated that confidence accuracy correlations are generally between .00 and .29, the correlations between perceived accuracy and actual accuracy was .23. The scores for perceived completeness and actual completeness were also significantly correlated at .22, indicating that participants, who thought they were more complete, were actually more complete.

7.5.6 Rapport

As suggested by Collins et al. (2002) and Millwee et al. (2001), rapport is an important part of an investigative interview. The rapport process of the interview is important in that, when building rapport is successful, the cooperative witness sees the interviewer as “friendly” and therefore wants to try hard to give as much information as possible as demonstrated by the quote, “I wanted to help the interviewer”. In the qualitative section, 39 participants had positive views on the rapport developed and only one had a negative view. This friendly exchange can benefit the interviewer because the more comfortable and relaxed the witness feels, the more inclined they will be to try hard to remember additional items.

7.5.7 Probing Questions

It appears that, overall, participants, when responding qualitatively, were positive about the probing questions; in fact some participants indicated that more probing questions would have been beneficial. However there appears to be a limit to which the interviewer should reiterate questions in the hopes of obtaining more information, as some witnesses became annoyed at being asked repetitive questions.
7.5.8 Mnemonics

The qualitative responses which discussed the specific mnemonics indicate that no participants who made comments had negative perceptions of the Tell All or Reinstate Context mnemonics. Further, the Change Time mnemonic received almost equal amounts of negative and positive comments demonstrating that some people thought the cue was helpful and some found it unhelpful. However, comments in response to the Change Perspective mnemonic suggest, in contrast to the Likert scale questions that, as prior research had reported, the change perspective mnemonic is more confusing and less helpful to the participants than the other mnemonics used in the Cognitive Interview (Boon & Noon, 1994; George, 1991; Kebbell et al., 1999; Mello & Fisher, 1996). Negative comments about the Change Perspective mnemonic contained two main confusion elements. The first was that the instruction for the cue was confusing and had to be explained again for the witness to understand and secondly, was the interpretation that what they were being asked was difficult because they were not originally in that perspective.

7.5.9 Suggestions

Qualitative responses suggested that perhaps if the interview structure was more flexible and allowed for probing questions after each mnemonic, the participants would have been asked more beneficial probing questions. Keeping in mind that it had been recommended not to interrupt the witness, it is a skill to allow the participant to speak without interruption and still ‘pepper’ the interview with probing questions. Additionally, it is interesting that two participants felt that they would have been aided by being able to draw the incident. It had been mentioned by Fisher (personal communication, 2001) that having the participants draw the scene may help recall of
specific details. Given that it was a complex stimulus, being able to draw the incident may have been beneficial.

7.6 Limitations

Upon examination it is noted that the response rate to the open ended questions was not outstanding. While 92% of respondents made at least one written comment, they did not all make a comment each time they were invited to based on their previous answers. Also, the original training may have influenced the level of proficiency of the interviewers, thereby influencing the witnesses’ perceptions of certain mnemonics. However, it is argued that the scripts used by the interviewers could help to alleviate this.

7.7 Chapter Summary

The findings that there were no significant differences between groups on the quantitative data generated by the questionnaire used in Study Two, indicates that possibly the questions were not sensitive enough to tap the levels of confusion or helpfulness the witnesses found with the interview mnemonics. Considering that 16 negative comments were identified to reflect confusion with the use of the Change Perspective mnemonic with the content analysis. The content analysis also highlighted four and nine positive comments in regard to Tell All and Reinstate Context, respectively.

Overall, the comments received from the participants about the interview were generally positive in nature. The rapport building skills of the interviewers seemed to be very important for making the participants feel relaxed and comfortable about answering questions. Some participants found the questioning and especially
repetitive questions frustrating and consequently had a negative view of that part of the interview.

Interestingly, the most frequent suggestion to improve the interview was for more questions. However, these were requests for more specific probing questions leading on from particular pieces of information that the participants had already stated. Again, this may have been due to the standardization restraints of the interview procedure, which requested that interviewers hold all probing questions until the end of the interview to allow for strict analysis of the information gained during specific sections of the interview.
Chapter Eight: Interview Procedures of the Queensland Police Service

Accident Investigation Squad

8.1 Interview Procedures of the QPS AIS

8.1.1 Police and Psychologists Working Together

8.2 Phase One: Evaluation of QPS AIS Training Manuals

8.2.1 Aims

8.3 Method

8.3.1 Materials and Procedure

8.4 Results

8.4.1 Memory Cues

8.4.2 Social Dynamics

8.4.3 The Interviewer

8.4.4 Questioning

8.5 Section Discussion

8.7 Phase Two: Questionnaire

8.7.1 Aims

8.7.2 Hypothesis

8.8 Method

8.8.1 Participants

8.8.2 Materials and Procedure

8.9 Results

8.10 Section Discussion

8.11 Phase Three: Focus Group

8.11.1 Aims

8.12 Method
8.12.1 Participants 186
8.12.2 Materials and Procedure 187
8.12.3 Coding and Analysis of Transcripts 188

8.13 Results 189

8.13.1 Social Dynamics: Facilitation of Interview 189
  8.13.1.1 Purpose 190
  8.13.1.2 Convenience 190
  8.13.1.3 Agreeableness 191
  8.13.1.4 Props 191

8.13.2 Qualities of Questioning 192
  8.13.2.1 Initial Query 193
  8.13.2.2 Timeline 194
  8.13.2.3 Matrix 194

8.13.3 Avoiding Negative Behaviour 195
  8.13.3.1 Avoid Hearsay 196
  8.13.3.2 Avoid Terminology 197
  8.13.3.3 Avoid Sabotaging Witness Confidence 198
  8.13.3.4 Avoid Suggestive Questions 198
  8.13.3.5 Avoid Interruptions 199
  8.13.3.6 Avoid Offending the Witness 200

8.13.4 Parallels with CI Recommendations 200
  8.13.4.1 Mentally Reinstate Context 201
  8.13.4.2 Physically Reinstate Context 202
  8.13.4.3 Change Time 202
8.13.5 Perceptions of Witness Veracity

8.13.5.1 Witness Accuracy

8.13.5.2 Physical Evidence Versus Witness Reports

8.13.6 Comments Specific to CI Mnemonics

8.13.6.1 Tell All

8.13.6.2 Reinstate Context

8.13.6.3 Change Time

8.13.6.4 Change Perspective

8.13.6.5 Transfer Control

8.14 Section Discussion

8.14.1 Memory

8.14.2 Facilitation of Interview Process

8.14.3 Questioning Skills

8.14.4 Perceptions of Witness Veracity

8.15 Phase Four: Case Study

8.15.1 Participants

8.15.2 Materials and Procedure

8.15.3 Criteria for Case Study

8.16 Results

8.16.1 Memory

8.16.2 Social Dynamics

8.16.3 Communication and Questioning

8.17 Section Discussion

8.18 Chapter Discussion
8.1 Interview Procedures of the QPS AIS

In the previous chapters, the rationale for examining interview procedures in relation to current forensic practices was outlined. Study One examined interview procedures from an experimental and academic perspective. The results indicated that a truncated Cognitive Interview was as successful in gaining increases in accuracy as the Full Cognitive Interview. As stated previously, the use of the Cognitive Interview to elicit information from witnesses in the experimental setting has been documented repeatedly (see Fisher, Geiselman, Raymond & Jurkenvich, 1987; Fisher & Geiselman, 1992; Memon, Wark, Holley, Bull & Koehnken, 1997; Milne, & Bull, 2000); however there has been less research conducted on interviewing skills that officers currently use in the field. While most research demonstrates the positive aspects of utilising the CI, some research, which has addressed police officers in the field, has demonstrated that the practical usage of the CI is less than satisfactory (Kebbell, Milne & Wagstaff, 1999).

This current study attempts to broaden the research previously conducted by approaching expert officers in the field who currently interview cooperative witnesses as their main duty. This study investigated the behaviours and opinions held by the Queensland Police Service Accident Investigation Squad officers, concerning the use of interview skills with cooperative witnesses.

Several Research Questions were addressed. These include:

1. What are the QPS AIS training procedures for officers who interview cooperative witnesses?

2. What do the officers think about the reliability and usefulness of cooperative eyewitness reports?
3. What do the officers actually do and say when interviewing cooperative witnesses?

It is expected that the answers to these questions will provide data, which can be used to delineate similarities and differences between what the CI recommends and what the officers actually do. In doing so, it is possible to determine where the officers are using successful techniques to interview and where the officers may find further distinctions useful.

Kebbell and Wagstaff (1997) surveyed police officers with several questions relating to the police officers perceptions’ of eyewitness reports. They asserted that the police, who were surveyed, indicated that eyewitnesses play a central role in the criminal justice system and that police rarely think eyewitnesses are wrong. Additionally, police in the field also felt that they did not have enough time to interview eyewitnesses properly (Croft, 1995; Fisher, Geiselman & Amador, 1989). Memon, et al. (1994) also found that officers in the field do not use the cognitive interview as trained, and that they often use only one or two mnemonics, or none at all (also see George, 1991; Kebbell & Wagstaff, 1996).

Finding psychologists and police working together in the field and in research is a relatively new phenomenon. As interest increases from psychologists wanting to be involved with police in order to improve interview protocol, and as police departments become more open to the type of research that they and psychologists might undertake in their field, linkages between psychologists’ and police departments’ should continue to grow.

8.1.1 Police and Psychologists Working Together

In an investigation into the prevalence of joint police and psychology studies, Brewer, Wilson and Braithwaite (1995) located 705 psychology journal articles on
policing in 118 journals from 1983 to 1993. In a further division of the articles into the types of data analysed, 40% of the data was obtained through questionnaires, while no data was found to have been obtained from focus groups or other types of personal interview or communication. Additionally, traffic safety was mentioned in just 7% of the articles, while only 25 articles dealt with police interviewing techniques for the time period studied.

More recent research involving police officers has used focus groups and has explored areas as diverse as the use of violence (Cancino, 2001), peer retaliation (Cancino & Enriquez, 2004) and job image (Lim, Teo & See, 2000). Richmond, Kehoe, Hailstone, Wodak and Uebel-Yan, (1999) used focus groups of 8 officers to investigate interventions to reduce smoking, alcohol intake and stress among officers. The fact that this current study involves personal discussion and focus groups of police officers makes it a beneficial addition to the field of investigative interviewing. Also, the advantages of the inclusion of the focus groups allow the police officers to elaborate and bring into clarity the issues that are central to the research.

Brewer et al. (1995) also stated that it could be extremely difficult to conduct research within police organisations, owing to a range of reasons including police being wary of the research process (p. 405). They highlight that one should be aware of all levels of management to obtain support for the project (i.e., the strong hierarchy within police services and the pitfalls and benefits of it). Indeed, with this population of police officers, the ethical constraints from both the University and the Queensland Police Service (QPS) and the Minister for Policing, the shift work demands on time, and the inaccessibility of officers due to being called away to an investigation at any time, all had various levels of impact on the research program.
This current study utilises a triangulation approach (Denzin & Lincoln, 1994) to ascertain what the Queensland Accident Investigation Squad officers say they actually do when they interview cooperative witnesses. As indicated earlier, the triangulation approach was used to increase the validity and reliability of the overall findings (Blaikie, 2000), and includes secondary data analysis, questionnaire, focus group interviews and a real interview case study (Stewart & Shamdasani, 1990).

Firstly, QPS AIS training manuals were researched and analysed as secondary data sources, to determine the content of information currently used to train investigators. The second phase involved distributing a questionnaire to the officers to determine details such as workload and what the officers think about the reliability and usefulness of witnesses and interviewing. The final stage included ascertaining from the QPS AIS officers what they currently do when interviewing eyewitnesses. This was achieved by using both focus groups and a case study.

In order to analyse the data gained from the four phases of Study Three, a “best practice” criteria will be used to compare accepted protocols to current practices in the QPS AIS. The “best practice” components that will be used for a point of comparison include those that are recommended by the Cognitive Interview (Fisher, Brennan & McCauley, 2002). These will be categorised broadly, into “memory”, “social dynamics” and “questioning” categories, as recommended by Fisher, Brennan and McCauley (2002). Examples of “memory” include statements from the four mnemonics, including the Tell All cue, Reinstall Context cue, Change Time cue, and the Change Perspective cue. Under the criterion of “social dynamics” are concepts introduced in the Enhanced CI and include rapport building, transfer control, guided imagery, non-verbal communication and introducing the interview aims and ground rules. The “questioning” category includes information on interrupting the witness,
and the use of open, closed and probing questions. The inclusion of these sections as a template of best practice comparison will allow for a methodological approach in the analysis of the police officer’s current practices. Please see Figure 8.1 for a flowchart of Study Three Processes.

**Figure 8.1.** Flowchart of Study Three Processes.

8.1 Phase One: Evaluation of Queensland Accident Investigation Squad Training Manuals

In order to thoroughly evaluate the training programs of the QPS AIS, a review of their current training manuals was first required. Research has shown that there are many different training systems. There is also a great deal of research to show that police officers are rarely trained intensively in interviewing and especially in interviewing cooperative witnesses (see Fisher et al., 1990; Fisher et al., 1994; Lauchland & LeBrun, 1996). Additionally, criticism has been levelled at policing
organisations for not adequately training their officers in appropriate social and questioning skills to deal with cooperative witnesses (Collins et al., 2002).

Kebbell and Wagstaff (1997) conducted informal interviews with police in the United Kingdom. These informal discussions indicated that interviews of eyewitnesses have specific objectives. Firstly, to discover whether a crime has been committed and to determine what type of crime; secondly, to obtain evidence to identify the person/s responsible; thirdly, to produce evidence that prevents a guilty person from using an inappropriate defence; and fourthly to determine whether the eyewitness is telling the truth. The QPS holds similar objectives and they are to determine whether there had been a crime committed and to determine the elements of that crime (personal communication, Snr Sgt Robert Cochrane, OIC AIS, 2003).

8.2.1 Aims

The aim of this stage of the research was to collect data relating to interviewing witnesses that the QPS offers its AIS officers in their training. This stage will aid in identifying the setting from which QPS AIS officers enter the field. Training manuals from new recruit (or cadet training) were examined, as well as advanced training manuals for detectives or those seeking to update their skills. It should be noted that the QPS training manuals are not public documents and permission to view the documents was given by the Queensland Minister for Policing and the Queensland Police Commissioner. Additionally, some of the advanced training manuals reviewed were specific to traffic investigation. Specific hypotheses were not formed in relation to material included in the training manuals, due to the exploratory nature of secondary data analysis.
Therefore, the Research Question remains to determine what the QPS AIS are training their officers.

- What procedures are the QPS AIS officers trained in, with relation to cooperative witnesses?

8.3 Method

8.3.1 Materials and Procedure

Access was granted by the Minister for Policing, to review QPS AIS related literature from the QPS libraries at three different locations. Both introductory and advanced training manuals were selected. Material included in the manuals was coded and analysed as belonging to one of several categories. As previously discussed, for ease of comparison to a model of “best practice”, the information found in the manuals was evaluated according to Cognitive Interview categories of “memory cues”, “social dynamics”, and “questioning”, as recommended by Fisher, Brennan and McCauley (2002). The manuals also included significant material detailing the personal attributes deemed advantageous to the interviewer and this was included as a fourth category “interviewer”. It was decided to collapse the information into these headings to be able to analyse the data into groups comparable with the Cognitive Interview recommendations, namely from the perspective of “memory” in terms of mnemonics and cues, “social dynamics” in terms of rapport and transferring control and “questioning” in terms of questioning skills, including the use of open-ended questions and not interrupting the witness and the additional category “interviewer”.
8.4 Results

The following results have been delineated into four separate sections. The first section of these results focuses on the material contained in the training manuals that discussed ‘memory enhancing cues’ to ask the witness. The next section of the results deals with the information contained in the manuals that refers to the ‘social dynamics’ of the interview. The third section deals with the personal attributes of the interviewer deemed desirable and the fourth section includes information on questioning skills. The manuals contained a significant amount of information on interviewing, in addition to what could be categorised as belonging to one of the four preceding categories, however, this information was not deemed to be crucial to the research questions and therefore was not included.

8.4.1 Memory cues

No particular cues or mnemonics are recommended to the officers to help witnesses to recall more information.

8.4.2 Social Dynamics

The following section refers to sections of the manuals that refer to social dynamics and includes rapport building and transferring control. The QPS training manuals state that obtaining information from people about traffic incidents is much more difficult than obtaining information about vehicles, roads or machinery (QPS, CAPS, 2000). The QPS Competency Acquisition Program (CAPS) training manual has several points to make about the interview itself. For example, the training manual suggests that the officers should explain who they are, their interest in the collision, and (their reason for questioning them), give their card and show their
personal identification card. The manuals also state that step-by-step rules are
difficult, because what is appropriate in one instance may not be effective in another.

The training manuals suggest that interviewing is more an art than a science,
and step-by-step rules are difficult to suggest because a procedure that is effective for
an investigator with one temperament may fail with someone of a different
personality. For example, the training manual suggests that one investigator may find
a very informal, approach serves him best, whereas another is more successful with a
brisk, brief and business like pursuit of the desired data. The training manual further
suggests that ‘true artists’ in obtaining statements are able to adapt their method to the
character and mood of the person being interviewed. Points that concern how the
officer should present him/herself and how the officer should question are now
discussed.

The training manuals instruct the officers to be objective. The officers are also
taught to be positive, stating that a successful investigation may hinge to a large
extent, on the first questions asked, although they do not specifically recommend a
question to begin with. The training manuals encourage the officers to be specific;
and make sure the person understands the question fully and clearly.

The manuals instruct the officers not to argue, even if they receive an answer
that they know is incorrect. The officers are instructed not to suggest answers, as one
of the biggest pitfalls in interviewing is when the interviewer’s opinions are forced on
the person being questioned. The manuals state that many people are very susceptible
to suggestion and when an idea is put into a person’s mind, the person is likely to
think of it as his or her own. The manuals suggest that when asking questions, the
officers be adaptable and flexible, to avoid ‘routine’ questioning. Finally, officers are
couraged to be diplomatic and understanding.
8.4.3 The Interviewer

The manuals also suggest personal attributes that may help to become a successful interviewer. For the purpose of describing these attributes, they will be organised according to individual difference variables. These include both trait-based behaviours and skills-based behaviours, which may influence the interview. Trait based behaviours, generally, include commanding respect by being professional, impressing the witness with attitude and performance, being alert and having the ability to change tactics midstream if necessary, and persevering and being patient, which is necessary for complete and accurate information.

The skills-based behaviours, which are important in an investigation, include encouraging the officers to have good general knowledge, a range of interests and keen sense of observation. It is stated that the officer should be free of prejudice, be a good actor and to play the part, have adaptability to take advantage of casual remarks or gestures. They are taught to have reasonable self-awareness, and are warned not to overestimate their own or their suspect’s, intelligence. The officers are also encouraged to have stamina for long, drawn out interviews.

8.4.4 Questioning

According to the training manuals, there are three main components that have to be answered in order to complete the record of the incident and these are: the roads, the vehicles and the people. In addition to demographic information, such as the names and addresses of witnesses, there are many other types of questions that must be asked to obtain a complete picture. The manuals advocate the 6-WH technique which explores who, what, why, where, when and how in relation to an incident. Answers to the 6-WH investigative questions are expected to be obtained by the
officers. Some examples of this questioning do lend toward open questioning styles (how, what, why) however, who, when, and where lend themselves to closed questioning styles. The manual does refer to some questioning examples and in some examples they recommend an open style, while in other examples a closed style is recommended. For example, they recommend that officers do not ask, “you don’t know much about this do you?” which could be labelled a poor, closed question and recommend, “what can you tell me about this collision?” which could be labelled a good, open question. However, with other examples, the manuals advocate a move from an open style to a closed style. For example, interviewers are instructed not to ask “where were you going?”, and instead ask “in which direction were you travelling?”. Also, in using the who, what, and why approach, the manual suggests that almost every answer to one of those questions can prompt another who, what, or why question.

Other questioning examples in the manuals are also pragmatic and tend toward a protocol of ‘getting the facts’. For example, the manuals recommend that the following questions be asked of witnesses. “How did you first know about the crash?” The answer to this question reveals the witness’s relationship to the collision and the perception of hazard. For example, if the witness first knew about the crash because he could hear squealing tires, then the officer may realise that the witness did not see the preceding events to the crash. The next question is “Where were you at the time? In the vehicle or elsewhere?” This answer to this question indicates the witness’s ability to observe, helps to identify the driver, and locates the witness within the scene. The next question is “What were you doing?” This question relates to what the witness was doing in the vehicle, the vehicle’s movement on the road, and also applies to a bystander or passer-by. The answer to this question demonstrates the
witnesses’ opportunity to observe, helps identify the driver, describes vehicle
movement, and confirms the witnesses’ relationship to the crash.

Some questions included in the manuals are more appropriate for bystanders
or passers-by. These include; “show me where the vehicle or pedestrian was when
first seen by you, what was he (it) doing at the time?” , “if you saw the actually
collision, show me exactly where it occurred”, “show me where the vehicle or
pedestrian came to rest”.

Still other questions recommended by the manuals are appropriate for any
person in the involved vehicle. These include asking a number of questions such as:
“which direction were you traveling before the crash?” , “who was driving the car you
were in?” , “what was he (you/she) planning to do?”, “how did he (you/she) try to
avoid the crash?” and “show me exactly where the collision occurred”.

Other questions suggested in the manual relate to setting the scene of the trip
and include; the time and place the trip began, the intended destination and estimated
time or arrival, the time, location and duration and purpose of stops, and the purpose
of trip and the trip vehicle, and intended movement just before the collision happened.

Recommended questions also relate to the results of the collision. These
include the exact position of cars, where the people were, injuries, damage, lights,
bald tires, signs damaged, debris, fluid, tyre marks, vehicle condition, and driver
condition. The material evidence can confirm several of the answers from these
questions; for example, the tire marks can be used to ascertain the direction of the car
when the collision occurred.

Questions also relate to the events leading up to the collision. These include
the position of the vehicle, speed point of perception, intended manoeuvre, and
evasive tactics attempted. Again the material evidence can confirm several of these
answers, for example, the length of the skid marks can be used to ascertain the speed of the car.

8.5 Section Discussion

Most information given in the training manuals revolve around questioning. The training manuals do suggest a wide range of questions to ask the witnesses; however the manuals do not consistently advise officers to begin with a free narrative phase where the witness can tell about the incident in their own words at their own pace. Most of the information contained in the training manuals with regard to questioning highlighted the need for the officers to gain the answers to the 6-WH investigative questions rather than an attempt to facilitate the witness recalling all they could remember.

Within the training manuals, a mix of open and closed questions styles are given as examples of what to ask witnesses; there is little included in the manuals about the benefits or detriments of closed or open-ended questions. Nor is there mention of other practices accepted in the psychological community that could be perceived to fall under this ‘questioning’ or what to say category. For example, interruptions, or avoiding interruptions are not mentioned, giving the witness the option to say that ‘I do not know’ is not mentioned, telling the witness that the officer does not know what occurred was also not mentioned. Additionally, there was no background or theoretical information included that could help the officers understand why particular protocols were important or how they work with memory recall. While it is of course important for the officers to obtain the details of the incident, lack of information on interruptions, eliciting a free narrative, facilitating cues or prompts, may hinder the officers ability to gain details with adequate accuracy.
Interview styles and protocols, used in this current research project and recommended by the Cognitive Interview, do not seem to be demonstrated in these manuals. For example, in the social dynamics category, closure of the interview is not mentioned, nor is rapport, nor transferring control. In the questioning category, there is no specific encouragement of open-ended questions and no explicit mention of not interrupting the witness. Specific mention of the CI is not included in the manuals.

While rapport is not mentioned as such, the manual does highlight some social skills, which may help the investigator to gain the cooperation of the witness. These social skills can be deemed to have similar characteristics to ‘building rapport’. These include explaining who you are and giving your card as a means of introduction. The suggestions encourage investigators to be positive, to be understanding, to be diplomatic, to be adaptable and to not argue with the witness. However, inferring rapport building through stylistic recommendations may not be enough, considering a ‘brisk and brief approach’ is also recommended and that there are no reasons provided as to why building rapport helps witnesses to provide more information.

In terms of direct questioning, the manual encourages the officers to be objective, to be specific and to clarify any answers that are ambiguous. Additionally, the manual does make reference to the dangers of suggesting information to the witnesses. In light of the data collected from the training manuals, it is evident that some practices, recommended by the Cognitive Interview are implied but not explicitly referred to in the manuals. Skills such as rapport building and asking open ended questions could be inferred in the recommendations included in the training programs. However, it may be beneficial to advance the training so that these skills are explicitly encouraged and trained to interviewers. While step by step rules may be
difficult, a more structured, informational and explanatory bases to interviewer training in the manuals could be beneficial.

The following section describes Phase Two of this study, which included the responses from the QPS AIS officers to a questionnaire on workload and their perceptions of witness veracity.

8.7 Phase Two: Questionnaire

Following the investigation of the training manuals, the officers were given a questionnaire to complete. The questionnaire contained questions which related to the officers’ general workload, previous training and contained 10 questions that examined the officers’ perceptions of witness accuracy and interview protocol (See Appendix I). As previously discussed, prior research which has obtained officers’ perceptions of witnesses has provided a picture which generally indicated that officers think witnesses are correct and reliable (Kebbell & Milne, 1998). The following section relates to questions asked of the QPS AIS officers.

8.7.1 Aims

The aims of administering the questionnaire were to firstly determine the types of interviews or work that the officers did; and secondly, the questionnaire aimed to identify what training the officers had completed. In addition, the questionnaire asked the officers’ questions that were intended to ascertain the officers’ perceptions of witness accuracy and their perceptions of interviewing procedures.

8.7.2 Statement of Hypotheses

The hypotheses for this study were:
• Officers would produce similar results to the Kebbell and Milne (1998)
  questions regarding their perceptions of witness accuracy, specifically that the
  officers would indicate that witnesses usually remember as much information
  that the officers would like (H₁)
• That witnesses usually provide the central leads in an investigation (H₂)
• That officers would think that witnesses were rarely incorrect (H₃)
• That officers would agree that they rarely had enough time to conduct quality
  interviews (H₄).

The answers to these questions helped to inform the issues and topics of
discussion in the focus group.

8.8 Method

8.8.1 Participants

Fifteen officers from QPS AIS in three different regions completed the
questionnaire. The officers ranged in age from 28 to 54 and included six females and
nine males. There are 24 full time, permanent QPS AIS officers with experience in
road incident investigation. Three officers were unavailable because they were on
maternity or sick leave, therefore 21 officers remained. The participants in this study
represent 72% of the total QPS AIS officers.

Of the 15 participants, the average length of service in the Queensland Police
Service prior to transfer to the Accident Investigation Squad was 5.6 years, (SD =
5.41), the average length of service within the Accident Investigation Squad division
was, 14.5 years (SD = 8.22). The officers’ rank was also examined; 53 % were Senior
Constables, 33% were Sergeants, 7% were Senior Sergeants and 7% were Constables.
8.8.2 Materials and Procedure

The questionnaire explored officers’ perception of eyewitness’, the accuracy of eyewitnesses and the interview procedure. Responses were on a five point Likert scale with a score of 1 representing the officer stating that they “never” agree with the statement or perform the behaviour and a score of 5 indicating that the officer “always” performed that behaviour or agreed with the statement. Specifically, the first four questions and the Likert scale scoring headings were directly replicated from Kebbell and Milne’s (1998) questionnaire regarding officers’ “perceptions of eyewitnesses and eyewitness performance” (p. 323). Kebbell and Milne’s study included 159 officers from the United Kingdom.

Additional questions in the current study were created to tap specific research questions and were constructed to examine specifics in the role of Accident Investigator. These questions included average number of witness interviews per year, type of incident investigate (e.g., road, air, rail, industrial), location of interviews, and duration of interviews.

Two officers piloted the questionnaire and suggested changes to the wording of some questions were made. The questionnaires were then delivered to the Officer in Charge at each region. The Officer in Charge encouraged the officers to complete the questionnaire, however participation was not compulsory. QPS AIS officers who completed the questionnaires did so anonymously and the questionnaires were returned to the researcher for data analysis.

8.9 Results

In response to questions which referred to workload, the officers indicated that they each interviewed an average of 180 witnesses per year. The officers stated that
an average of 27% of interviews were conducted in the office, 49% were conducted in the witnesses home and only 13% of interviews were completed at the scene. The officers also indicated that on average, the duration of an interview is one hour. These officers also responded to airline ($M = .87$ per month), rail ($M = .87$ per month) and industrial ($M = 1.6$ per month) incidents, but most of their workload was road incidents ($M = 15.20$ per month).

Results for the questions which tapped the officers perceptions of witnesses recall and witnesses importance to an investigation are displayed in Table 8.1. The officers felt that they always, or almost always, built rapport, that witnesses are almost always cooperative, that witnesses are always important to a police investigation and that they usually have enough time to interview witnesses properly. Please see Table 8.1 for percentage scores for each question, in addition to the mean and standard deviations.

The means of Kebbell and Milne’s (1998) results for the four selected questions and the means of the current population were examined for significant differences. Using a single-sample t-test, there were no significant differences for the questions regarding a) whether witnesses remember as much as the officers would like and b) how often the officers think that witnesses are incorrect. There was a significant difference for the question which tapped the officers’ perceptions of how often witnesses provided major leads $t (14) = -2.258, p = .040$. A significant difference was also found for the question which asked the officers if they thought they had enough time to interview witnesses properly $t (14) = 3.404, p = .004$. 

Table 8.1

Police Officer's Perceptions of Witnesses (N=15)

<table>
<thead>
<tr>
<th>Question</th>
<th>Never</th>
<th>Rarely</th>
<th>Usually</th>
<th>Almost</th>
<th>Always</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How often do witnesses provide the major leads for an investigation?</td>
<td>0.0</td>
<td>33.3</td>
<td>46.7</td>
<td>20.0</td>
<td>0.0</td>
<td>2.86</td>
<td>.74</td>
</tr>
<tr>
<td>2. How often do witnesses remember as much as you want?</td>
<td>0.0</td>
<td>33.3</td>
<td>46.7</td>
<td>13.3</td>
<td>6.7</td>
<td>2.93</td>
<td>.88</td>
</tr>
<tr>
<td>3. How often do you believe that witnesses are incorrect?</td>
<td>0.0</td>
<td>60.0</td>
<td>40.0</td>
<td>0.0</td>
<td>0.0</td>
<td>2.40</td>
<td>.50</td>
</tr>
<tr>
<td>4. How often do you have as much time as you believe is necessary to conduct a good interview?</td>
<td>0.0</td>
<td>20.0</td>
<td>26.7</td>
<td>46.7</td>
<td>6.7</td>
<td>3.40</td>
<td>.91</td>
</tr>
<tr>
<td>5. How often do witnesses remember as much crucial information as you would like?</td>
<td>0.0</td>
<td>33.3</td>
<td>53.3</td>
<td>13.3</td>
<td>0.0</td>
<td>2.80</td>
<td>.67</td>
</tr>
<tr>
<td>6. How often do you actively try to develop rapport with a witness?</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>40.0</td>
<td>60.0</td>
<td>4.60</td>
<td>.50</td>
</tr>
<tr>
<td>7. How often do you think witnesses are cooperative?</td>
<td>0.0</td>
<td>0.0</td>
<td>20.0</td>
<td>60.0</td>
<td>20.0</td>
<td>4.00</td>
<td>.65</td>
</tr>
<tr>
<td>8. How often would you rely on physical evidence instead of witness reports?</td>
<td>0.0</td>
<td>20.0</td>
<td>20.0</td>
<td>40.0</td>
<td>13.3</td>
<td>3.50</td>
<td>1.01</td>
</tr>
<tr>
<td>9. How often do you think you would interrupt a witness while they were giving their story?</td>
<td>6.7</td>
<td>60.0</td>
<td>13.3</td>
<td>13.3</td>
<td>6.7</td>
<td>2.53</td>
<td>1.06</td>
</tr>
<tr>
<td>10. How often are witnesses important to an investigation about road incidents?</td>
<td>0.0</td>
<td>13.3</td>
<td>26.7</td>
<td>26.7</td>
<td>33.3</td>
<td>3.80</td>
<td>1.08</td>
</tr>
</tbody>
</table>

8.9 Section Discussion

Direct comparisons between the responses from the current pool of officers and the officers in Kebbell and Milne's (1998) study were conducted on the four replicated questions. No firm conclusions can be drawn about the similarities of the two populations; as the present population is specialist accident investigators and
Kebbell and Milne’s population was general duty officers. However it is interesting to note how the two sets of officers compare. The officers indicated that witnesses usually remember as much information as the officers want ($M = 2.9$), which is not significantly different to the scores gained by Kebbell and Milne (1998) ($M=2.6$, $SD=0.7$). The Kebbell and Milne study found that officers rarely thought that witnesses were incorrect ($M = 2.3$, $SD = .06$), which is also not significantly different to this current study ($M = 2.4$). The current population of officers demonstrated that witnesses rarely/usually provided the central leads in an investigation ($M = 2.9$), which is significantly different from the mean Kebbell and Milne (1998) found with this question ($M = 3.3$, $SD = .07$), indicating that the officers thought that witnesses provided less central leads in an investigation than the officers surveyed in Kebbell and Milne’s study. This may be due to the amount of physical evidence accident investigation squad officers would have available at the scene. Finally, the fourth question that was replicated from Kebbell and Milne’s study found that officers rarely had enough time to conduct a good interview ($M = 2.6$, $SD = 1.0$), which was significantly different from this study which found that officers thought that they almost always had enough time to conduct a good interview ($M = 3.4$). This may be attributable to the roles of these officers in that they were not general duty officers and seemed to have sufficient time to interview the witnesses.

The remaining questions indicated that the officers almost always, or always, tried to develop rapport, and that officers thought that witnesses were almost always cooperative. The officers also thought that witnesses were almost always important to an investigation about road incidents. Officers thought the witnesses usually remembered enough crucial information, and contrary to previous research, the
officers indicated that they thought they rarely interrupted a witness while the witness was telling their story.

However, self report bias must be considered when examining the responses to some questions including the interruption question, as most research indicates that officers often interrupt witnesses. Furthermore, in order to make comparisons between the current officers and the officers in Kebbell and Milne’s study, the Likert scale and questions were retained from the previous study. However, in terms of limitations, the labels applied to the Likert scale may have influenced the results causing a cluster effect around 3. In future research, it may be more beneficial to use a 7-point Likert scale with revised labels.

8.11 Phase Three: Focus Group

This stage of the research aims to identify what Queensland Police Service Accident Investigation Squad (QPS AIS) officers actually do in relation to interviewing cooperative witnesses. Prior to this stage, this research had firstly identified the most effective and efficient interview procedure from an experimental and academic perspective, and secondly, identified what the QPS AIS officers are trained in by evaluating the QPS training manuals. Next, this research endeavoured to examine the stated behaviours and interviewing skills of the QPS AIS, by conducting a focus group to discuss what it was that the officers actually do when interviewing cooperative witnesses. Research involving police officers frequently uses focus groups to increase the richness of the data, and has explored areas as diverse as the use of violence (Cancino, 2001), peer retaliation (Cancino & Enriquez, 2004) and job image (Lim, Teo & See, 2000). Richmond, Kehoe, Hailstone, Wodak and Uebel-Yan, (1999), used focus groups of 8 officers to investigate interventions for officers.
8.11.1 Aims

In order to determine what the QPS AIS officers were currently doing in relation to interviewing cooperative witnesses, a focus group was conducted. Several issues were included in the focus group, and included the types of questions the officers asked the witnesses and the types of behaviours the officers engaged in, while interviewing witnesses. The aim was to obtain a verbally rich description of the day-to-day practices of the officers to create an in-depth picture of the current state of witness interviewing. Themes and answers that the officers gave in response to the focus group prompts were not subject to specific hypotheses. The focus group was considered exploratory research to develop themes as they emerged.

The Research Questions for this aspect of the current study were:

1. What do the QPS AIS officers say they actually do when interviewing witnesses?
2. What are the QPS AIS officers’ perceptions of specific interviewing skills?

8.12 Method

8.12.1 Participants

Experienced Brisbane based, Queensland Police Service Accident Investigation Squad (QPS AIS) Officers were the participants in this study. In keeping with recommendations for the size of the focus group (Neuman, 1997); there were 8 participants, five men and three women, which represented approximately 40% of available officers from Queensland and over 50% of the available officers from the Brisbane Metropolitan Area. They had a mean of 9 years experience in the
police service before joining the QPS AIS and recorded an average of 12 years as specialist QPS AIS officers. The average age was 44 with a range of 33 to 53 years. Five officers held the rank of Senior Constable, two officers were ranked Sergeant and one officer was a Senior Sergeant.

8.12.2 Materials and Procedure

The semi-structured focus group interview was utilised to provide a planned range of discussion topics for the officers (Blaikie, 2000), while still allowing the officers to speak in their own words and elaborate on any topic (Neuman, 1997). The focus group interview was held in the Accident Investigation Squad offices. The officers sat at a table where the tape recorder was placed. They were informed that their responses would be kept confidential and that no officer would be identified by name in the report. Each officer consented to the interview.

The discussion topics were based on a range of questions relating to what the officers do when interviewing witnesses. Some questions were predetermined and were designed to introduce issues, or used as prompts in order to encourage discussion of specific topics. The predetermined questions were designed to tap the two main dimensions of questioning (“what do you ask the witness?”) and communication (“how do you ask the witness?”). Topics for discussion introduced by the moderator were loosely based on the recommendations from the CI, to create a point of comparison between best practice protocols and current practice. At the same time, the questions were open ended and time was available to expand or explore related topics.

It was determined from personal conversation and the questionnaire, that the officers had not been trained in the Cognitive Interview; therefore asking the officers
about the Cognitive Interview in any detail was deemed inappropriate. Consequently, in the first instance, officers were asked broad questions about how they interview. As with most qualitative research, the purpose was to allow the participants to bring their own words and experiences to the discussion. Prior to ending the focus group, the moderator then introduced specific discussion regarding CI mnemonics. To facilitate this discussion and invite feedback, the moderator gave the officers a brief description of the CI Mnemonics (Tell All, Reinstate Context, Change Time, Change Perspective) and the rapport building technique of Transfer Control. The focus group session lasted one and a half hours. The session was tape-recorded for later transcription.

8.12.3 Coding and Analysis of Transcripts

The approach to coding and analysing the focus group transcripts was based in grounded theory (Strauss, 1987; Strauss & Corbin, 1998). Content analysis was not used in this case, as the frequency of the statements was not required. It was not important to identify quantitatively the number of times a statement was made, or a theme was commented on. Rather, as in the case of grounded theory, the themes that emerged were identified following the data gathering. Although certain issues were raised in the focus groups, the themes that emerged were coded according to the topic that was discussed. The questions that prompted the topics were disregarded in that, it was not important when the topic was commented on, but rather that the officers spoke of a certain theme.

The researcher and an assistant read the transcripts to identify themes that emerged. There was an attempt made to categorise the themes which would complement the ‘best practice’ coding schemes developed in Study Three, Phase One.
Nevertheless, it was accepted that the officers could introduce topics which had not been discussed previously. Further, the questions and topics posed to the officers in the focus group were worded to avoid terminology which would influence the terms and themes that the officers could speak about, as much as possible. The transcripts were imported into NVivo (Qualitative Solutions and Research, 1999) and were coded and analysed according to themes.

8.13 Results

The officers were asked a range of predetermined questions to gain an insight into how the officers currently go about their interviewing duties. The statements that emerged were coded into themes which according to Grounded Theory (Strauss, 1987) were then organised into different sections.

8.13.1 Social Dynamics: Facilitation of Interview

The current section of themes refers to comments that were deemed to reflect behaviours or statements that contribute to the social dynamics that would facilitate the interview process. These four themes of Purpose, Convenience, Agreeableness and Use of Props are exemplified in Table 8.2.
Table 8.2

*Themes Identified to Represent Social Dynamics That Facilitate the Interview Process*

<table>
<thead>
<tr>
<th>Theme</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purpose</td>
<td>Well the first thing that anybody here does, is we tell the witness that we’re doing. If someone doesn’t know what you’re doing and what it’s about then they’re not comfortable (Male officer 4).</td>
</tr>
<tr>
<td>Convenience</td>
<td>We interview them at the appropriate time, always at their convenience (Male officer 2).</td>
</tr>
<tr>
<td>Agreeableness</td>
<td>Most of us would give about an hour and a half or 2 hours, but at least an hour of that would be the top end, building rapport. If you go to somebody’s house, you spend the first half-hour learning about their kids, etc (Male officer 2).</td>
</tr>
<tr>
<td>Props</td>
<td>We show them photos or show them plans (Male officer 1).</td>
</tr>
</tbody>
</table>

8.13.1.1 *Purpose*

The officers stated that one of the first things they do when interviewing a witness is to clearly state the purpose of the discussion. Their convictions that being clear about the situation facilitates a better discussion of the events is illustrated in the comment “*Make them feel comfortable. A lot of people think this will end up in court. Help them to understand the process. The thing is, if it does end up in court, this might happen…”* (Male officer, 5).

8.13.1.2 *Convenience*

The officers also indicated that setting the day and time for the interview should be made as convenient as possible for the witness. The QPS AIS officers can be called away from the office at any time a serious car crash occurs. The officers remarked that on many occasions when the witness had come into the police stations for an interview, the officer was called away due to a serious accident occurring during that time. Therefore, a group of the officers preferred to interview the
witnesses at their home. The logic of the choice was that if the officer was called away to an incident, the witness was not significantly inconvenienced because the officer could simply call them at their home and reschedule.

*You always try and do it at their place too, at their choosing. Because if you make them come here they can sit around and wait; you’re doing it at their place, give them a quick phone call to say sorry, couldn’t make it* (Male officer 3).

8.13.1.3 Agreeableness

Most officers agreed that they had to try to build rapport with a witness “*You have to build rapport every time, that’s very important, you want to keep them as a witness*” (Male officer 2). There were some specific comments on how to build rapport by being nice or agreeable; some “*witnesses you treat with kid gloves*” (Male officer 1), “*we make them feel comfortable*” (Male officer 2), “*learn to like to drink tea and coffee*” (when it is offered to you by the witness) (Male officer 2), “*be frank and open rather than being heavy*” (Male officer 5). Some comments reflected an inference that rapport building is a natural occurrence; “*pretty much everyone here knows how to treat people*” (Male officer 1), and overall, there was affirmation that rapport building and making the witness feel comfortable were important components of an interview.

8.13.1.4 Props

The officers also indicated that they would happily provide the witness with props to aid the recall of memory if it was necessary. The officers stated that they would use props such as; a Refidex, photos from the scene, plans from the scene or
toy cars to demonstrate some component of the situation that would help the witness to either remember more or be more clear about what they recalled. For example

\begin{quote}
Ask them to look at props and stuff, make them look at a Refidex. Most of them don’t even know what streets, but I know where it was. So I ask them to take a look at a Refidex and they’re like ‘yeah, that’s where it was, it was Roscommon road.’ And they now know and she’s not telling a lie
\end{quote}

(Male officer 1).

Statements such as this one also indicated the officer’s reluctance to give the witnesses information which they know, which has not come from the witness, as is important to not provide the witness with leading questions. The benefits of the props mean that the witness can identify details for themselves. For example, they can identify the road with a Refidex, and they can demonstrate which way the cars spun with the use of toy cars, as opposed to making the officer infer which way the cars spun through limited verbal descriptions.

8.13.2 Qualities of Questioning

Three themes were identified which were related to questioning or ‘what’ the officers ask the witnesses. These themes were designated Initial Query, Timeline and Matrix. The first theme includes statements which relate to the officers’ initial inquiries and what they ask of the witnesses. The second and third themes exemplify the notion that the officers attempt to create an understanding of the event that includes what happened immediately prior to, during and after the incident. Each of these themes are discussed in detail below, please see Table 8.3 for an overall description of these themes.
Table 8.3

Themes Identified to Represent Qualities of Questioning

<table>
<thead>
<tr>
<th>Theme</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial query</td>
<td>I generally just say “what happened?” (Male officer 2).</td>
</tr>
<tr>
<td>Timeline</td>
<td>What we try and do is make a sort of collision as a timeline. And along the line, the crash might only be one little section of that line. And what we have to investigate is to put that timeline in. What people saw at different places along that timeline, till it’s continuous. (Male officer 1).</td>
</tr>
<tr>
<td>Matrix</td>
<td>The other way of explaining it too is your matrix. Investigation matrix is along the top you would have pre-impact, impact and post impact. Now down the side you would have the three elements, human, vehicle and environmental (Male officer, 5).</td>
</tr>
</tbody>
</table>

8.13.2.1 Initial Query

The officers were asked, what is the first thing you ask a witness? The replies indicated that the officers in this study tended to use questions similar to what the academic literature describes as police officers’ ‘usual’ questioning, including “tell me what you saw” (Male officer 1).

The officers also commented that they would ask a witness in their initial queries “where they were when they were first aware of it {the crash}” (Male officer, 3). These comments also relate to orientation, or where the witness was when the crash occurred. “You just know where they are, if they are standing on the side of the road, and it happened straight in front of them” (Female officer 2). The officers stated that it was important to understand the crash from the witnesses’ perspective. For example:

…were they standing two kilometres away and couldn’t really see properly and just making it up as what they’ve seen? Were they actually the passenger
in the car? *Cos they’re going to have a better idea of what happened if they were a passenger in the car than if they were a kilometre down the road, just watching it from a distance* (Female officer 2).

### 8.13.2.2 Timeline

Although the officers had not participated in formal training for interviewing witnesses, they commented on two methods which they used to help guide their investigations. The first was the use of a timeline. The officers’ aim was to have a complete understanding of everything that happened directly proceeding, during and following the incident. “*That’s the idea, to build a continuous story. First starting at a ‘k’ (kilometre) or two ‘k’s down the road, little gaps along the timeline*” (Male officer 1). The officers implied that they knew what happened in the crash, they wanted to know what contributed to the event occurring. This perspective is illustrated by the following comment:

> I can not recall one accident I’ve done where there’s been one factor. It’s always a combination, a number of things. And it’s hard to tell that if one of the things hadn’t happened, if the accident would still have occurred (Male officer 4).

### 8.13.2.3 Matrix

The other method the officers mentioned that helped them to be sure that they had gained all the information they needed about the crash was a matrix. In general, the officers used the matrix to make sure they had all the information from the incidents. Some officers used a 3 x 3 matrix, while one used a 4 x 3 matrix. One officer explains, “*you’ve got your vehicle, you’ve got your person, you’ve got your environment. You’ve got before, during, after*” (Male officer 3). The officers
commented that the matrix works for any sort of incident including car, industrial, aircraft or rail. The matrix that contains four items includes “description, conditions prior to, conditions if they are a part of the incident, description of the person” (Male officer 5). The officers suggested that it is difficult to identify any one single cause in an incident because several factors normally contribute to an event. Therefore, the usefulness of the timeline or matrix becomes more relevant. “This gets back to the matrix and why you would critically evaluate each component that makes up the highly changeable system” (Male officer 1). Whether the officers used a timeline or a matrix, they were constructing a complete picture of what occurred to contribute to the event.

8.13.3 Avoiding Negative Behaviours

In the focus group, the officers also spoke of behaviours that they recognised as being negative to the outcomes of a successful interview. The six themes which were identified are provided in Table 8.4 and focus on avoiding hearsay, using terminology, sabotaging witness confidence, using suggestive questions and offending the witness.

Table 8.4.

<table>
<thead>
<tr>
<th>Theme</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avoid hearsay</td>
<td>I’ll normally throw in another thing. Not what you’ve heard or what you’ve been told, just what you as a witness saw. What happened, what you saw (Male officer, 3).</td>
</tr>
<tr>
<td>Avoid terminology</td>
<td>Actually I tend to avoid that word ‘witness’ altogether. I don’t mention the word witness. Because as soon as you mention that word ‘witness’ people become terrified and they think they’re at court and all that other stuff that’s associated with it (Male officer 3).</td>
</tr>
</tbody>
</table>
### Theme | Example
--- | ---
Avoid sabotaging witness confidence | It’s very important you don’t start trying, when you get something from a witness and you know it’s incorrect, they believe it strongly. If you start challenging it or question them in such a way that they start to question what they saw, then guess what’s going to happen to the stuff that they really saw? They’ll question it (Male officer, 2).

Avoid suggestive questions | You can’t put words in their mouth (Male officer 1).

| | Without suggesting to them that another witness saw this, ‘what do you say to that?’ You can’t give them those sort of indicators (Male officer 2).

Avoid interruptions | It’s their story. They’re telling you about something. When they finish that paragraph, you’ll interrupt to get them to clarify something, you’re not going to interrupt them in the middle of a sentence (Male officer 4).

Avoid offending the witness | Some people might have some little religious things, even like taking your shoes off at the front door, some people don’t care, but you get some people from Asian backgrounds, walk in the house with shoes on, straight away you’ve just broken a taboo (Male officer 2).

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**8.13.3.1 Avoid Hearsay**

In attempting to communicate to the witnesses that the officers wanted only from the witness what they personally experienced, officers explained that they often included statements designed to limit hearsay. One officer said, “I’ll normally throw in another thing. Not what you’ve heard or what you’ve been told, just what you as a witness saw. What happened, what you saw” (Male officer, 3). The officers explained they also utilised a ‘five senses’ approach. While limiting the amount of inferences and irrelevant information, this five senses cue also limits the possibility of hearsay being included. For example, “That’s going through your five senses. Because you want to get out of them what they saw, heard, tasted, smelt” (Male officer 2). Officers present agreed with the following statement about the veracity of
the using the five senses approach to filter out hearsay or comments that the witness might make where they ‘think’ something must have happened, but did not actually witness it.

\[ \text{figure out what they \{the witness\} imagined and what they recall with some of their five senses.} \text{ Actually, our five senses is not a bad thing to try and isolate how you become aware of the crash.} \text{ “I heard it”}. \text{ (Male officer, 5)} \]

8.13.3.2 Avoid Terminology

Officers were aware that use of even simple terminology, or jargon, can give the witness the wrong impression and alter the responses received from a witness. For example, most of the officers said that they avoided the use of the word ‘witness’ altogether. Two main reasons were offered. The first reason concerns the probability that when people hear the word witness they think that they will have the responsibility of attending court to give their evidence. This indicates a fear or hesitation in people to become involved if they think there is going to be ongoing commitment from them to participate. The second reason indicates a cognitive or perceptual implication in the word ‘witness’. A person may not think of themselves as a witness if they did not physically see the crash happen before their eyes. However, the police may require information from witnesses who, for example, heard the crash, or saw the motion of the cars or behaviour of the drivers before the crash. For example:

\[ \text{People who say, “I didn’t witness the crash”, but they are a witness, they think a witness is a person who saw the crash between the two vehicles. Our witnesses may have seen something two k’s down the road so they are a witness, but not to the crash. They’ll say they can’t help you ’cause they} \]
didn’t see it. Modify a few questions and they’ll say, but, I did see them . . .

(Male officer 1).

As the term witness seemed integral to common speech and the protocol of interviewing the officers were asked to elaborate on what they do say to witnesses. The following quotations are examples of these responses. “I have information that you may have seen something about this incident that occurred on such and such a date” (Male officer 3) and I need some information about this, your name was given, what can you tell me about what you saw?” (Male officer 2).

8.13.3.3 Avoid Sabotaging Witness Confidence

In relation to alerting a witness to information that they had provided that may have been incorrect, the officers were very careful not to accuse the witness of being wrong, or to provide negative feedback. Two main reasons for this were offered. The first was that telling the witness they were wrong was tantamount to leading questions where the witness may then feel as if they were being prompted for a new answer. The second reason was that the officers felt that if they told a witness something they believed was true was actually incorrect, they would begin to doubt everything they saw. This point is illustrated here:

...once they get caught over a line that’s incorrect, then it taints the whole of their story, then get very hesitant over everything they did remember. ‘Maybe I’m wrong all up’ (Male officer 3).

8.13.3.4 Avoid Suggestive Questions

In spontaneously answering other questions, the officers demonstrated that they were well aware of the dangers of using leading or suggestive questions with witnesses. The officers suggested that the interviewer can suggest things to try to jog
the person’s memory but cannot put words in the person’s mouth. An example was provided by one officer who recalled questioning a witness who acted as though he wanted the police to tell him what to say. “We’d say something like you were doing 60 and he’d say ‘yep’, then you came round here, ‘yep’, then you ran into the car, ‘yep’, then whose statement was it?” (Male officer 2). On this occasion the officer was aware that, if the witness did not say it in his own words, it was not his statement.

8.13.3.5 Avoid Interruptions

This theme related to interruptions to the interview by external factors such as workplace practices and situational interruptions. For example, “you basically set up a scene so you don’t get interrupted. Which is pretty hard to do in this work” (Male officer 3), indicated that interruptions in this instance are seen as external factors. Other examples of which are telephone calls, other people coming to see the officer and other officer’s interrupting the interview. One officer went so far as to say that with the chances of being called away to another incident, he felt as though he was “on a time bomb” interviewing witnesses at the station (Male officer 1).

Interestingly, contrary to the research literature that highlights interrupting the witnesses’ speech and therefore flow of information as a negative interview behaviour, officers in this study did not spontaneously identify this behaviour. When probed about the negative behaviour of interrupting witnesses while they were speaking, officers in this study only briefly mentioned this behaviour. Some defence was given for necessary interruptions; “some people go off on a huge tangent and you have to get them back” (Male officer 2).
8.13.3.6 Avoid Offending the Witness

How the officers attempted to avoid offending the witness was discussed at length. The officers’ comments mainly reflected offending the witness in their own home and related to cultural, religious and personal boundaries. For example, the officers acknowledged that some people refuse to allow firearms into their homes. In addition, cultural traditions such as taking off your shoes before entering should be recognised and complied with; “if they take theirs off {shoes}, take yours off” (Male officer 2). Issues such as avoiding offending people’s attempts at hospitality were another factor to be aware of. Anecdotally, the officers’ spoke of having to drink beverages they did not like, drink tea out of dirty cups, and refuse the offer of a curry meal made from unknown meat.

8.13.4 Memory: Parallels with CI Recommendations

Some of the officers’ comments were also identified to reflect skills or behaviours recommended by the Cognitive Interview. The officers were not prompted in CI specific protocols at this stage of the focus group, however, when analysing the comments, they were seen to reflect CI protocols. The comments discussed here as statements, reflect similar elements to the CI mnemonics, and were mentioned spontaneously in the main part of the focus group discussion, without any CI specific prompting. Table 8.5 illustrates examples from the three themes of Mentally Reinstate Context, Physically Reinstate Context, and Change Time Order.
Table 8.5

*Themes Identified to Represent CI Mnemonics*

<table>
<thead>
<tr>
<th>Theme</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mentally reinstate context</td>
<td>Someone will say “oh, I’m not really sure how long I was stopped there” so we might say something like “well put it in your minds eye” and we’ll actually put a stopwatch on it. Then we’ll say “Now when did you move off” and we’ll do it twice and you’ll be surprised 9 times out of 10 they got it right” (Male officer 3).</td>
</tr>
<tr>
<td>Physically reinstate context</td>
<td>But picking out things like stop signs or safety features, you might say, can you show me? And you physically have to take them back (Male officer 3).</td>
</tr>
<tr>
<td>Change time order</td>
<td>What’s the last thing that you can remember and what’s the first thing that you can remember? That’s what I used to do (Male officer 1).</td>
</tr>
</tbody>
</table>

8.13.4.1 Mentally Reinvoice Context

Although the officers were not trained in the CI, they spoke of techniques that they used to help witnesses remember that resembled specific components of the CI. The officers spoke of asking the witnesses to put the situation “in the mind’s eye” (Male officer 1). They also discussed other techniques that helped them to aid the witness in making a complete and accurate statement. For example, “you might say well how far were you from that car in front of you. And they’ll say “look I really can’t remember, I don’t know, I’m not really good at distances” and you say, “I don’t want meters, do you know how long a football field is?” “Or do you know how long a cricket field is”. And they go “oh, yeah, about the length of a football field”. Well we then know that it was about 100 meters” (Male officer 2). While this quote is not representative of a specific technique recommended by the CI, it could be seen as another way of allowing the witness to verbalise the information accurately using information they know. Thus, overlapping the information the witness already knows
(the incident) with other information they are already sure of (length of a football field).

8.13.4.2 Physically Reinstate Context

As well as mentally reinstating the context, or having the witness put the situation in their minds eye, some officers stated that they had physically reinstated the context by taking the witness back to the scene: “gone back to the situation, gone back to the scene, got in her car, drove them down the road” (Male officer 4). When queried by the facilitator if the officers would take a person back to the scene who was stressed from a tragic accident, the officers replied that they probably would not take that witness back, “you wouldn’t get them to cooperate anyway” (Male officer 4). The frequency of physical reinstatement was not determined, however it may not be a frequent occurrence as some officers found it “a bit of a drama to do it” (Male officer 4).

8.13.4.3 Change Time

The concept of going from the first thing the witness remembers and then the last thing they remember was illustrated by the comment “You start at the beginning. “When did you actually start to see this incident occurring?” and that’s what you’re establishing. Then you go straight to “When did you finish seeing that incident occurring?” (Male officer 3). However, it was determined that the officers used a more ‘free recall’ followed by ‘probing questions’ protocol “You get them to tell you the story, so they can get it out. And then go back and sit there and break it down into parts” (Male officer 2).
8.13.5 Perceptions of Witness Veracity

Two themes were also identified which were seen to represent statements made by the officers about their perceptions of how accurate eyewitnesses are. The concept of physical evidence and its importance to an investigation was also discussed. These themes of Witness Accuracy and Physical Evidence Versus Witness Evidence are illustrated in Table 8.6.

Table 8.6

<table>
<thead>
<tr>
<th>Theme</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Witness accuracy</td>
<td>I think there would be something, no matter what witness statement, something would be partially wrong (Male officer 3).</td>
</tr>
<tr>
<td></td>
<td>Very rarely totally wrong (Male officer 3).</td>
</tr>
<tr>
<td></td>
<td>And very rarely totally right too (Male officer 2).</td>
</tr>
<tr>
<td>Physical evidence versus witness evidence</td>
<td>That’s where the witness comes in, the evidence doesn’t lie, but you might misinterpret it (Male officer 2).</td>
</tr>
<tr>
<td></td>
<td>There’s 3 things, there’s physical evidence, your witness stuff and your technical stuff (Male officer 2).</td>
</tr>
</tbody>
</table>

8.13.5.1 Witness Accuracy

The officers indicated that they would like to expand on some of the questions contained in the questionnaire on witness accuracy. The question, ‘How often do you think witnesses are incorrect’ was seen to be too broad and they indicated that witnesses were either totally or partially incorrect, “never totally right I would go as far as to say” (Male officer 3). The officers also went so far as to say that they would expect to get “a quarter of [the information about] the event, and that’s about all you’re going to get. It’s almost impossible to get the perfect story” (Male officer 2).
This was illustrated by a point that one officer made about attempting accuracy experiments at conferences he had attended, where they would demonstrate accuracy with the cars that were going by. This officer claims that even then, they are only about 25% accurate.

Discussion about witnesses actually being incorrect when the witness truly believes they are correct was illustrated in several comments. Officers recognised that a witness may have thought they saw something, but by the time they gave the incident attention, and the cars had rotated after impact, the witness statement was incorrect even though they believed they were telling the truth. The following statement illustrates an amount of tolerance for witnesses who are incorrect; “he wasn’t lying, that was what he honestly believed he saw” (Male officer 1). Officers also seemed to demonstrate a level of understanding of the process of lying stating that “even lies will give you a little bit of good in it” (Male officer 4). However, one comment, “witnesses are notoriously inaccurate” (Male officer 2) seems to sum up the officers’ the perceptions of eyewitness accuracy.

8.13.5.2 Physical Evidence Versus Witness Reports

Following on from statements that witnesses are notoriously inaccurate, the facilitator assumed some statements regarding physical evidence would obviously point toward a greater reliance on physical evidence than on eyewitness reports. However, that was not necessarily the case. An officer indicated that “sometimes you have great physical evidence so you do know, but other times you don’t” (Female officer 2). Officers voiced the perception that physical evidence is never wrong; however the interpretation of that evidence may be incorrect. When challenged by the facilitator that, with excellent physical evidence you would not need witness reports;
the officers stated that “it would be a sad day if we were convicting them, not taking them to court, just convicting them” (Male officer 2). This implied that an over reliance on physical evidence would preclude any need for court appearances and other evidence being presented.

The officers also speculated that they would “not get away with” (Male officer, 4) solely relying on physical evidence in the courts. However, an example was introduced by the officers in which one officer recently won a case with only physical evidence. This example created a situation where the officers debated whether that was a “dangerous precedence” (Male officer 2) to set, considering that the interpretation of the physical evidence can be wrong. Ultimately, the officers looked to witness reports to back up or confirm that their interpretation of the physical evidence was correct. One example provided was of a recent hit and run case where the witnesses were incorrect on the make of the vehicle, however the physical evidence at the scene informed the officers of the true make of the vehicle. Furthermore, in this case, both witnesses were correct in identifying the advertising that the vehicle had on the side. The officers agreed that knowing the advertising on the work vehicle was a “major lead” (Male officer, 2) from the witnesses, however the make of the vehicle the witnesses provided was “a thousand miles off” (Male officer, 3).

8.13.6 Comments Specific to the CI Mnemonics

Following the main section of the focus group discussion, the officers were presented with a brief description of the CI Mnemonics (Tell All, Reinstate Context, Change Time and Change Perspective) and the rapport building technique of Transfer Control, a salient communication skill recommended by the CI, for their comment. A
discussion is included below concerning the officers’ feedback from the descriptions of the CI tools. (See Table 8.7).

Table 8.7.

*Feedback from the Introduction of Specific CI Mnemonics*

<table>
<thead>
<tr>
<th>Theme</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tell All</td>
<td>Bad choice of words (Male officer 2)</td>
</tr>
<tr>
<td>Reinstate Context</td>
<td>Yeah, we’ve done that before (Male officer 4)</td>
</tr>
<tr>
<td>Change Time</td>
<td>When did you actually start to see this incident occurring?’ And that’s what you’re establishing, then you go straight to ‘when did you finish seeing that incident occurring? (Male officer 3)</td>
</tr>
<tr>
<td>Change Perspective</td>
<td>Atrocious (Female officer 1)</td>
</tr>
<tr>
<td>Transfer Control</td>
<td>What does that mean? (facilitator answers) Oh, empower the witness (Male officer 4).</td>
</tr>
</tbody>
</table>

8.13.6.1 *Tell All*

The Tell All mnemonic, when presented to the officers, received mixed responses. Although, the officers wanted to know events which occurred both prior to, during and after the event, they were reluctant to see the benefit of the ‘even details which you may not think are important’ statement. The argument was put forward that firstly, witnesses may then become annoyed that all their information was not being recorded, and secondly, from a legal perspective, everything that the witness says should be included in the report. They suggested that the mnemonic may include a bad choice of words and recommend instead, “*tell me all that you know*” (Male officer 2).
8.13.6.2 Reinstate Context

When discussing the reinstate context mnemonic, the previous points about props were reiterated, “ask them to look at props and stuff, make them look at a Refidex. Most of them don’t even know what streets, some do” (Male officer 1).

8.13.6.3 Change Time

The change time mnemonic received positive comments. Firstly, officers in the focus group had already indicated they had used the technique of recalling the first thing that the witness recalls and the last thing the witness recalls, spontaneously. Secondly, the officers admitted that most people recall in a disjointed chronological order regardless. “I guess it’s not important that chronologically they don’t have it right, but they do give you the right information. You can change the chronological order as long as what they’ve said is correct. And most people do that. They’ll go through a whole series of things, and they know there’s some important pieces they’ve missed, so they’ll skip back to it” (Male officer, 3). The officers further acknowledged that they will edit the story so that when it goes into the report it has a logical order; “Now if you literally wrote down word for word what people have said, you’d be all over the shop. You’d be at the start then at the end then at the start” (Male officer 4). “Most people read a statement like reading story” (Male officer 2).

8.13.6.4 Change Perspective

The Change Perspective mnemonic was introduced and received a strong response from the officers. The officers were quick to identify the ramifications from a legal point of view of the cue. Another officer answered, “atrocious”, when queried, she explained that she “would not like to have to defend that in court” (Female officer 1). Another officer was quick to say they would not use it.
8.13.6.5 Transfer Control

The officers were presented with the transfer control cue and the immediate response was, “what does that mean?” (Male officer 1). Anecdotally, it should be added that there was a general mumble of negativity when the cue was presented. The cue was explained and the officer replied “oh, empowering them”; to which the other officers agreed positively. The officers then demonstrated an acceptance of the cue. The analogy of treating the witness like a victim was made. “There’s no difference in treating the witness like a victim” (Male officer 3). This officer indicated that he had worked with victims previously and tended to treat witnesses in a similar fashion. In a similar vein, the officer mentioned the rapport building technique of empathy. Saying that he tried to “make the victim feel as ease” and telling them that “you’re sorry it’s happened to you” (Male officer 3). Of interest here is that the officer avoided the terminology ‘empathy’ and instead forgot the term “some flash word” and described the technique instead.

8.14 Section Discussion

In general, the officers in the present study stated that they are using some techniques that help them to elicit information from the witnesses such as timelines, matrices, being nice, not suggesting information, screening for hearsay by implementing the five senses cue and avoiding jargon. It should be noted, that although these officers were not specifically trained in interviewing witnesses or the CI, they are an specialised team of experienced investigators with varied skills, who do not perform ‘general’ or standard duties.

Because this series of studies is interested in identifying similarities and differences between current QPS AIS interviewing procedures and CI procedures the
preceding results will be discussed utilizing the CI categories of Social Dynamics, Questioning and Memory. Thus Memory: Parallels with CI Recommendations and Comments Specific to the CI Mnemonics are discussed in the subsection Memory, Social Dynamics: Facilitation of Interview, is discussed as Social Dynamics, and Qualities of Questioning and Avoiding Negative Behaviours are discussed in the subsection Questioning. Whilst Perceptions of Witness Veracity do not fit into CI categories for discussion, and are discussed separately, these perceptions are of note as they flag the significance that QPS AIS officers place on witness’ statements whilst at the same time recognizing the inherent flaws.

8.14.1 Memory

The officers stated that they are using some techniques that help them to elicit information from the witnesses; timelines, matrices, not suggesting information, screening for hearsay by implementing the five senses cue and actively avoided jargonistic terms which may confront the witnesses. It should be noted, that although these officers were not specifically trained in interviewing witnesses or the CI, they are an specialised team of experienced investigators with varied skills, who do not perform ‘general’ or standard duties.

The officers also demonstrated some spontaneous usage of some of the CI mnemonics. Specifically Reinstate Context and Change Time, this may indicate that these two mnemonics may better fit what the officers currently do and therefore may be appropriate in future training.

It was also indicated by the officers, when directly questioned about CI mnemonics, that they did not like the Change Perspective cue. Surprisingly, the officers also did not like the Tell All explicitness about telling even what the witness
may not think is important. From the officers’ responses on the Tell All mnemonic it was inferred that the officers were already filtering information into necessary and unimportant information.

8.14.2 Social Dynamics: Facilitation of the Interview Process

Rapport building, including explaining the purpose of the interview and being friendly toward the witness were described by the officers as behaviours they always engage in. The officers also demonstrated that they would use props or maps to facilitate the understanding and communication between the witness and themselves. Each of these techniques are recommended by Fisher and Geiselman (1992) for conducting a quality interview. Specifically, the officers explained the goals of the interview, engaged in rapport building behaviours such as talking about the witness’s children, communicated empathy and tried to make the interview as convenient as possible for the witness. Additionally, the officers were aware of situations where their behaviour or actions could offend a witness and attempted, where possible to respect the witness’s needs.

It is interesting that the officers in the present study were wary of the CI term ‘transfer control’ but when this term was seen to mean ‘empower the witness’, reactions were more positive. The officers then indicated that they understood the concept of empowering the witness and try to do that where possible. That officers could then explain strategies they use to empower witnesses, suggests that the CI technique transfer control is used somewhat by QPS AIS officers to facilitate rapport. Overall, the behaviours of the officers demonstrated an understanding and awareness of rapport building techniques as attempts to make the witness feel comfortable.
8.14.3 Questioning Skills

The officers demonstrated some skills with regard to questioning that seemed successful. They utilised the analogy of a timeline or matrix in order to both organise information and identify sections of the event about which they needed further information. Their use of the five-sense technique established a demand for first hand information and not hearsay, or what the witness thinks might have happened. Jargonistic terms were avoided, while the officers tried to communicate what they needed in basic terms.

Additionally, the officers demonstrated an awareness of negative behaviours to avoid when questioning, such as suggestive questions, hearsay, providing negative feedback and interruptions. Overall, the officers were aware of, and said that they attempted to perform, questioning behaviours which were positive and helpful and to avoid negative questioning behaviours. These officers had limited training in interviewing witnesses and yet their responses to the focus group topics indicates that they engage in more positive behaviours than simply asking ‘tell me what happened’; and they also were aware of negative behaviours, for example, their awareness of the detrimental use of leading questions.

8.14.4 Perceptions of Witness Veracity

In terms of the officers’ perceptions of witness accuracy, they believed that witnesses were inaccurate and yet they still placed significant emphasis on the witnesses’ statement, even when physical evidence was available. This perception of witnesses being inaccurate contradicts Kebbell and Wagstaff’s (1997) research which found that police rarely think eyewitnesses are incorrect. The questionnaire (Study Three, Phase Two) found that officers in the present study were also moderate about
their indications that witnesses were incorrect, but when they were given the opportunity to verbally express their perceptions of witness accuracy, a more inaccurate picture emerged. However, the importance placed on witnesses’ statements indicates that perhaps like their use of the matrix, they attempt to determine whether the witness statement, the physical evidence and the technical evidence all combine to create one complete and accurate story. It is interesting that different officers identified ‘25%’, as being the average amount of information they receive from a witness about the incident. However, even this low figure is an overestimate when compared to research studies. In particular, Study One obtained approximately 13 percent correct out of all the information available (when all participants were included), which was in line with other research, while Lipton (1977) found 20% accuracy, both less than the 25% the police indicated. Considering these results, it is noteworthy that the QPS AIS officers realised that they are not obtaining a high percentage of information from the witnesses.

In conclusion, two of the CI techniques, Change Perspective and Transfer Control were rejected when presented in CI terminology (jargon) but when paraphrased into more familiar terminology were recognized by the officers. This may align with the officers’ attempt to actively avoided jargonistic terms which may confront the witnesses, thereby reflecting the officers own rejection of jargon. Perhaps the terminology (jargon) that the instructors of the CI have used in the past had been enough to disenchant the officers. It is not that the officers do not understand the techniques, because these officers showed both an overt and a subtle understanding of a wide range of issues including the impact of their style, questioning and terminology on the responses of the witnesses. Moreover, the CI may
benefit from a return to simplicity, where cues are described by their intent and purpose rather than a jargonistic term such as ‘transfer control’.

Overall, the officers demonstrated positive behaviours and awareness of issues related to interviewing witnesses. It would be beneficial to build on these practices with additional training, so that all of the Queensland police officers had knowledge of the types of procedures that worked well for their colleagues in QPS AIS. Training of officers should attempt to avoid any jargonistic terms and focus not just on what to do and what not to do, but how to achieve these skills.

Limitations of this study phase include a self-report bias, in that officers may have answered more positively about their interviewing behaviors either due to not recognizing what they actually do or wanting to appear positively during the discussions. In addition, it would have been optimal to have conducted further focus groups but considering the small sample; the number of QPS AIS officers in Queensland, and shift work constraints, it was not feasible to recruit more officers for additional focus groups. This focus group served as preliminary testing of real-world attitudes and beliefs about interviewing from the officers themselves.

8.15. Study Three: Phase Four: Case Study

The aims of this case study were to determine what the officers were actually doing by observing a ‘real life’ interview. Permission was only granted to observe the interview and take notes, video or audio taping was not permitted. The research questions remain exploratory in nature and include establishing what the officers actually say and do in an example interview and evaluating whether what they are actually doing matches what they are trained to do and what they said they do in the questionnaire and focus group.
8.15.1 Participants

An experienced QPS AIS officer was observed conducting investigative interview with a cooperative witness. The officer who was observed in this case study was a male of Sergeant Rank. The officer was selected to be observed conducting an investigative interview based on the unpredictability of when the officers would be conducting interviews. The officer was not selected for the task as such, but selected on the basis of when an officer had an interview scheduled for the time the researcher was available. Specific demographics are not available about the witness for privacy reasons.

8.15.2 Materials and Procedure

The researcher gained permission from the witness and the officer to observe the interview. Statements, questions, verbal and non-verbal behaviour, distractions, and any other occurrence that happened in the interview were noted down. For confidentiality, any statements made by the witness which could be seen to compromise confidentiality were not noted. For example, the witness’s name, registration number, and intricate details of the road incident, which did not directly relate to the interview procedure were not included. The resulting handwritten notes were transcribed and analysed based on the following criteria for the interview.

8.15.3 Criteria for Case Study

The criteria for the case study analysis was based on recommendations from the Enhanced Cognitive Interview in order to promote a basis for comparing the similarities and differences between the recommendations from the CI and a ‘real’ interview. The criteria are divided into three main categories based on the CI (Fisher,
Brennan & McCauley, 2002). Firstly, the category of ‘Memory’ encompasses the four main Cognitive Interview mnemonics. However, because the officer was not previously trained in the CI procedure, it would be highly unlikely that he would use the four mnemonics. If he used a similar prompt or cue then that would be examined under this category, but due to the fact that he was not trained in the CI, it was expected that the majority of data from the observed interview would not come under this category.

The second category is ‘Social dynamics’, which examines rapport building and transferring control to the witness. The third category is ‘Questioning’ which encompasses questioning skills such as asking open-ended questions and not interrupting the witness. This category also included any other strategy or behaviour which helped to elicit facts from the witness. Information received from the interview may overlap in the categories. Only information that was contained in the interview and deemed to be relevant was discussed.

8.16 Results

8.16.1 Memory

The officer did not use any of the CI mnemonics. The only cues the officer used that could possibly be seen to be memory enhancing cues was the use of a street directory which helped the witness to recognise street names rather than recall them. When the witness was unsure of a street name, the officer utilised a “Refidex” so that the witness could identify the street names.
8.16.2 Social Dynamics

The officer did introduce himself, but did not give the witness his card until asked by the witness. There were moments of lightness/comradery between the officer and the witness; for example, when they both laughed about the spelling of the witness’s company name. Some obstacles to rapport were the situation of the seating for the interview, which according to classical rapport literature may have hampered rapport, because the officer and witness both sat facing the computer screen, however some people prefer this spatial arrangement as it decreases the feel of confrontation.

8.16.3 Communication and Questioning

In relation to the training given to officers, the officer did attempt to retrieve answers to the WH-6 questions, who, what, when, where, why, and how, rather than allowing for an uninterrupted free recall. Interruptions to the witness’s free recall were common and occurred when the officer asked the witness a direct question. The interview was also interrupted by the change of shift and new officers coming into the room. However, the interviewing officer admitted to the witness that he had become distracted and asked the witness to repeat what he had said.

The officer utilized mostly closed questioning for example: “what time did you leave the site?” Most of the closed questions occurred at the beginning of the interview when the officer was gaining “utility” information such as occupation, address, and phone number. Other closed questions were used when there was a long silence in the conversation. After the witness gave his free recall of events (with interruptions and closed questions), more probing questions followed, but these were still mostly closed questions. The officer performed some behaviours, which could be seen as positive in the quest for retrieving information, these will be discussed next.
The officer sat at a computer while the witness looked on. This created a number of interesting dynamics. The computer became the focus for both the officer and the witness. The computer (and its usage) caused several difficulties such as; pauses due to typing, misspellings, formatting and printing errors. However, there was an element to the typing of the witnesses recall and allowing the witness to view all typing which facilitated the interview. Firstly, the use of the computer and the visual dynamic that it allowed meant that the witness always knew exactly where the officer was up to. For example, when asking demographic or utility information, the witness could see that the next question was going to be his address, or phone number, etc. This allowed a certain transfer of control (the witness being ‘allowed’ to be involved in the process), and also, possibly more importantly, the computer usage mediated the negative aspects of the interruptions and closed questions to some extent. For example, when the officer wanted to clarify something that had been stated earlier, he would scroll through the pages of typed text. This meant that although the officer was mixing up chronologically typed out recall, probing items that were mentioned earlier and expanding on information that was limited in the first recall trial, the witness still knew exactly which part of the recall the officer was trying to expand on, because the officer would scroll to that line, place his curser and ask the question. It remains to be seen whether the use of the computer would be beneficial to all witnesses (for example, the illiterate, the computer phobic, or the less than cooperative witness); however, it did seem to mitigate some negative features of this interview.

The officer did frequently use minimal encouragers, such as ‘yes’, ‘go on’, and ‘uh-hu’ phrases which kept the witness reporting what he remembered. The officer also ‘caught’ the witness making an inference (“the car must have spun that way
because of the way it swung around”). The officer asked if that was what happened or were you surmising and the witness admitted it was just a guess. There appeared to be no real attempt to lead the witness with suggestive or leading questioning.

The officer used props in the interview; the officer got a toy car so that the witness could demonstrate what happened to make the written description as clear as possible. Still the officer did not write what happened according to the witness’s placement of the toy car, but used it to help the witness put into words what happened. Additionally, the officer got the witness to draw some aspects of his truck to again clarify what exactly had happened and allowed the witness to clarify his words. The use of props appeared to help this witness to reinstate visually what had happened and in doing so allowed the witness to be more clear.

8.17 Section Discussion

The officer who conducted the interview performed several complex tasks while attempting to retrieve the necessary information from the witness. While it could be deemed that he did retrieve the necessary information, in that he obtained the information that was needed, an examination of the interview session reveals several practices that deviated from the protocol of the Cognitive Interview. The officer interrupted frequently and frequently asked closed questions. The CI asserts that interrupting the witness leads to a break in concentration, where some material to be remembered is lost by a change in direction of the flow of thought. Also, interrupting the witness hinders the transfer of control protocol, which is said to help the witness to recall at their own pace and in their own words. In addition, no memory enhancing mnemonics were used by the officer.
In summary, this interview demonstrated some aspects of the officer’s interviewing differed from the research literature. In general, the interview seemed to flow fairly well, and the computer and openness of its use to the witness seemed to help mediate some negative aspects of the interviewing skills. The officer seemed to obtain the information he needed and the witness did not seem to be overly stressed, confused or offended by anything that occurred in the interview.

It should be noted that for this stage of the research the accuracy of the witness’s statement was not known because the stimulus was a ‘real world’ event. This limitation means that it cannot be confirmed if the officer’s interviewing skills did in fact help the accuracy of the witness’s statement. The observation of the interview can only be used to ascertain what the officer said and did and the reactions of the witness, as opposed to determining how much of the witness’s statement was correct.

8.18 Chapter Discussion

As identified in the discussion sections of each of the four phases of Study Three, QPS AIS officers are not specifically trained in the Cognitive Interview, nor do they receive any training specific to interviewing cooperative witnesses. The training manuals make some reference to skills which could be deemed to reflect recommendations contained in the CI, such as introductions and explaining the purpose of the interview, which the focus group participants indicated they always engaged in, in interview situations. The manuals, while detailing what to ask and how to ask it, do not present the officer with useful and practical aids to help witnesses to recall more accurate information. For example, the use of props and drawings to aid the witnesses recall is recommended by the CI for complex situations and was illustrated in the focus group and case study, but is not mentioned in the manuals. In
addition, the officers in the focus group extolled the benefits of the use of a matrix or timeline to assist them to capture the completeness of the incident, however there is no mention of completing a matrix in the officers’ training program. Perhaps police training could include these specific behaviours to help officers to engage in more complete statement taking.

The overarching research questions for Study Three were investigated from several methodological approaches, including observations, secondary data, focus groups and a questionnaire, without relying on one piece of data alone. The impact of the limitations associated with any one technique was restricted, as the inclusion of multiple approaches adds greater validity and reliability to the findings (Blaikie, 2000; Neuman, 1977). The results identified in the thesis will be discussed next in the final chapter.
<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.1</td>
<td>Introduction to General Thesis Discussion</td>
<td>222</td>
</tr>
<tr>
<td>9.2</td>
<td>Review of Findings</td>
<td>222</td>
</tr>
<tr>
<td>9.2.1</td>
<td>Experimental Recall Task</td>
<td>222</td>
</tr>
<tr>
<td>9.2.2</td>
<td>Exploration of Witness Perceptions</td>
<td>223</td>
</tr>
<tr>
<td>9.2.3</td>
<td>Interview Procedures of the QPS AIS</td>
<td>224</td>
</tr>
<tr>
<td>9.2.4</td>
<td>Integration of Findings</td>
<td>225</td>
</tr>
<tr>
<td>9.2.4.1</td>
<td>Mnemonics</td>
<td>226</td>
</tr>
<tr>
<td>9.2.4.2</td>
<td>Communication Skills</td>
<td>227</td>
</tr>
<tr>
<td>9.2.4.3</td>
<td>Overall Understanding of Incident</td>
<td>228</td>
</tr>
<tr>
<td>9.3</td>
<td>Contribution to Theory and Research</td>
<td>228</td>
</tr>
<tr>
<td>9.4</td>
<td>Application of Research Findings</td>
<td>231</td>
</tr>
<tr>
<td>9.4.1</td>
<td>Recommendations for Policy and Practice</td>
<td>231</td>
</tr>
<tr>
<td>9.5</td>
<td>Strengths and Limitations</td>
<td>235</td>
</tr>
<tr>
<td>9.6</td>
<td>Suggestions for Future Research</td>
<td>237</td>
</tr>
<tr>
<td>9.7</td>
<td>Concluding Remarks</td>
<td>238</td>
</tr>
</tbody>
</table>
9.1 General Thesis Discussion

The purpose of this chapter is to provide an overview of the issues raised in the three discussion sections from Chapters Six, Seven, and Eight and then integrate those research findings to reflect the overall result. Following that, the implications for policy and practice and the strengths and limitations of the research are presented.

9.2 Review of Findings

This entire thesis utilised several different methodological approaches and populations to achieve the overarching aim of identifying an interview procedure that would: (a) elicit the most amount of correct information from eyewitnesses to road incidents, (b) elicit the least amount of incorrect information, (c) take less time to administer, (d) not be confusing to the witnesses, or (e) the interviewing officers, and (f) was not problematic in the courtroom situation. A review of the findings follows.

9.2.1 Experimental Recall Task

Findings obtained from Study One indicated that the Tell All and Reinstate Context group of the CI produced equivalent recall to the Full CI group, which was significantly better than the Change Time and Change Perspective group and the control group. In addition, the Tell All cue was identified to elicit significantly more information than the Free Recall phase of the interview indicating that explicitly telling the witnesses to ‘tell all that they could remember’ resulted in more details being recalled than simply asking the witnesses to report ‘what happened’. Further, the Tell All and Reinstate Context truncated group took less time to administer, did not produce an increase in incorrect information, nor confabulation. Also, this truncated interview protocol did not produce an increase in confusion. Thus it has
been demonstrated that this more parsimonious, time efficient and effective interview procedure has explicit value to the professionals who interview witnesses.

Furthermore, in the experimental study, the modified group which included Change Perspective obtained the least amount of correct information and the most amount of incorrect information. This result is consistent with that of Kebbell et al. (1999) which found that the Change Perspective mnemonic was the least useful of the CI cues. Additionally, the results from the Change Perspective mnemonic align with statements by Boon and Noon (1994) which called into doubt the usefulness of this cue as a productive component of the CI.

9.2.2 Exploration of Witness Perceptions

Study Two examined the witnesses’ perspectives and found that overall there were no significant differences in the witnesses’ perceptions concerning the interviewers’ behaviours. Content analysis demonstrated that in response to the written questions, the witnesses did report more confusion with the use of particular mnemonics.

In terms of the specific mnemonics, 84% of the comments about the Change Perspective mnemonic obtained were negative. The negative comments reflected either confusion with the instruction, or an awareness that they would not be able to accurately tell the officer anything from another view. The Tell All cue received only positive comments. In addition, the Reinstate Context cue received no negative comments suggesting an overall approval of the use of these cues. Further, the Change Time mnemonic obtained a similar number of positive and negative comments, indicating that an almost equal number of respondents found the mnemonic either helpful or confusing.
The witnesses’ responses to the questionnaire indicated that they were overwhelmingly approving of the rapport building techniques that the interviewers used to make the witnesses feel comfortable. The witness statements indicated that while they disliked being asked the same question repeatedly, they actually wanted more probing questions throughout the interview, which could be seen to be representative of an authentic field interview. Witnesses also mentioned the possible benefits of using props, or drawing the scene to facilitate recall.

Data obtained from Study Two also indicated that the witnesses were underconfident in the accuracy of their recall answers. This lack of confidence may be due to the complexity of the video and the speed with which the depicted event unfolded. However, in the witnesses’ subjective reports, they significantly overestimated their completeness of recall, demonstrating that witnesses are overconfident in how much information, out of the total amount available, that they provide to the interviewer.

9.2.3 Interview Procedures of the QPS AIS

The Queensland Police Service Accident Investigation Squad provided substantial information regarding how they currently conduct interviews with witnesses. The findings indicated that while the officers were not trained in CI mnemonics, they did use interview components which are recommended by the CI protocol. The officers indicated that building rapport is an important part of interviewing and is used often. They described using variations of the Reinstate Context and Change Time techniques that are included in the CI. However, the officers did not agree with the use of the Change Perspective mnemonic, nor the explicit nature of the Tell All cue.

The officers were also aware of interviewing behaviours which have a negative impact on accurate eyewitness testimony used in the judicial system. For
example, the officers responded that they made efforts to avoid engaging in leading questions, eliciting hearsay, and interruptions. The officers indicated that while they acknowledged that witnesses are not always correct, they placed a great emphasis on obtaining thorough witness statements, so that a complete and accurate description of the event was obtained.

9.2.4 Integration of Findings

The purpose of the thesis was to develop a methodology that would identify positive and negative implications of an eyewitness interview procedure from an experimental viewpoint, a witness viewpoint and an officer viewpoint. The rationale underlying this purpose was to identify recommendations that could be made in consideration of the needs of different participants in an interview situation. Essentially, a parsimonious procedure that is effective and efficient was the research goal. The following conclusions are made with reference to the findings and their implications from all three studies.

A matrix follows which illustrates the inclusion or omission of different interview protocols by the separate groups, (see Table 9.1). The most salient finding from the matrix of interview protocols is that the CI recommendations set the benchmark and the experienced QPS AIS officers engage in some CI recommended protocols than are evident in the QPS training manuals. This has training implications, in that the QPS are not utilising skills that are recommended by research and being used by their experienced QPS AIS staff (as stated in the focus group and to some extent observed in the case study). The QPS could train many more officers in these skills.

Additionally, the matrix highlights protocols that the witnesses indicated were beneficial to helping them remember more. Upon examination of the matrix, it
becomes evident that several protocols received mostly positive indicators from the experimental study, and the witnesses’ perspectives, such as rapport building, Reinstate Context, the use of props, and introductions. Alternatively, protocols such as Change Perspective received mostly negative comments.

Table 9.1

Matrix of Identified Protocols

<table>
<thead>
<tr>
<th>CI protocol</th>
<th>Recall Task</th>
<th>Witness Perceptions</th>
<th>QPS Training Manuals</th>
<th>Police focus group</th>
<th>Police case study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rapport Building</td>
<td>X</td>
<td>X</td>
<td>H</td>
<td>I</td>
<td>X</td>
</tr>
<tr>
<td>Transfer Control</td>
<td>X</td>
<td>X</td>
<td>I</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Introductions</td>
<td>X</td>
<td>X</td>
<td>I</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Closure</td>
<td>O</td>
<td>X</td>
<td>I</td>
<td>O</td>
<td>I</td>
</tr>
<tr>
<td>Tell All</td>
<td>X</td>
<td>H</td>
<td>H</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Reinstate Context</td>
<td>X</td>
<td>H</td>
<td>H</td>
<td>O</td>
<td>X</td>
</tr>
<tr>
<td>Change Time</td>
<td>X</td>
<td>H</td>
<td>H</td>
<td>O</td>
<td>X</td>
</tr>
<tr>
<td>Change Perspective</td>
<td>X</td>
<td>U</td>
<td>U</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Matrix</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>X</td>
</tr>
<tr>
<td>Timeline</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>X</td>
</tr>
<tr>
<td>Use of Props</td>
<td>X</td>
<td>O</td>
<td>H</td>
<td>O</td>
<td>X</td>
</tr>
<tr>
<td>Draw the Scene</td>
<td>X</td>
<td>O</td>
<td>H</td>
<td>O</td>
<td>X</td>
</tr>
<tr>
<td>6WH Questions</td>
<td>O</td>
<td>I</td>
<td>H</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Avoid Jargon</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>X</td>
</tr>
</tbody>
</table>

Note: X = included; O = excluded/not mentioned; I = inferred; H = helpful; U = unhelpful.

9.2.4.1 Mnemonics

The truncated version of the CI which contained the Tell All and Reinstate Context mnemonics was found to be an efficient and effective interview procedure in the experimental study. In addition, the comments received about these cues from the
witnesses indicated that there were no negative perceptions on behalf of the witnesses. The police indicated that they may not like the specific quotation concerning the Tell All mnemonic, but were actively already using the Reinstate Context cue.

The research demonstrated, however, that Change Perspective is not a useful mnemonic for road incidents. As demonstrated by the three studies, the Change Perspective cue, does not benefit increases in accuracy (Study One), the majority of the comments by witnesses were negative (Study Two), and police indicated they would not use the cue due to its inadmissibility in court (Study Three, Phase Three). It could be argued that the cue confuses the witness, does not increase accuracy and police may disregard a large portion of the CI training because of the negative perceptions of particular cues, such as this one.

9.2.4.2 Communication Skills

Rapport was identified as being an important part of the interview process. The witnesses identified rapport as making them feel comfortable and therefore the witnesses had a feeling of wanting to help the interviewer as much as possible. The officers stated that they attempted to build rapport during each interview. The officers understood the practices that could be seen to be building rapport and while they were not specifically trained in rapport building, they could perceive the benefits of treating the witness with respect.

The interviewing officers allowed witnesses to use props, such as toy cars, maps, photos and plans of the scene, to help correctly report the events. The CI recommends these techniques for complex situations. Indeed, two participants in the content analysis (Study Two), made unprompted comments that indicated that they would have appreciated the opportunity to have drawn the scene from the road incident stimulus.
The officers were also aware of using jargonistic terms with the witnesses. They attempted to avoid police specific terminology, even avoiding the use of the word ‘witness’, because of the preconceived ideas that members of the public hold of being a ‘witness’. The officers were also wary of psychological terminology, such as ‘transfer control’, which without proper training or definition implies one is literally giving away control. Psychologists who wish to train officers should also avoid terminology which could prove detrimental to the underlying message being accepted.

9.2.4.3 Overall Understanding of Incident

Police officers identified a majority of the details contained in the video that they thought were important (Study One, Phase Two). It is interesting to note that these aspects did not solely identify culpability, but were instead a range of details which included what happened to each of the cars in the incident. The inclusion of these items indicates the police officers’ expectation that they would identify what happened prior to, during, and after the incident. When very important details were analysed across the four groups, the patterns remained the same and the differences between the groups were significant. As officers indicated in Study Three, Phase Three, most details are important in order to understand the timeline or matrix of events, prior to, during, and post the incident occurring.

9.3 Contribution to Theory and Research

This section outlines specific contributions to theory and research that can be extrapolated from the results. One of the main contributions the thesis makes toward research on interview procedures, is the inclusion of a methodology which can tap the witnesses’ perceptions, thereby clarifying the assumptions of previous researchers in the area. For example, researchers have found that the Change Perspective cue could
cause confusion for the witnesses, yet, these findings originated from surveys of police officers’ views of the mnemonics and not the witnesses’ views (Kebbell et al., 1999). Evidence is provided that the Change Perspective mnemonic does not adequately benefit the Cognitive Interview procedure from a witness perspective. The present study identified two main sources of confusion for the witnesses. Firstly, the witnesses did not understand the instruction and secondly, they did not find it helpful, as they recognised that they had not witnessed the scene from the ‘other’ perspective and doubted their ability to provide correct information.

It has been demonstrated that mentally changing perspective or orientation is difficult and often causes inaccuracies as participants attempt to spatially reorientate themselves (Wang & Simons, 1999). It is important to identify that mentally changing spatial orientation in order to guess what might have been seen, is fundamentally different to highlighting a novel memory cue for recalling previously encountered word lists, as was presented in the Anderson and Pichert (1978) study (see also Tulving & Thomson, 1982). Generalising these results, one could argue that information gained from the Change Perspective mnemonic could be inaccurate, not due solely to the witnesses not actually experiencing the event from that perspective, but due to the participants’ difficulty in accurately identifying spatial objects from an imagined perspective.

Many researchers are still espousing the use of the Change Perspective mnemonic and its operationalisation of the varied retrieval theory (see Milne & Bull, 2000). It is recommended that the use of the Change Perspective mnemonic be limited, as it does not appear to operationalise the varied retrieval theory adequately. It seems to confuse the witness, does not increase accuracy and police may disregard a
The inclusion of the expert commentary by the QPS AIS officers also contributes to the body of research concerning interviewing. While officers have been the subject of interest in previous research, the use of officers as a population has been limited to engaging them in training in interviewing, having field interviews examined, or surveying officers’ perceptions about interviewing. The research herein is original, in that the opportunity to have the officers participate in a focus group and case study enabled the researcher to distinguish what the officers were currently doing with regard to interviewing witnesses and what they would need to do to meet research expectations. In this way, the researcher was able to identify the needs of the officers rather than creating a protocol that assumed what the officer’s standards and needs were.

The inclusion of the study that asked officers to identify forensically relevant details in a stimulus for later comparison against witness recall, is also a novel contribution of the present research. Prior psychological research has not utilised experienced law enforcement personnel to identify details important to a police investigation. The thesis findings indicate that the officers thought that more items were important than may have been expected, if the assumption was that officers simply need to isolate the cause and culpable persons involved in the incident.

An additional contribution to theory is the research conducted on report option and the findings that decreasing the response criterion by explicitly telling witnesses to tell all they could remember even if they did not think it was important, substantially increased the amount of information gained compared to asking ‘what happened’. Eliciting more information with this cue did not lead to an increase of
incorrect information when compared to the Free Recall group, without a caveat on response demands, contrary to predictions.

9.4 Application of Research Findings

Professional interviewers interviewing cooperative witnesses need a set of guidelines which are parsimonious and effective at helping them to obtain the most accurate information from witnesses. The identified parsimonious approach is relevant when the interview procedures are used in real world contexts. When experimental findings are brought to the practical field, as in this applied setting, the recommendations stemming from the findings must take into account the usefulness of the protocols when real world issues such as funding, time, and practicality, are considered. These findings can be applied to law enforcement officers, insurance claim officers and other professionals who interview cooperative witnesses.

9.4.1 Recommendations for Policy and Practice

It is recommended that formal witness interviewing guidelines be introduced across law enforcement. These guidelines should seek to integrate skills and techniques supported by empirical evidence, with those skills and techniques currently used in the field by investigative officers. This research has found, overall that the QPS AIS officers had selectively chosen aspects of existing guidelines (e.g., QPS Training Manuals) to implement, including 6W-H questioning, and avoiding the use of suggestive questions. This research has also shown that QPS AIS officers have adopted interviewing techniques (e.g., utilising a timeline or matrix) as well as communication skills and mnemonics similar to some aspects of the CI (e.g., rapport building and reinstate context) which are not formalized in official training guidelines.
An important theme however, is that if these interview skills are being used by experienced officers, but not included in the training manuals, new officers will need further training. Information concerning interviewing procedures should be included in the training manuals and formalised if it is to aid all officers and give the QPS an official witness interviewing training program.

The QPS AIS group demonstrated field experience using some aspects of the CI in their interviewing techniques. It could be advantageous for all police officers to be trained, as the present research has demonstrated that these highly experienced QPS AIS officers were using techniques representing some of the CI components. Specifically officers in this study described using a form of a reinstate context process, finding it valuable for eliciting accurate recall from witnesses that was admissible in court, despite never having received explicit training in these techniques. It is therefore recommended that the empirical findings from this research supporting a truncated CI interview procedure be used to supplement field experience of effective techniques to create new formal training guidelines which can then be further tested in an applied setting. This version of the CI was shown in the present research to elicit similar amounts of correct and accurate information to a Full CI, but takes much less time to train and administer and does not appear to be confusing for the officers or the witnesses. It is recommended that officers be trained in the truncated version of the CI, which includes communication skills and the memory enhancing cues - Tell All and Reinstate Context. It is also recommended that the training should include the rationale behind each of these techniques, including why they are useful and how they aid witness retrieval.

It is additionally recommended that communication skills be included in the formal training guidelines of the truncated version of the CI. These skills should
include building rapport, closure, empowering the witness, the reciprocal effect of being pleasant to someone, and explicit training on avoiding negative behaviours. Officers should be trained in communication skills, in a way that is easy to learn and understand.

In terms of questioning, several recommendations are made that would be beneficial to an investigative interviewing training program. Firstly, the 6W-H questioning techniques can be aided by the use of judicious probing questions. Participants’ responses to the questionnaires in Study Two indicated that probing questions were appreciated and judged helpful when they related to specific information already given rather than general “anything more?” style questioning.

Findings from Study Three regarding current police behaviours indicate that most of these QPS AIS officers create a timeline or matrix and expected that they would be able to determine what happened to the car, person and environment, prior to, during and directly following the incident. Although creating a matrix was not formal policy and examination of the training manuals did not identify this technique, it did appear to be a useful and relatively simple technique for officers to utilise to ensure that they identified all of the factors concerning the incident.

In an effort to make recommendations that are not complex or confusing, it was evident from the focus groups that the officers utilized a ‘five senses’ technique to avoid contaminated evidence such as hearsay. It is therefore recommended that officers are aware of and trained in, the relatively simple technique of asking witnesses to report what they experienced personally with their five senses. While the matrix and ‘five senses’ techniques were not tested experimentally, officers indicated their usefulness in the questioning phase of interviews and it would be an important research direction to empirically test the benefits of these procedures. Indeed, shifting
perspective from one sense to another, in an expansion of the five senses technique, may be a valid way to operationalise the “Change Perspective” mnemonic.

QPS AIS officers also stated that they avoided interviewing behaviours that have been shown to be detrimental to the recall of accurate information such as leading questions, interruptions and the use of jargon. However, avoiding these behaviours was not explicitly apparent in the training manuals. Formal training can reinforce the importance of avoiding negative interview styles.

It is also recommended that researchers and trainers should avoid psychological terminology, which may alienate the officers and the witnesses and limit the acceptance of valid interview techniques such as ‘transfer control’. For example, transfer control was interpreted negatively by the police officers because of the implications inherent in the terminology that officers would literally be handing over control of the interview. However, the officers seemed accepting of the ‘empower the witness’ terminology; which is easier to understand, a term used more by the general public, less controversial for the officers and has a positive connotation.

In summary, formal training guidelines could formalize, explicitly, some positive behaviours the officers currently use and introduce the truncated CI containing TA and RC. These guidelines could also emphasise questioning skills such as probing and avoiding negative interview behaviours to create a more effective interviewing protocol for gaining forensically relevant information from road incident witnesses.
9.5 Strengths and Limitations

There are a number of strengths of this research. The most salient is the inclusion of a series of methodological approaches and a range of populations to identify an interview procedure that experimentally produces the most accurate information, is seen to be helpful by the witnesses, and would be useful to the police officers, for whom its use is intended. More specifically, the strengths can be found in the applied studies, where professionals who interview witnesses day to day were invited, as an expert sample, to give evidence on what they do and what they perceive to be beneficial or detrimental to evidence gained during an interview. Also, eliciting feedback from the witnesses regarding their perceptions of the interview process provided a depth of understanding of the experimental findings which is not readily available when simply examining the quantitative recall scores.

A limitation of the research is that only officers from the QPS AIS were involved in this research. These officers were selected because they were experts in interviewing witnesses to road incidents. However, a broader selection of general officers may have produced different results. For example, an officer performing general duties may feel that they have less time to conduct an interview than officers from the QPS AIS. Accident Investigation Squad members are also an experienced team and may have participated in more previous training than general duty officers (or officers of lower rank) possibly inflating the positive effects of what the officers are already doing. In addition, officers from other states of Australia may be exposed to different training programs from the Queensland officers.

The use of self report data for the police officers’ questionnaire and focus group should also be mentioned as a possible limitation of the research. Self report data has been found to be somewhat inaccurate, as participants’ responses may be
influenced by an inability to recall behaviours accurately (Shaughnessy et al., 2000). Officers also may have been biased toward answering positively because they wanted to be seen to be engaging in positive behaviours (Neuman, 1997). However, the inclusion of the questionnaire provided an important component in identifying the officers’ perceptions’ of witnesses’ relative importance to a police investigation.

The population used as witnesses for the experimental study was students. Although this population is often seen as a convenience sample (Blaikie, 2000), the use of students as witnesses reflected the participants used in previous research. In addition, the interviewers used in this research were post-graduate or final year Psychology students rather than professional interviewers. The time constraints and availability of professional interviewers precluded them from being used as interviewers in this research.

The use of a road incident dramatization on video was used as the stimulus in Study One, rather than a ‘real life’ incident, due to the ethical and practical obstacles which are inherent in organizing a ‘real’ road incident. Although this could be said to limit generalisability to laboratory settings, previous research in this field has often used video stimuli to reflect actual incidents. Additionally, the use of the video had positive implications, in that the events contained in the video could be objectively ascertained. The experimental stage of this research was developed in order to control for extraneous variables, such that findings could be said to be due to differences in interview procedure and not confounding variables found in field settings.

Another limitation is that the case study was a single observed interview of a ‘real world’ incident. Therefore, the accuracy of the witness’s recall of events cannot be confirmed. This makes conclusions based on this interview more generalized. It is
possible to identify behaviours and questions made by the interviewer and witness; however it is not possible to determine if answers to these questions were accurate.

9.6 Suggestions for Future Research

The main suggestions for future research are derived from the limitations in this thesis. One suggestion is that officers from different ranks and roles be given the opportunity to voice their current behaviours and needs in a forum, such as was demonstrated in this study with the focus group. The officers appeared keen to have their thoughts heard and recognised, as research from academia tends to determine officers’ needs from experimental studies in controlled environments. It seems flawed to arbitrarily determine what officers need and proceed to develop and train those techniques without prior consultation with the people who will be using the techniques in the field. As identified with Action Research, the most advantageous way to obtain cooperation from groups is to involve them in the process of the development of the end product, in this case, an interview procedure.

It would also be advantageous to examine the officers’ actual behaviours in witness interviews in more detail, to expand on the questionnaire and single case study findings. It could be suggested that future research expands on the case study design, either through observing witness interviews or analyzing witness interview transcripts.

Populations other than a student sample could be used in future research to increase the reliability of the findings identified with the experimental research. Additionally, it would be advantageous for professional interviewers to be trained in the recommended suggestions and investigated to determine whether their skill levels increased, and therefore if the witnesses’ recall is improved.
In addition, it would be useful to identify different ways to operationalise the varied retrieval component of the Cognitive Interview. It may be that ‘Change Perspective’ operationalised as changing the focus from one of the five senses to another could aid recall. For example, asking witnesses to shift from what they saw to what they heard could gain more information. In this example, the change in perspective is occurring within the bounds of the witnesses’ personal knowledge of the event and not from attempting to have the witness speculate on what they did not personally experience.

9.7 Concluding Remarks

This research has contributed to the overall body of knowledge concerning investigative interviewing, notably by engaging the witnesses and the police officers’ insights into their perceptions of interviewing protocols. Further, this research has utilised an applied approach, as recommended by Action Research to engage and encourage the participation of police officers in the development of any recommendations concerning interview procedures. It is important to bridge the gap between research, academia and application, such that the individuals who are to use the interview protocols are involved in the development process. The enrichment of research with practical relevance improves the probability that the interview protocols would be accepted by the groups who are destined to use it.

The acceptance and use of beneficial interview procedures for the interviewing of cooperative witnesses has positive implications for the forensic arena and the wider community. The utilisation of formal interview protocols can enable the forensic community to have greater confidence in both the interview skills of officers and the resultant witness testimony. In order to benefit the larger community, it is imperative
that psychologists and police continue to work together to produce the most efficient and most valuable techniques for acquiring information from eyewitnesses. These recommendations, as outlined in Section 9.3.1, regarding investigative interviewing should be implemented in police departments, in order to standardize the behaviours and skills required of the officers when interviewing eyewitnesses.
References


http://psy.ucsd.edu/ebbesen/confidence.htm


Brisbane: QPS.


Appendix A
Witnesses Consent Form
An Evaluation of the Cognitive Interview Procedure in Investigative Interviewing

This study is being conducted as an experimental research project for my PhD degree in psychology. The purpose of this research project is to examine the influence of interview procedure on responses to investigative interviews. Participants will be asked to view a video of a road incident and then be interviewed using typical interview techniques. The interviews will be audiotaped and replayed only for the purpose of transcribing. You will also be asked to complete a questionnaire. It is anticipated that the viewing of the video, the initial interview and questionnaire will take approximately one hour of your time.

It is anticipated that this study will provide results concerning useful interview strategies for police and other forensic uses and also identify cognitive strategies and techniques. The findings should enable police training and other forensic populations (lawyers and insurance companies) to gain better and more complete information from witnesses to road accidents.

Participation in this project is voluntary and you retain the right to withdraw at any time without comment or penalty to your grades. The results of this study are strictly confidential and there will be no public reporting of the participants by name. No person will be personally identified in the report following the project. Only the researcher will have access to the data.

If participants are caused distress due to taking part in the research, the School of Psychology and Counselling will provide counselling, additionally, the University’s Counselling Service is available. Details about the purpose of the study will be made available to the participants after the study. Feedback regarding the results of the study will be provided following the conclusion of the study.

Further Information:
If you have any queries concerning the project, I can be contacted on 3864-4685, alternatively, my supervisor, can be contacted on 3864-4707.

If you wish to raise any concerns about the ethical conduct of this research, you may phone the secretary of the QUT Human Research Ethics Committee on 3864-2902.
Informed Consent Form for Participation in Experimental Research

An Evaluation of the Cognitive Interview Procedure in Investigative Interviewing

I have read the previous statement and give consent to participate in this study, and have my responses used for research purposes.

NAME ..............................................................................................................................................

SIGNATURE ......................................................................................................................................

DATE ..../..../.....

Thank you for your time,

BSS(Psych)(Hons)
Researcher
Appendix B
Script for Researcher
“I am going to tell you what you will be doing and what is going to happen today. I am going to show you a video of a traffic incident; it is quite fast and complex. When the tape begins there is about 5 seconds of black and then the footage starts. The footage itself runs for about 30 seconds and a lot happens in that time, so you will need to pay attention. You do not need to focus on the traffic travelling in the opposite direction (outbound), just concentrate on the traffic coming towards you (inbound lanes). The viewpoint is taken from what appears to be an overpass, so you can ‘position’ yourself as if you were standing there when the incident occurred.

After watching the video, I will ask you to move to another room where there are trained interviewers who will interview you in an eyewitness style, as if you had actually seen the incident live and needed to report what happened. Are you ready to begin?”
Appendix C
Confidentiality Agreement for Interviewers
You are participating in an investigative interview training program, as part of a PhD project being conducted by ___________ under the supervision of ____________.

During the course of this program you will be instructed in the Cognitive Interview style of interviewing. Following the completion of the course and some investigative interviewing you will be presented with a Certificate of Completion. You may be required to participate fully in interviewing of witnesses.

The project, which you will be participating in, is an experimental design. Therefore, some participants will be given slightly different information than others. For the protection of the validity of this experiment you are not to discuss the material presented to you with other interviewers or other students at any time. Any information not presented to you at the beginning of the training and interview process will be imparted to you at a later date, when possibility of contamination of the groups and therefore of the experimental design has passed.

You may be eligible for registration hours with the Psychologists Board of Queensland. To be eligible for registration hours you must already be provisionally registered with the Psychologists Board of Queensland. If you are eligible for registration hours from the Board, you should contact Ms Helen Ross to organise the required paperwork for the Board.

You will be asked to complete a demographic sheet with contact details on it. You will be responsible for the witness interviews in terms of having the equipment ready, being on time and having writing implements.

Name:
Signature:
Date:
<table>
<thead>
<tr>
<th>Demographic Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name:</td>
</tr>
<tr>
<td>Phone number:</td>
</tr>
<tr>
<td>E-mail address:</td>
</tr>
</tbody>
</table>

1. Are you:
   - Male ......................................... 1
   - Female ...................................... 2

2. What age group are you in?
   - 18 – 24 years ....................... 1
   - 25 – 34 years ....................... 2
   - 35 – 44 years ....................... 3
   - 45 – 54 years ....................... 4
   - 55 years or over .................... 5

3. Are you a part-time or full-time student?
   - Part time ................................... 1
   - Full time ................................... 2
   - Other ........................................ 3

4. What year of your degree are you currently completing?
   - Third year ................................. 1
   - Fourth year ............................... 2
   - Masters ..................................... 3
   - Bridging course ......................... 4

5. Are you currently employed?
   - No............................................... 1
   - Yes, Part time/Casual work .......... 2
   - Yes, Full time ............................. 3

6. Are you currently completing a Psychology degree?
   - Yes ........................................... 1
   - No............................................... 2

6a. If no, which degree are you completing?
   ______________________________

7. Please tick the boxes to indicate your availability to interview witnesses.
   - Tuesday’s in May 9am - 12pm  
   - Thursday’s in May 1pm - 4pm  

8. Would you be interested in being contacted again in the future for further interviewing?
   - Yes  
   - No
Appendix D
Recall Sheets for Groups
**RECALL SHEET FOR GROUP 1:TCI**

- Introductions
- Mention tape recorder
- Record recall
- TIME BEGIN ____________________

“Thank you for participating in this interview. I understand that you have just seen a video of a traffic incident. I have not seen the video myself. Now, I am going to ask you some questions about what you have just seen. This interview will be audiotaped for future reference and transcribing.”

“You witnessed a video of a traffic incident today. I want you to tell me everything you can, even the things that you think are not important, and even if you cannot remember something completely. Everything that comes to your mind tell me in your own time and pace. Now what did you see in the video, and remember to tell me everything.”

Record information here:

---

“I would like to ask you to put yourself back to the same place where you saw the video of the traffic incident. Some people even find it helpful to close their eyes to get a good picture. Create a picture in your mind of the road. Think of where you were in position to watch the accident. How were you feeling at that time? What could you see? Think of all the things that were going on. Think about all the objects on the road. Get a really good picture in your mind and then tell me everything you can remember without leaving anything out. All that pops into your mind, tell me.”

Record information here:
“Do you think you have anything else to add?”

Record information here:

- Begin returning to normality (non experiment topic)

“Thank you very much for your time. Now I would like you to complete this questionnaire about the interview. When you are finished you can take it back to Colette and she will put it in a sealed envelope.”

- TIME FINISHED _______________________________

  AUDIO TAPE COLOUR: NUMBER: INITIALS:
**RECALL SHEET FOR GROUP 2: MCI**

- Introductions
- Mention tape recorder
- Record recall

**TIME BEGIN ____________________**

“Thank you for participating in this interview. I understand that you have just seen a video of a traffic incident. I have not seen the video myself. Now, I am going to ask you some questions about what you have just seen. This interview will be audiotaped for future reference and transcribing.”

“You witnessed a video of a traffic incident today. I want you to tell me everything you can, even the things that you think are not important, and even if you cannot remember something completely. Everything that comes to your mind tell me in your own time and pace. Now what did you see in the video, and remember to tell me everything.”

Record information here:

---

“I would like to ask you to put yourself back to the same place where you saw the video of the traffic incident. Some people even find it helpful to close their eyes to get a good picture. Create a picture in your mind of the road. Think of where you were in position to watch the accident. How were you feeling at that time? What could you see? Think of all the things that were going on. Think about all the objects on the road. Get a really good picture in your mind and then tell me everything you can remember without leaving anything out. All that pops into your mind, tell me.”

Record information here:
“Do you think you have anything else to add?”

Record information here:

• Begin returning to normality (non experiment topic)

“Thank you very much for your time. Now I would like you to complete this questionnaire about the interview. When you are finished you can take it back to Colette and she will put it in a sealed envelope.”

• TIME FINISHED ______________________________

AUDIO TAPE COLOUR: NUMBER: INITIALS:
RECALL SHEET FOR GROUP 3: FCI

- Introductions
- Mention tape recorder
- Record recall
- TIME BEGIN __________________________

“Thank you for participating in this interview. I understand that you have just seen a video of a traffic incident. I have not seen the video myself. Now, I am going to ask you some questions about the video you just saw. This interview will be audiotaped for future reference and transcribing.”

“You witnessed a video of a traffic incident today I want you to tell me everything you can, even the things that you think are not important, and even if you cannot remember something completely. Everything, which comes to your mind, tell me in your own time and pace. Now what did you see in the video and remember to tell me everything.”

Record information here:

“I would like to ask you to put yourself back to the same place where you saw the video of the accident. Some people find it helpful to close their eyes to get a really good picture. Create a picture in your mind of the road. Think of where you were in position to watch the accident. How were you feeling at that time? What could you see? Think of all the things that were going on. Think about all the objects on the road. Get a really good picture in your mind and then tell me everything you can remember without leaving anything out. All that pops into your mind, tell me.”

Record information here:
“We are going to try something, which sometimes helps people remember more. What I am going to ask you to do now is to tell me what happened, but this time backwards. It is not as hard as it sounds. OK, what was the very last thing you can remember happening? What happened just before that? What happened just before that? (Repeated until reach the beginning).”

Record information here:

“OK, we are going to try another technique which may help memory, but do not guess at information. Go through the event again and tell me any further information, which may have been witnessed by someone else at the scene, for example, pretend you were safely on the shoulder of the road, what would you have seen?”

Record information here:

“Do you think that you have anything else to add?”

Record information here:

- Begin returning to normality (non experiment topic)

“Thank you very much for your time. Now I would like you to complete this questionnaire, when you are done you take it back out to ____________ who will put it in a sealed envelope.”

- TIME FINISHED

| AUDIO TAPE COLOUR: | NUMBER: | INITIALS: |
**RECALL SHEET FOR GROUP 4: SI**

- Introductions
- Mention tape recorder
- Record recall
- TIME BEGIN ___________________

“Thank you for participating in this interview. I understand that you have just seen a video of a traffic incident. I have not seen the video myself. Now, I am going to ask you some questions about the traffic incident you saw on the video. This interview will be audiotaped for future reference and transcribing.”

“I would like you to tell me what you saw in the video you just witnessed.”

Record information here


“Do you think you have anything else to add?”

Record information here:


- Begin returning to normality (non experiment topic)

“Thank you very much for your time. Now I would like you to complete this questionnaire. When you are finished you can take it out to Colette and she will put it in a sealed envelope.”

- TIME FINISHED ______________________________

| AUDIO TAPE COLOUR: | NUMBER: | INITIALS: |
Appendix E
Coding Instructions for Video Details
You are being asked to view a video and note down all of the incidences that occur. The video is of a road accident. The details you name will be used to determine a list of all correct and true details that happen in the video for research purposes.

The video is quite fast and complex. The video you are provided with has a fast version and a slow-motion version for your viewing. You may watch the video as many times as you like until you feel confident that you have noted down everything that has happened in the video. It is expected that you will need to stop/rewind/play it or play it frame by frame many times to perceive all of the details.

Please follow the instructions below.

- Firstly, view the video a few times to become familiar with the cars, the actions, the timing and the environmental details.
- Begin to make notes on everything that happens on the overview notes page below.
- After you feel confident that you have gotten a clear overview of the incidences in the video clip, you may open the envelope and follow the instructions on the questionnaire.
- You will be asked to list all of the details that occur and then answer some basic questions about the video. Thank you for your participation.
After you have watched the video several times to become familiar with the overview of the content, you may begin the survey.

Go to the next page and start noting in as detailed a way as possible, the cars, lanes, actions, and everything else that happens in the video.

- You may find it easier to focus on the initial accident and note down everything that happens, then move to the second accident and note down everything about that.
- You will also be asked to note down incidental items, such as cars that were not involved in either accident, their colour, lane, and action.
- You will need to be consistent when naming lanes and therefore, there is a table for you to refer to which stipulates which lane is which.

You should be looking to note down everything that happens in the video.

Following that, please complete the Environmental details form at the back of the survey.
Video Details Survey

You are now at the section of the survey, where you will note down and detail each and every event in the video clip. Please read the following notes and make notes on the paper provided. If you need more paper, feel free to use additional pages.

NOTES TO KEEP IN MIND

- No comment or details need to be made about the traffic travelling in the outbound direction.
- Please see the table and use it as a guide when naming or identifying lanes. The inbound lanes will be called, inbound inside (II), inbound middle (IM), inbound outside (IO) and inbound shoulder (IS) starting from the barrier.
- You may prefer to identify the items in the video by organising the first accident in full and then making comment on the second accident and in addition to that, any incidental items that are contained in the video.
- Please be as detailed as possible, for example, the ‘cars actions’ should include, which lane the car was in, which lane it moved to, which car it hit (or which car hit it), what the car did then (was it hit again, did it ‘spin’, did glass smash, etc.)
- Categories to remember:
  - Cars actions
  - Cars positions
  - Cars lanes
  - Cars colours and make (or size)
  - Sequence of events
  - Timing of events
  - Causation (may link with sequence and timing)
  - People
  - Environmental details

<table>
<thead>
<tr>
<th>SHOULDER</th>
<th>OUTSIDE</th>
<th>MIDDLE</th>
<th>INSIDE</th>
<th>BARRIER</th>
<th>INSIDE</th>
<th>MIDDLE</th>
<th>OUTSIDE</th>
<th>SHOULDER</th>
</tr>
</thead>
<tbody>
<tr>
<td>OS</td>
<td>OO</td>
<td>OM</td>
<td>OI</td>
<td>B</td>
<td>II</td>
<td>IM</td>
<td>IO</td>
<td>IS</td>
</tr>
</tbody>
</table>

OUTBOUND    INBOUND
Once you are confident you have written down all of the details you can, you can move on to the Environmental Details form. Please do not change any previous answers in response to the following questions.
**ENVIRONMENTAL DETAILS**

For the following questions, please comment briefly using your own words. Then circle answers that you agree could be a correct description of the event. You may circle as many items as you like.

### 1. Please comment on the conditions of the road.

Wet  Damp  Misty  
Slick  Icy  Foggy  
Dry  Congested  Dewy  
Clear  Oily  Other.....

### 2. Please comment on the weather conditions.

Raining  Sprinkling  Foggy  
Dry  Cloudy  Spitting  
Clear  Drizzle  Windy  
Storms  Clearing  Sunny  Other.....

### 3. Please comment on the time of day.

Early morning  Afternoon  Evening  
Mid morning  Late afternoon  Night-time  
Midday  Early evening  Day-time  Other.....

### 4. Please comment on the expected/inferred visibility.

Obstructed  Good visibility  Low visibility  
Foggy  Water spray  Medium visibility  Other.....
5. Please comment on the traffic.

<table>
<thead>
<tr>
<th>Slow moving</th>
<th>Merging</th>
<th>Speeding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Congested</td>
<td>“Traffic jam”</td>
<td>“Bumper to Bumper”</td>
</tr>
<tr>
<td>High speed</td>
<td>On speed limit</td>
<td>Heavy</td>
</tr>
<tr>
<td>Light</td>
<td>Moderate</td>
<td>Other…..</td>
</tr>
</tbody>
</table>

6. Please comment on set-up of road. (ie., How many lanes in each direction (both outbound and inbound), travel lanes and/or shoulder lanes, barriers and what type, etc.)

<table>
<thead>
<tr>
<th>6 lanes, 3 each way</th>
<th>Grassy barrier</th>
<th>Freeway</th>
</tr>
</thead>
<tbody>
<tr>
<td>8 lanes, 4 each way</td>
<td>Metal fencing barrier</td>
<td>Motorway</td>
</tr>
<tr>
<td>6 lanes + 2 shoulders</td>
<td>Concrete divider</td>
<td>Blockade</td>
</tr>
<tr>
<td>Highway</td>
<td>Island</td>
<td>Multi-lane</td>
</tr>
<tr>
<td>Other…..</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

7. How many cars were involved in the ‘first’ accident?

8. How many cars were involved in the ‘second’ accident?

9. How many cars were involved in the entire accident area (include cars that did not actually get hit but may have had to veer out of the way or stop quickly to avoid the accidents)?

10. How many cars were on the tape recording (including cars that were not involved in any way, ie., include even the first cars that went past before the accident started).

Once you are satisfied that you have identified all of the details in the video, please return the survey and the video to ____________ . Thank you for your assistance.
Appendix F
Master List of all Details Contained in the Video
# Master List of Details Contained in the Video

<table>
<thead>
<tr>
<th>Item #</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Inferred / Confabulation Total</td>
</tr>
<tr>
<td>1</td>
<td>Weather</td>
</tr>
<tr>
<td>2</td>
<td>Conditions of road</td>
</tr>
<tr>
<td>3</td>
<td>Road set - up (lanes)</td>
</tr>
<tr>
<td>4</td>
<td>Country scene</td>
</tr>
<tr>
<td>5</td>
<td>Overpass view</td>
</tr>
<tr>
<td>6</td>
<td>How many cars/trucks involved? Many</td>
</tr>
<tr>
<td>7</td>
<td>2 separate accidents/crashes</td>
</tr>
<tr>
<td>8</td>
<td>Accident 1 in IM</td>
</tr>
<tr>
<td>9</td>
<td>Accident 2 in II</td>
</tr>
<tr>
<td>10</td>
<td>Significant changing of lanes</td>
</tr>
<tr>
<td>11</td>
<td>Significant skidding &amp; braking</td>
</tr>
<tr>
<td>12</td>
<td>Spinning cars/glass in Accident 2</td>
</tr>
<tr>
<td>13</td>
<td>A large white truck (3.5t?)</td>
</tr>
<tr>
<td>14</td>
<td>In the IM lane</td>
</tr>
<tr>
<td>15</td>
<td>Skews off/goes to change lanes</td>
</tr>
<tr>
<td>16</td>
<td>Into the IO lane</td>
</tr>
<tr>
<td>17</td>
<td>Clips/swipes/slams into</td>
</tr>
<tr>
<td>18</td>
<td>The back of the red station wagon</td>
</tr>
<tr>
<td>19</td>
<td>(The red wagon) cannons into/is sent into/hits</td>
</tr>
<tr>
<td>20</td>
<td>The rear of /the back of the small red car (sedan)</td>
</tr>
<tr>
<td>21</td>
<td>In front of it/ in the same lane</td>
</tr>
<tr>
<td>22</td>
<td>(small sedan red car) cannons into/pushes</td>
</tr>
<tr>
<td>23</td>
<td>The silver/grey car/station wagon: Volvo</td>
</tr>
<tr>
<td>24</td>
<td>In front of it</td>
</tr>
<tr>
<td>25</td>
<td>The red car crunches up</td>
</tr>
<tr>
<td>26</td>
<td>All three vehicles stay in IM lane</td>
</tr>
<tr>
<td>27</td>
<td>(these cars) are nudged/hit by</td>
</tr>
<tr>
<td>28</td>
<td>A black car</td>
</tr>
<tr>
<td>29</td>
<td>Which rear ends</td>
</tr>
<tr>
<td>30</td>
<td>The original station wagon</td>
</tr>
<tr>
<td>31</td>
<td>Truck</td>
</tr>
<tr>
<td>32</td>
<td>In IO lane</td>
</tr>
<tr>
<td>33</td>
<td>Merges</td>
</tr>
<tr>
<td>34</td>
<td>To IS lane</td>
</tr>
<tr>
<td>35</td>
<td>Silver sedan</td>
</tr>
<tr>
<td>36</td>
<td>Goes from IM to IS</td>
</tr>
<tr>
<td>37</td>
<td>Original white truck going to IO</td>
</tr>
<tr>
<td>38</td>
<td>Forces a B-double loaded (large truck)with cars</td>
</tr>
<tr>
<td>39</td>
<td>Off the road</td>
</tr>
<tr>
<td>40</td>
<td>And onto IS</td>
</tr>
<tr>
<td>41</td>
<td>Another large truck</td>
</tr>
<tr>
<td>42</td>
<td>Following (the B-double loaded with cars)</td>
</tr>
<tr>
<td>43</td>
<td>Also veers off</td>
</tr>
<tr>
<td>44</td>
<td>To the IS</td>
</tr>
<tr>
<td>45</td>
<td>(B-double loaded) eventually goes around back to the IO</td>
</tr>
<tr>
<td>46</td>
<td>In the II lane</td>
</tr>
<tr>
<td>47</td>
<td>Simultaneously with accident one</td>
</tr>
<tr>
<td>48</td>
<td>A black car/sedan</td>
</tr>
<tr>
<td>49</td>
<td>Brakes suddenly/does not move on</td>
</tr>
</tbody>
</table>
50 Is rear ended by/hit by
51 A white sedan
52 Which is rear ended by
53 A dark maroon / red car
54 Cars are crunched up badly
55 There is glass spraying/debris
56 Silver sedan goes from
57 II to IM to IO (undamaged)
58 A black car
59 hits/runs into
60 The back of the maroon / red car
61 Cars spin out into IM lane
62 Blocking the IM lane
63 A Blue/black car
64 In IM
65 Hits the accident
66 Blue/black ute/4WD/car
67 Speeds
68 From II to IM to IS(undamaged)
69 Behind the (yellow mini)
70 Black car behind (IM)
71 Hits the accident
72 White car behind(IM)
73 Hits the accident
74 Explosion of glass shattering/bits of vehicle fly into air/debris
75 Yellow mini
76 Stops dead
77 In IO
78 (mini) moves to IS
79 Driver
80 Steps out of
81 Small red car
82 Windshield wipers going on some cars
83 Wet road / Slippery
84 Congested/ Busy
85 Had rained/ Slippery
86 Raining / Drizzle
87 Afternoon
88 Mid morning
89 Water spray
90 Medium visibility
91 Obstructed
92 Foggy
93 Slow moving
94 Speeding
95 6 lanes (3 each way)
96 3 each way
97 Grassy barrier
98 Metal fencing
99 Barrier
100 Freeway
101 Four cars in first accident (3 + truck)
102 9 cars in second accident
103 19 – 23 all together in scene
104 26 – 32 cars all together (9 outside accident)
Appendix G
Police Ranking of Important Information
Ranking of details as to their importance in a police investigation

Thank you for participating in this research project. This activity requires you to watch the accompanying video in order to familiarise yourself with what occurs in the traffic incident. You may watch the tape as many times as you like. Following that, you will need to examine the details on the video details sheet and rank those individual details from ‘not at all important to the investigation’ to ‘crucial/extremely important to the investigation’. There are no right or wrong answers; you are the expert and we would like to know, in your opinion, which details are important to a police investigation of a road incident.

Please circle the number that corresponds to your ranking.

If you have any questions you can contact __________ at QUT on 3864-4691.

Key: IM: inbound middle lane, II: inbound inside lane, IO: inbound outside lane, IS: inbound shoulder (exit lane)
Please circle the number that matches the importance of each detail

<table>
<thead>
<tr>
<th>Details</th>
<th>Not Important At All</th>
<th>Of Little Importance</th>
<th>Relatively Important</th>
<th>Very Important</th>
<th>Crucial/Extremely Important</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Weather</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2 Conditions of road</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3 Road set-up (lanes)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4 Country scene</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5 Overpass view</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6 How many cars/trucks involved? Many</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>7 2 separate accidents/crashes</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>8 Accident 1 in IM</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>9 Accident 2 in II</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>10 Significant changing of lanes</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>11 Significant skidding &amp; braking</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>12 Spinning cars/glass in Accident 2</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>13 A large white truck (3.5 ton?)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>14 In the IM lane</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>15 Skews off/goes to change lanes</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>16 Into the IO lane</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>17 Clips/swipes/slams into</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>18 The back of the red station wagon</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>19 (The red wagon) cannons into/is sent into/hits</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>20 The rear of the back of the small red car (sedan)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>21 In front of it/in the same lane</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>22 (small sedan red car) cannons into/pushes</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>23 The silver/grey car/station wagon: Volvo</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>24 In front of it</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>25 The red car crunches up</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>26 All three vehicles stay in IM lane</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>27 (these cars) are nudged/hit by</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Item #</td>
<td>Details</td>
<td>Not Important At All</td>
<td>Of Little Importance</td>
<td>Relatively Important</td>
<td>Very Important</td>
</tr>
<tr>
<td>-------</td>
<td>--------------------------------------------------</td>
<td>----------------------</td>
<td>----------------------</td>
<td>----------------------</td>
<td>----------------</td>
</tr>
<tr>
<td>28</td>
<td>A black car</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>29</td>
<td>Which rear ends</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>30</td>
<td>The original station wagon</td>
<td>1</td>
<td>2</td>
<td>3</td>
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</tr>
<tr>
<td>31</td>
<td>Truck</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>32</td>
<td>In IO lane</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>33</td>
<td>Merges</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>34</td>
<td>To IS lane</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>35</td>
<td>Silver sedan</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>36</td>
<td>Goes from IM to IS</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>37</td>
<td>Original white truck going to IO</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>38</td>
<td>Forces a B-double loaded (large truck) with cars</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>39</td>
<td>Off the road</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>40</td>
<td>And onto IS</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>41</td>
<td>Another large truck</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>42</td>
<td>Following (the B-double loaded with cars)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>43</td>
<td>Also veers off</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>44</td>
<td>To the IS</td>
<td>1</td>
<td>2</td>
<td>3</td>
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<tr>
<td>45</td>
<td>(B-double loaded) eventually goes around back to the IO</td>
<td>1</td>
<td>2</td>
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<tr>
<td>46</td>
<td>In the II lane</td>
<td>1</td>
<td>2</td>
<td>3</td>
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<tr>
<td>47</td>
<td>Simultaneously with accident one</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>48</td>
<td>A black car/sedan</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>49</td>
<td>Brakes suddenly/does not move on</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>50</td>
<td>Is rear ended by hit by</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>51</td>
<td>A white sedan</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>52</td>
<td>Which is rear ended by</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>53</td>
<td>A dark maroon / red car</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Item #</td>
<td>Details</td>
<td>Not Important At All</td>
<td>Of Little Importance</td>
<td>Relatively Important</td>
<td>Very Important</td>
</tr>
<tr>
<td>-------</td>
<td>-------------------------------------------------------------------------</td>
<td>----------------------</td>
<td>----------------------</td>
<td>----------------------</td>
<td>----------------</td>
</tr>
<tr>
<td>54</td>
<td>Cars are crunched up badly</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>55</td>
<td>There is glass spraying/debris</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>56</td>
<td>Silver sedan goes from</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>57</td>
<td>Il to IM to IO (undamaged)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>58</td>
<td>A black car</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>59</td>
<td>hits/runs into</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
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<tr>
<td>60</td>
<td>The back of the maroon / red car</td>
<td>1</td>
<td>2</td>
<td>3</td>
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<tr>
<td>61</td>
<td>Cars spin out into IM lane</td>
<td>1</td>
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<tr>
<td>62</td>
<td>Blocking the IM lane</td>
<td>1</td>
<td>2</td>
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<td>4</td>
</tr>
<tr>
<td>63</td>
<td>A Blue/black car</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>64</td>
<td>In IM</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>65</td>
<td>Hits the accident</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>66</td>
<td>Blue/black ute/</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>67</td>
<td>Speeds</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>68</td>
<td>From Il to IM to IS (undamaged)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>69</td>
<td>Behind the (yellow mini)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>70</td>
<td>Black car behind (IM)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>71</td>
<td>Hits the accident</td>
<td>1</td>
<td>2</td>
<td>3</td>
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</tr>
<tr>
<td>72</td>
<td>White car behind (IM)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>73</td>
<td>Hits the accident</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>74</td>
<td>Explosion of glass shattering/bits of vehicle fly into air/debris</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>75</td>
<td>Yellow mini</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>76</td>
<td>Stops dead</td>
<td>1</td>
<td>2</td>
<td>3</td>
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<tr>
<td>77</td>
<td>In IO</td>
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<td>2</td>
<td>3</td>
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<tr>
<td>78</td>
<td>(Mini) moves to IS</td>
<td>1</td>
<td>2</td>
<td>3</td>
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<tr>
<td>79</td>
<td>Driver</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>80</td>
<td>Steps out of</td>
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<td>2</td>
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<td>Item #</td>
<td>Details</td>
<td>Not Important At All</td>
<td>Of Little Importance</td>
<td>Relatively Important</td>
<td>Very Important</td>
</tr>
<tr>
<td>-------</td>
<td>----------------------------------------------</td>
<td>----------------------</td>
<td>----------------------</td>
<td>----------------------</td>
<td>----------------</td>
</tr>
<tr>
<td>81</td>
<td>Small red car</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>82</td>
<td>Windshield wipers going on some cars</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>83</td>
<td>Wet road / Slippery</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>84</td>
<td>Congested/ Busy</td>
<td>1</td>
<td>2</td>
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<td>4</td>
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<td>85</td>
<td>Had rained/ Slippery</td>
<td>1</td>
<td>2</td>
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<tr>
<td>86</td>
<td>Raining / Drizzle</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
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<tr>
<td>87</td>
<td>Afternoon</td>
<td>1</td>
<td>2</td>
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</tr>
<tr>
<td>88</td>
<td>Mid morning</td>
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<tr>
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<td>Water spray</td>
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<td>Medium visibility</td>
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<td>2</td>
<td>3</td>
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</tr>
<tr>
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<td>Obstructed</td>
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<td>Foggy</td>
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<tr>
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<td>Slow moving</td>
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<tr>
<td>94</td>
<td>Speeding</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>95</td>
<td>6 lanes (3 each way)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>96</td>
<td>3 each way</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>97</td>
<td>Grassy barrier</td>
<td>1</td>
<td>2</td>
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<td>4</td>
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<tr>
<td>98</td>
<td>Metal fencing</td>
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<td>4</td>
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<td>Barrier</td>
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<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>100</td>
<td>Freeway</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>101</td>
<td>Four cars in first accident (3 + truck)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>102</td>
<td>9 cars in second accident</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>103</td>
<td>19 – 23 all together in scene</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>104</td>
<td>26 – 32 cars all together (9 outside accident)</td>
<td>1</td>
<td>2</td>
<td>3</td>
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</tbody>
</table>
Appendix H
Questionnaire for Witnesses
The purpose of this questionnaire is to gather information regarding the interview that you have just participated in. You will not be asked for your name or any other identifying information in this questionnaire. The person who interviewed you will not look at your answers. When the questionnaire is completed, it will be placed in an envelope to be sealed.

PART A

<table>
<thead>
<tr>
<th>Demographic Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>This first section of questions relates to general information about you. Please circle one answer for each question.</td>
</tr>
</tbody>
</table>

1. **Are you:**
   - Male ......................................... 1
   - Female ...................................... 2

2. **What age group are you in?**
   - Under 18 years ......................... 1
   - 18 – 24 years ............................ 2
   - 25 – 34 years ............................ 3
   - 35 – 44 years ............................ 4
   - 45 – 54 years ............................ 5
   - 55 years or over ....................... 6

3. **Are you a part-time or full-time student?**
   - Part time ................................... 1
   - Full time ................................... 2
   - Other ........................................ 3

4. **What is the highest level of education you have completed?**
   - Grade 10 or earlier ................. 1
   - Grade 12 ................................... 2
   - University bridging course ....... 3
   - University degree ..................... 4
   - Tafe .......................................... 5

5. **Are you currently employed?**
   - No ............................................. 1
   - Yes, Part time/Casual work ....... 2
   - Yes, Full time ........................... 3

6. **Do you identify yourself to be an Aboriginal or Torres Strait Islander?**
   - Yes ........................................... 1
   - No ............................................. 2

7. **Is English your first language?**
   - Yes ........................................... 1
   - No ............................................. 2

7a. **If no, what is your first language?**

8. **What faculty are you currently enrolled under?**
   - Arts.......................................... 1
   - Health...................................... 2
   - Built Environment & Engineering ................................................. 3
   - Business ......................... 4
   - Education ......................... 5
   - Information Technology ...... 6
   - Law .......................................... 7
   - Science ................................. 8
   - Creative Industries........... 9
A trained interviewer has just interviewed you about the details of a video of a traffic incident. Please take a minute to reflect on the interview, *what* was said and the *way* that you recalled information.

Think about the details you recalled and how easy or difficult it was to remember them. Then go on to answer questions about the interview.

Please be as honest and complete as possible and take as much time as necessary.

---

The following questions relate to the interview pace and the general understanding between the interviewer and the witness (yourself) in terms of *rapport*.

1. **Overall, how smoothly do you think the interview went?**
   
<table>
<thead>
<tr>
<th>Very poor</th>
<th>Poor</th>
<th>Average</th>
<th>Good</th>
<th>Very Good</th>
</tr>
</thead>
</table>

2. **In terms of getting information from witnesses about road accidents, would you say the interview length was ..........**
   
<table>
<thead>
<tr>
<th>Too short</th>
<th>Short</th>
<th>Average</th>
<th>Long</th>
<th>Too long</th>
</tr>
</thead>
</table>

3. **How skilled would you rate your interviewer at getting information from you about the video?**
   
<table>
<thead>
<tr>
<th>Very poor</th>
<th>Poor</th>
<th>Average</th>
<th>Good</th>
<th>Very Good</th>
</tr>
</thead>
</table>

4. **To what extent, did the interviewer spend sufficient time during the early parts of the interview, to make you feel relaxed?**
   
<table>
<thead>
<tr>
<th>Not at all</th>
<th>Slightly</th>
<th>Moderately</th>
<th>Very</th>
<th>Extremely</th>
</tr>
</thead>
</table>

5. **How did the interviewer make you feel?**
   
<table>
<thead>
<tr>
<th>Very stressed</th>
<th>Stressed</th>
<th>Average</th>
<th>Relaxed</th>
<th>Very Relaxed</th>
</tr>
</thead>
</table>

6. **Did any of the mannerisms or behaviour of the interviewer put you off?**

   Yes .................................................................................................................................................. 1
   No.................................................................................................................................................. 2

6a. **If yes, what were the mannerisms or behaviour that put you off?**

   ______________________________________________________________________________________
   ______________________________________________________________________________________
7. Were you impressed by any particular skills of the interviewer (ie., anything the interviewer said or did)?

Yes ..................................................... 1
No........................................................ 2

7a. If yes, what skills were you impressed by?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

8. Do you think there was anything that the interviewer could have done to get more information from you about what you saw?

Yes ..................................................... 1
No........................................................ 2

8a. If yes, what do you think could have helped the interviewer to get more information from you?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

During your interview, the interviewer used several techniques to help you to recall details from the video. The following questions refer to how helpful the instructions were in helping you to remember the traffic incident.

1. Was everything the interviewer said clear to you?

Yes .................................................. 1
No...................................................... 2

1a. If no, What did the interviewer say that was not clear to you?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

2. Did you feel confused at any point in the interview?

Yes ..................................................... 1
No........................................................ 2

If No, Go To Question 4
2a. At what point were you confused?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

3. Was it something that the interviewer said or did that made you confused?

Yes ..................................................... 1
No ....................................................... 2

If NO, Go To Question 4.

3a. What was it that interviewer said or did that made you confused?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

4. At any point did you feel pressured into making a further statement about which, you were unsure of the details?

Yes ..................................................... 1
No ....................................................... 2

If No, Go To Question 5

4a. If yes, at what stage of the interview was this?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

4b. What did the interviewer say to make you feel pressured?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

5. Did any cues the interviewer gave you trigger a memory of the traffic incident?

Yes ..................................................... 1
No ....................................................... 2
5a. Did this cue create an “Ah-ha” or “Yes, I know” effect?

Yes ..................................................... 1
No.......................................................... 2

5b. What did the interviewer say when your memory was triggered?

_______________________________________________________________
_______________________________________________________________
_______________________________________________________________

The following questions relate to how accurate you think you were in the information you gave the interviewer.

1. A trained interviewer has just interviewed you; do you think that they found out most of the information that you had about the traffic incident in the video?

Little information  Some information  Most of the information

2. What percentage of the information that you had in your mind about the video, do you think the interviewer gained from you?

00% 10%  20%  30%  40%  50%  60%  70%  80%  90%  100%

3. What percentage of the total information contained in the video, do you think the interviewer gained from you?

00% 10%  20%  30%  40%  50%  60%  70%  80%  90%  100%

4. Out of all the details you told the investigator, what percentage do you think were correct?

00% 10%  20%  30%  40%  50%  60%  70%  80%  90%  100%

5. Out of all the details you told the investigator, what percentage do you think were incorrect?

00% 10%  20%  30%  40%  50%  60%  70%  80%  90%  100%

6. Please think of one important detail you told the interviewer and write that detail here

________________________________________________________________

6a. How crucial do you think that detail would be to the investigation of the road incident?

Not at all       Slightly        Moderately        Very        Extremely
PART B

In Part A, you answered a section on the helpfulness of the format of the instructions. This section goes further into issues relating to cues used to trigger information about the traffic incident. These cues were introduced when the interviewer asked you to tell everything, reinstate the context, change time order and change perspective. The following questions relate to particular sections of the interview, or particular memory-enhancing cues the interviewer gave you.

**At the beginning of the interview, the interviewer told you to tell everything you could remember about the traffic incident in the video, even if you thought it was not important. The following questions relate to the section of the interview after you were asked to tell everything you could. If you would like to make further comments, please do so in the space provided.**

During the interview, following the presentation of the video of the traffic incident:

1. How helpful do you think being told to ‘tell everything you could remember’ helped you to recall details from the traffic incident?

<table>
<thead>
<tr>
<th>Very unhelpful</th>
<th>Unhelpful</th>
<th>Neutral</th>
<th>Helpful</th>
<th>Very Helpful</th>
</tr>
</thead>
</table>

2. How difficult did you find the task of ‘telling everything you could remember’ even if it was not important?

<table>
<thead>
<tr>
<th>Very difficult</th>
<th>Difficult</th>
<th>Neutral</th>
<th>Easy</th>
<th>Very Easy</th>
</tr>
</thead>
</table>

3. To what extent did you get confused, when asked to ‘tell everything you could remember’?

<table>
<thead>
<tr>
<th>Very confused</th>
<th>Confused</th>
<th>Neutral</th>
<th>Clear</th>
<th>Very Clear</th>
</tr>
</thead>
</table>

Comments:

---

---
At one stage of the interview, the interviewer asked you to ‘reinstate the context’ of the scene by cognitively re-visiting the scene in your mind. The following questions relate to the section of the interview after you were asked to ‘reinstate the context’ of the time you saw the video of the traffic incident. If you would like to make further comments, please do so in the space provided.

During the interview, following the presentation of the video of the traffic incident:

4. How helpful do you think being asked to ‘reinstate the context’ helped you to remember details from the traffic incident?

   Very unhelpful   Unhelpful   Neutral   Helpful   Very Helpful

5. How difficult did you find the task of mentally ‘reinstating the context’ at the time which you viewed the video of the traffic incident?

   Very difficult   Difficult   Neutral   Easy   Very Easy

6. To what extent did you get confused, when asked to ‘reinstate the context’?

   Very confused   Confused   Neutral   Clear   Very Clear

Comments:

_________________________________________________________________
_________________________________________________________________
_________________________________________________________________

At a later stage of the interview, the interviewer asked you to change time order and go from the last thing you remember back to the first. The following questions relate to the section of the interview after you were asked to change chronological time order. If you would like to make further comments, please do so in the space provided.

During the interview, following the presentation of the video of the traffic incident:

7. How helpful do you think being asked to ‘change time order’ was in helping you to remember details from the traffic incident?

   Very unhelpful   Unhelpful   Neutral   Helpful   Very Helpful
How difficult did you find the task of ‘changing time order’ and going from the last thing that happened back to the first?

| Very difficult | Difficult | Neutral | Easy | Very Easy |

8. To what extent did you get confused, when asked to ‘change time order’?

| Very confused | Confused | Neutral | Clear | Very Clear |

Comments:

_________________________________________________________________
_________________________________________________________________
_________________________________________________________________

At one stage of the interview, the interviewer asked you to change perspective and go to another person’s perspective and comment on what happened. The following questions relate to the section of the interview after you were asked to change perspective.

During the interview, following the presentation of the video of the traffic incident:

9. How helpful do you think being asked to ‘change perspective’ was in helping you to remember details from the traffic incident?

| Very unhelpful | Unhelpful | Neutral | Helpful | Very Helpful |

10. How difficult did you find the task of ‘changing your perspective’ to that of someone else, who was somewhere else at the time the incident occurred?

| Very difficult | Difficult | Neutral | Easy | Very Easy |

11. To what extent did you get confused, when asked to ‘change perspective’?

| Very confused | Confused | Neutral | Clear | Very Clear |

Comments:

_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
Appendix I
Questionnaire for QPS AIS Officers
This questionnaire is part of a joint research project being run by the QAIS and CARRS-Q (QUT). This questionnaire is to help identify issues relating to interviewing of witnesses. There will be no identifying names on the questionnaires and all responses will be confidential.

This questionnaire is being used to determine some basic information about the Queensland Accident Investigation Squad. This includes; brief demographic information, questions relating to workload and interviews, and questions on a 5-point scale which relate to witnesses and interviews. The answers to these questions will help to inform focus group topics, which relate to investigative interviewing and witness recall.

Questionnaire for AIS Officers Concerning Interviewing Procedures
Demographic Information

<table>
<thead>
<tr>
<th>Age</th>
<th>________</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>M        F</td>
</tr>
<tr>
<td>Rank</td>
<td>________</td>
</tr>
<tr>
<td>Years in AIS</td>
<td>________</td>
</tr>
<tr>
<td>Years in Police Service</td>
<td>________</td>
</tr>
</tbody>
</table>

Information relating to workload and interviews

How many road incident witnesses would you interview in an average month? _____
How many road incident witnesses would you interview in an average year? _____
How long is the average interview length? _____ hr _____ min
How many interviews would be done at the AIS offices? __________% 
How many interviews would be done at the witnesses’ home? __________% 
How many interviews would be done at the scene? __________% 
QAIS also interviews witnesses of rail crashes, airline crashes and industrial accidents.
How many witnesses would you interview in a month:
Rail __________
Airline __________
Industrial __________

Information relating to training in interview procedures

Have you been trained in the Cognitive Interview?
YES NO UNSURE
Do you remember the techniques from the Cognitive Interview?
YES NO UNSURE
Do you use the Cognitive Interview?
YES NO UNSURE

Information relating to witness recall and investigative interviewing

Please circle one number for each question

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Rarely</th>
<th>Usually</th>
<th>Almost always</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>How often do witnesses provide the major leads for an investigation?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>How often do witnesses remember</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Question</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>How often do you believe that witnesses are incorrect?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>How often do you have as much time as you believe is necessary to conduct a good interview?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>How often do witnesses remember as much crucial information as you would like?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>How often do you actively try to develop rapport with a witness? (shaking hands, introductions, giving your card, friendly tone of voice).</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>How often do you think witnesses are cooperative?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>How often would you rely on physical evidence instead of witness reports?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>How often do you think you would interrupt a witness while they were giving their story?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>How often would you use the Cognitive Interview techniques?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>How important are witnesses to an investigation about road accidents?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

What is the normal time delay between the accident or event and the interview? _______________

What training did you do for interviewing witnesses to road accidents?  ________________________________________________________________
________________________________________________________________________________________
________________________________________________________________________________________

What are the most important components in getting a ‘good’ witness interview?  ________________________________________________________________
________________________________________________________________________________________
________________________________________________________________________________________